EFFECTS OF EDUCATIONAL SCHOLARSHIP SCHEMES DESIGNED TO INCENTIVISE NIGERIAN HIGH SCHOOL STUDENTS TOWARDS HIGH TEST SCORES.

A Thesis submitted by

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ABSTRACT

Despite huge commitments, education quality and achievement gaps have remained low in developing countries in Nigeria, posing threats to SDG-4 actualisation. Studies have shown that test scores are the only educational outcomes not consistently improved by financial incentives. If improvements in test scores can be achieved in Nigeria and other developing African countries, existing publications reveal that sustainable economic growth may become realistic while some educational inequalities can be bridged. The attainment of item 4 of the Sustainable Development Goal (SDG-4), which borders on education quality, may also become expedited. Using a mixed-methods study, this work evaluates a scholarship scheme established in 2017 and designed to inspire increased test scores for "all eligible scholarship beneficiaries" (i.e., en masse inspiration for low, moderate, and high performers) in some high schools of Southeast Nigeria. Quantitatively, the study observed that, alongside increased enrolments in senior secondary school certificate examinations, the 6-year "Controlled-Before-and-after (CBA)" study found that, relative to controls, test scores improved significantly for all student-performance categories (low, moderate and high performers) in an intervention group. The scheme, which combined "community participation" with a hybrid of "needs and merit-based selection criteria", offers policymakers the option of optimising existing but potentially limited funds to inspire higher educational performances in Nigerian schools. Through a case study that used in-depth interviews to explore the experiences of 15 participants of the scholarship scheme, the qualitative component of this research confirmed that the scheme's hybrid selection criteria, motivation of whole student populations and community involvement were all tied to the observed improvements in test scores and exam enrolments. Alongside the scholarship recipients, the non-recipients also reported being motivated, affirming the efficacy of the mass motivation component of the work. Interviewed representatives of all community groups (family, friends, teachers, community leaders and government staff) involved in the scheme reported positive influences on the test outcomes. They also asserted that media publicity of the scheme inspired confidence and trust in the process. This work concludes that scholarship schemes that integrate the three advocated principles might hold the key to sustainably raising test scores in developing countries, arming stakeholders with new tools for optimising education quality and improving enrolments. If replicated in larger studies across other parts of the world, such an outcome might also help bridge inequalities in educational outcomes, not just in Nigeria and other developing countries that this paper focused on, but also among disadvantaged communities in developed countries like the Indigenous populations in Australia and Canada. If well implemented, the findings can also potentially boost economic growth in developing countries and facilitate the attainment of SDG-4.

CERTIFICATION OF THESIS

I, Christian Ifediora, declare that the Thesis entitled "*A mixed-methods study to explore the effects of educational scholarship schemes designed to engage communities in incentivising high school students of developing African countries*" is not more than 100,000 words in length, including quotes and exclusive of tables, figures, appendices, bibliography, references, and footnotes.

The thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Date: **July 30, 2024.**

Endorsed by:

Prof. Karen Trimmer
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Associate Supervisor

Student and supervisors' signatures of endorsement are held at the University.

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DEDICATION

This work is dedicated to my family, whose immeasurable sacrifices allowed me to get this job done.

To Mrs Nkem Ifediora, my adorable wife.

And to the children:

- Chidumebi Melody
- Munachimso Bryan
- Chimdindu Bryanna and
- Chimbusomma Harmony.

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To God, be all the glory . . . .

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ABBREVIATIONS

ABS	Anambra Broadcasting Service
ADB	African Development Bank
AIEF	Australian Indigenous Education Foundation
BLR	Binary Logistic Regression
CAC	Corporate Affairs Commission
CAQDAS	Computer Assisted Qualitative Data Analysis Software
CBA	Controlled Before-and-After (CBA) Study
CCT	Conditional Cash Transfer
CESSP	Cambodia's Education Sector Support Project
CHS	Community High School
CI	Confidence Interval
CLT	Central Limit Theorem
CSS	Community Secondary School
DLO	Domestic Liaison Officer
FA	Framework Approach
FFE	Food For Education
FSAG	Florida Student Access Grant
FSHSP	Free Senior High School Policy
GDP	Gross Domestic Product
GEM	Global Education Monitoring
GMT	Greenwich Mean Time
GPA	Grade Points Average
HOPE	Helping Outstanding Pupils Educationally
IBM	International Business Machines
IFOMSSA	Ifedioramma Okafor Memorial Secondary School Academic
JAMB	Joint Admissions and Matriculations Board
JSS	Junior Secondary School
JSSCE	Junior Secondary School Certificate Examination
LGA	Local Government Area
LR	Logistics Regression
NAPLAN	Australian Program in Literacy and Numeracy
NECO	National Examination Commission
OCI	Onyebuchi Chris Ifediora
OECD	Organisation for Economic Co-operation and Development
OLR	Ordinal Logistic Regression
OR	Odds Ratio
PACES	Plan de Ampliación de Co-bertura de la Educación Secundaria
PISA	Programme for International Student Assessment
PPSSC	Post Primary Schools Commission
PROGRESSA	*Programa de Educacion, Salud y Alimentacion*
PSSSP	Post-Secondary Student Support Program
PTA	Parents Teachers Association

PVEST	Phenomenological Variant of Ecological Systems Theory
RCT	Randomised Controlled Trial
RQ	Research Question
SACMEQ	Southern and Eastern African Consortium for Monitoring Educational Quality
SDG	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
SQLR	Systematic Quantitative Literature Review
SSA	Sub-Saharan Africa
SSCE	Secondary School Certificate Examination
SSS	Senior Secondary School
SSSP	Secondary-School Scholarship Program
TCT	Theory of Change Typology
TST	Typical-case Sampling Technique
UN	United Nations Educational, Scientific and Cultural Organisation
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations International Children's Emergency Fund
UPE	Universal Primary Education
USQ	University of Southern Queensland
UTME	Unified Tertiary Matriculations Examination
WAEC	West African Examination Council
WASSCE	West African Senior Secondary School Certificate Examination
WHO	World Health Organisation
ZDE	Zonal Director of Education

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1. Overview

This study is designed to contribute to existing educational policies in developing African countries by exploring a novel approach of implementing scholarship schemes. The idea is to help improve efficiency in using an otherwise limited pool of funds as incentives to motivate as many students as possible towards maximum learning outcomes.

It should be noted that, alongside recent articles, publications over the past 30 years (from 1995 onwards) were included in both this Chapter as well as in the Literature Review (*Chapter 2*), Theoretical Framework (*Chapter 3*) and other parts of the work where necessary. The many decades of evolution of education in the developing world justifies this approach, as a stricter limitation would exclude some significantly relevant academic papers. Conversely, publications older than 30 years might introduce redundancy to the work.

An analysis of the evolution of education in developing African countries, along with its past and current challenges, reveals the need to ensure quality learning outcomes for the concerned countries. Along with this need are the acknowledged limitations posed by minimally available financial incentives, a combination that has created a desire to find ways of making the best use of available resources to achieve the best possible learning outcomes with respect to test scores.

By analysing a prototype of scholarship schemes that aim to address the above needs and has been functional in parts of Southeast Nigeria since 2016, this work aims to strengthen existing educational policies and engender a re-think of the overall approach to the implementation of scholarship incentive schemes in educationally disadvantaged African countries. Educationally disadvantaged communities are those where students, due primarily to their educational background, are unable to realise their full potential (Härmä, 2016; Kellaghan, 2001; Weir et al., 2017). Communities in Southeast Nigeria are used as the focal point.

Statistics from Nigeria help highlight the need and urgency for this study. According to the United Nations Educational, Scientific and Cultural Organisation (UNESCO), Nigeria has the highest number of out-of-school youths and children in Africa (and is third in the world), estimated to be about 20.2 million (The Cable, 2023). The United Nations International Children's Emergency Fund (UNICEF) and the

United Nations Educational, Scientific and Cultural Organization (UNESCO) both report that one out of every five of the world's out-of-school children live in Nigeria (with about 10.5 million of the country's 5-to-14-year-olds affected), justifying their decision to push for improved access to quality education in the country (UNESCO, 2020; UNICEF Nigeria, 2013). This work, among other things, hopes to contribute to this push by UNICEF and UNESCO.

To further understand the need, rationale, and approach underpinning this study, the dynamics surrounding education in Nigeria and the larger African community (which it mirrors) will first be explored. These will be done under the following themes:

i. The education system in Nigeria.
ii. The evolution of education in Nigeria and other developing African countries.
iii. Challenges of Education in Nigeria and other developing African countries.
iv. The need to ensure quality learning outcomes in the concerned countries.
v. Financial incentives (aids) and education outcomes in the countries.
vi. The availability and flow of financial educational incentives in these countries.
vii. Proposed Solution and Further Justification for this study.
viii. The Underlying Principles of the Study.
ix. The Research Questions (RQs).

1.2. The Education System in Nigeria

Nigeria's "6-3-3-4" education system, adopted in 1989, commences after a pupil completes a one-year pre-school study (Egugbo & Salami, 2021). The "6" represents the six years of primary school, where children are generally aged between 6 to 11 years. This is then followed by the "3" years of lower or Junior Secondary School, otherwise known as JSS. Classes in JSS range from 1 to 3, and students are generally aged 12 to 14 years. Afterwards, there are another "3" years of upper or senior secondary school, also known as the SSS or high school in some countries. Classes here also range from 1 to 3, and students' ages range from 15 to 17 years. The final

“4” in the education system depicts the four years spent in tertiary or technical education, with students therein aged 18 years and older (UNESCO, 2019a).

While primary education in Nigeria is free, education at higher levels come at a fee, and many families struggle with those fees (All Africa, 2024; Nigeria Health Watch, 2023; UNICEF Nigeria, 2013). It comes as no surprise, therefore, that a major challenge of the education system in Nigeria is that of funding, with the proportion of funds allocated to education constantly being below the 15% to 20% of budgetary allocations recommended by UNESCO (The Cable, 2023). The cited source revealed that the proportions of allocations to education in Nigeria were 5.4% in 2022 and 8.2% in 2023. These proportions are unlikely to improve anytime soon, with the most realistic hope being to optimise its use, particularly to better the education outcomes that might go with it. An expert commentary stressed that finance is crucial to education quality in Nigeria, and advocated a need for urgent attention in this regard (Ajagbawa, 2014).

The scholarship scheme evaluated in this work focuses only on the incentives component of education funding (with reasons for this focus provided in the sections below) for students in Nigerian senior secondary (high) schools.

1.3. Evolution of Education in Developing African Countries.

Understanding the educational evolutions in the developing world is very important, as it helps unravel the otherwise obscure reasons behind the trend in educational attainments within those countries to date. It also helps to understand the slow progress and outright stagnation in some key aspects of educational outcomes, and the need to undertake studies similar to this work, which will help identify new ways to boost existing policies that can turn things around. Records reveal that, since the end of the Second World War, educational policies that promote human capital investments have been priority areas for developing countries, and that these have largely been financed through foreign aid (Masino & Niño-Zarazúa, 2016; Teegavarapu et al., 2008).

In the 1970s and 80s, for instance, soon after the attainment of independence by many developing African countries, lots of the efforts and research for improving education in Sub-Saharan Africa (SSA) were focused largely on the so-called “supply-side” policies (Hassan et al., 2022). These policies prioritised and facilitated education

access through the construction of schools and the provision of educational equipment (Hassan et al., 2022; Masino & Niño-Zarazúa, 2016). As such, prior to the 1960s (pre-independence era), school access was marginal. It then expanded steadily in the 1960s and 1970s, before stagnating and declining in the 1980s due to budget deficits and structural adjustment programs (Fredriksen, 2023; Gakusi, 2010). In order to enhance quality education, additional efforts at improving teaching abilities were then made through the training of more teachers and the reform of learning materials (Masino & Niño-Zarazúa, 2016). The 1990s, therefore, recorded a resurgence, a feat aided in part by combined national and international collaborations.

All of the above led to increases from the mere 14% secondary school enrolment and 1.6 completed years of schooling among the working-age population in 1960, to the 54% enrolment rate and 5.2 completed years by 2000 (Fredriksen, 2023; Gakusi, 2010) .

1.4. Challenges of Education in Developing African Countries

In Sub-Saharan African (SSA) countries like Nigeria, where learning outcomes are poor and the resources needed to instigate the desired outcomes are scarce, it has been posited that education interventions that have the potential to drive knowledge or promote economic advancement are of interest to scholars and policymakers makers (Hassan et al., 2022). Fredriksen (2023) added that this reality is even more so in today's interdependent world, where re-inventing education may be the catalyst that can help address global education challenges. Identifying such challenges is an essential first step that must be surmounted before any effective education intervention can be instituted, and this section attempts to do this. Scholars have argued that financial incentives used for education scholarships in developing African countries assist in fostering human capital development, economic growth, and political stability (Campbell, 2016; Jonbekova, 2024).

It is acknowledged that the supposed progress highlighted in *Section 1.3* has not been sustained in the concerned countries. Despite the fact that about two billion (or 85%) of the world's total children live in the developing world and that their futures are directly linked to school attendance and the quality of their learning (Kremer & Holla, 2009; UNICEF, 2021), a sizeable number of them are still not in school (Gakusi, 2010; Kremer & Holla, 2009; Oladele, 2018; Onah et al., 2021). In 2018, the United

Nations Educational, Scientific and Cultural Organisation's (UNESCO) Institute of Statistics reported that about 258.4 million children, adolescents and youths between the ages of 6 and 17 years (equivalent to one-sixth of their global total) were out of school (UNESCO, 2019a). Even though this number was 3.4 million less than the number from the year earlier, 2017, when it was 261.8 million (18% of the global total), the current rate of decline implies that there will still be about 225 million (or 14%) out-of-school children in the developing world by 2030 (UNESCO, 2019a; UNESCO Institute of Statistics, 2019). Something needs to be done about this, and this study aims to assist with finding ways to do so.

Analysing the above trends with respect to the stages of schooling reveals some startling facts. For instance, 59.1 million or 8% of primary school pupils remained out of school globally in 2018 (UNESCO, 2019a). This is a disappointing statistic that becomes even more glaringly so if one considers the fact that, before this time, there was an encouragingly steady drop, from 15% of pupils being out of school in the year 2000 to just about 9% or 64 million in 2008, before it stagnated to the current 2018 levels (UNESCO Institute of Statistics, 2019). Data for pupils in lower secondary schools mirror the same trend. Those out of school in this grade have remained at about 61 million or 16% since 2012, despite an initially promising decline from 25% in 2000 to 17% in 2010 (UNESCO, 2019a; UNESCO Institute of Statistics, 2019). Unsurprisingly, the out-of-school numbers for upper secondary schools are much worse, with as many as 137.8 million or 35%, being affected globally in 2018 (UNESCO, 2019a). Like in the lower education categories, this also has been largely static since 2013, when the numbers were 138 million or 37% (60% for developing countries alone), having again slowed considerably from 48% in 2000 (UNESCO Institute of Statistics, 2019).

These worrying numbers get worse when one realises that the out-of-school numbers for secondary schools (lower or upper) are always higher for countries in the developing world when compared to global averages. For instance, the proportion of out-of-school pupils for lower secondary schools in 2012 was 36% in developing countries (as against the 16% global average), while those affected in upper secondary schools were 60%, as against the 37% global average stated earlier (UNESCO, 2019a). In all these, Sub-Saharan Africa fares the worst, followed by South and Southeast Asian countries (UNESCO, 2019a).

In line with the foregoing is the observation by Fredriksen (2023), who reported that, due to increasing fertility rates in SSA (as against the trend in Asia and Latin America), the school-age population in the region is expected to grow significantly by 52% between 2020 and 2050. In the same period, their 15-29-year workforce is expected to increase by up to 90%. This increase will then represent about 29% of the global total for this age group, up from the 17% in 2020. These increases are huge, and present challenges for SSA as they need to ensure that all children of school age continue to get enrolled in schools. In addition, how this increase in demographic workforce translates to "economic dividend" in the region is of greater concern, as it comes with the need to ensure quality education that will drive the necessary skills needed for productive employment (Fredriksen, 2023). Measures that will ensure that scarce financial resources are optimised in ways that will ensure that the increased demographics continually obtain quality education, are imperative. This need further justifies this study, which is focused on Nigeria, a Sub-Saharan African country.

The alarming statistics mentioned above, whose real underlying reasons are not entirely clear, have persisted despite the huge commitment of resources and the concerted efforts to minimise the achievement gaps in education by both the governments in many developing countries and the stakeholders in the international community. Examples of such efforts that have been attempted since the 1990s include the deliberations and policies developed from the Jomtien Conference (1990), the Dakar Conference (2000), the Fast Track Initiative (2002), the UNESCO Global Initiative for Education, the Global Action Plan, and, currently, the Sustainable Development Goals, SDGs (Campbell, 2016; Gakusi, 2010). Subsequently, the World Bank (2018), released a paper that identified four priority areas of education in Africa, and these include: (i) the provision of equitable access to basic education with improved student retention and quality of education (ii) the effective engagement of teachers (iii) the increased financing for quality education, and (iv) the improvement of institutional capacity. Apart from these commendable initiatives, which have, so far, not been very successful, actual steps on financial arrangements have been attempted. Some of these include Budget Supports and Sector-Wide Approaches (SWAPs) that bring donors, governments and other education stakeholders together (Gakusi, 2010).

All the foregoing policies and financial efforts were designed to enhance long-term productivity, as well as economic growth and development in the concerned developing countries. None of these, to date, have been effective at significantly improving learning outcomes in the targeted countries, leading Fredriksen (2023) to report that most of the affected nations have educational pasts that are replete with ambitious national plans or conference reports that are poorly implemented. Part of the reason for these failures could be the top-down approach adopted by several of the initiatives, with a focus on funding infrastructure, curriculum development, large class sizes, and increased teachers' salaries (Hassan et al., 2022; Onyekwena et al., 2016; Spencer et al., 2005; UNESCO, 2020). The foregoing failures reflected poorly on the economic growth in SSA (except for South Africa), given that decent economic growths of the 1960s were followed by a 36% decline in per capita Gross Domestic Product (GDP) from 1970 to 1997 (Fredriksen, 2023). According to the same source, this decline becomes more glaring when comparisons are made to concurrent growths observed in Latin America (55%), South Asia (88%) and East Asia (355%) over the same period. Even though per capita growth accelerated between 2000 and 2014 in SSA, it has since stagnated (ACET, 2021). If found effective and adaptable beyond Nigeria, the principles underlying this work might help in identifying education interventions that can engender long-term economic growth in SSAs.

Alongside the foregoing, experts have also attributed the dire challenges facing education in developing countries to various other reasons, including inequitable access, insufficient political financing and commitments, irrelevant school curricula, weak capacity of the education systems, and poor learning outcomes (Abubakar, 2021; Gakusi, 2010). They also identified the regions' predominantly rural and poor nature, the pervading poor infrastructure and teaching resources, and cultures prioritising farming and early marriage ahead of education. Back in 2007, these challenges led to the estimation that 28 of 43 countries in sub-Saharan Africa would not attain Universal Primary Education by 2015, as was then the target (Gakusi, 2010). This prediction did only come to pass, but has persisted, with further predictions indicating that, in the 2030s, most children in sub-Saharan Africa will enter adulthood and still remain illiterate (Fredriksen, 2023).

Existing policies need to be enriched to overcome the multiple failures acknowledged above, particularly the stagnation of vital aspects of educational goals

in developing countries. Hopefully, this study's findings will help with some evidence that might be needed, further rationalising the need to undertake it.

1.5. The need for quality learning outcomes in developing countries.

While the issues above raised direct concerns with the overall numbers of enrolments, the quality of education for those who were enrolled remains of even greater concern. To address these, the United Nations General Assembly, at its 70th Session in September 2015, adopted the 2030 Agenda for Sustainable Development, and at its heart were the 17 Sustainable Development Goals (SDGs), including SDG-4, which borders exclusively on education (Campbell, 2016; UNESCO Institute of Statistics, 2019). Proponents of the SDGs identified quality education as a critical cornerstone for expanding human capabilities and freedoms in developing countries (Gakusi, 2010; Masino & Niño-Zarazúa, 2016). By definition, good quality education provides capabilities that allow all learners to develop economic productivity, sustainable livelihood, and enhanced individual well-being, as well as the ability to contribute meaningfully to democratic and peaceful societies (Garira, 2020; VVOB, 2024). This work aims to provide insights that may help actualise all these.

Even though it has been argued that developing countries can make significant future income growth by increasing school attendance and graduation rates (Asongu & Tchamyou, 2019; Barrera-Osorio et al., 2008; World Bank, 2018), the focus of quality education as a 4th item of the SDGs was informed by some key realisations (United Nations, 2024). Two of these realisations will now be discussed in order to ensure a clear understanding of how they fit into this study, and how they helped shape its design and goals.

The first of these realisations was the observation that test scores were better predictors of real per capita GDP growth than years of schooling attainment (Hanushek et al., 2023; Hanushek & Woessmann, 2012; Jamison et al., 2007; Laurini & de Carvalho Andrade, 2012). In addition, it was noted that sustained economic growth not only has a strong relationship with international achievement test scores (Kremer & Holla, 2009; World Bank, 2018), but it also depends largely on the quality of education (Asongu & Odhiambo, 2019; Hanushek & Kimko, 2000). Experts have linked the improvement of quality education in developing countries to increased earnings (Duflo, 2001; Masino & Niño-Zarazúa, 2016; Psacharopoulos & Patrinos, 2004), the adoption of technology (Asongu & Tchamyou, 2019; Foster & Rosenzweig,

1996), improved health and fertility (Kremer & Holla, 2009; Schultz, 2002; World Bank, 2018), better democratic and other institutions (Asongu et al., 2020; Campbell, 2016; Glaeser et al., 2004), as well as economic growth and performances on international achievement tests (Asongu & Tchamyou, 2019; Hanushek & Woessmann, 2008; Jonbekova, 2024; Van Staden, 2021). Reports from Ghana also showed that poverty and inequality levels decreased with high educational attainments in households, incomes invested in education by households, and the levels of support provided to children's home learning activities by their households (Anlimachie et al., 2022). Also, in Ghana, it was observed that investments in pre-tertiary education are associated with economic growth and poverty reduction in the country (Josephine et al., 2021). This study acknowledges that these are all issues that, if addressed, can put progress in developing countries at par with the rest of the world. By aiming to identify ways of optimising the quality of education in the developing world through whatever financial incentives are available, this work aims to help shape policies that can address most of these.

A second factor that informed the SDG education goal is the realisation that, despite all the efforts of the past decades, poor quality of education has persisted in most developing countries (Masino & Niño-Zarazúa, 2016), and that most school attendees in the affected countries end up with poor learning outcomes and other skills needed for future successes (The World Bank, 2018). For instance, the same World Bank source noted that a numeracy test of second-grade students in several Sub-Saharan African countries revealed that 3-in-4 could not count beyond 80, while 40% could not complete one-digit additions. A similar problem was found in reading, where between 50% and 80% could not correctly answer questions following a short reading passage (The World Bank, 2018). According to UNESCO, in 2014, about 250 million children remained functionally "illiterate and innumerate" despite the fact that up to 50% spent at least four years in schools (United Nations Educational & Organisation, 2014).

The facts above are further supported by more specific observations. For instance, in India, over half of all grade five students could only read to the level of grade 2 pupils (ASER, 2015). In addition, a Southern and Eastern African Consortium for Monitoring Educational Quality (SACMEQ) study found that fewer than half of sixth-graders reached the desired reading competence in only four of the countries studied (Gakusi, 2010). Similar work on six Francophone African countries revealed low

achievements that ranged from 14% to 43% on selected subjects, while, in Senegal, more than 40% of a set of surveyed students could not correctly order numbers with two decimal points (Gakusi, 2010). Though the cited statistics come from data that has been over a decade old, more recent information indicates that not much has changed (Fredriksen, 2023).

In view of the foregoing, it is, therefore, not surprising that many adults in developing countries are not well equipped with the necessary skills needed in the labour market (Filmer & Schady, 2014; Fredriksen, 2023; Gakusi, 2010; Lewin, 2022). Given the link between quality education and economic development (already discussed in *Section 1.3* of this work), one wonders if this ill-equipment of adults ion the workforce could be a major explanatory factor in the economic lag observed in developing countries, especially as it has been argued that investments in quality education can enhance long term economic growth and reduce inequality (Tchamyou et al., 2019). This study hopes to identify ways of sustainably addressing this problem.

While ensuring that pupils continue to enrol in schools, SDG-4 also aims for school completion and increased quality of learning outcomes. Globally, as of 2018, school completions for primary, lower secondary and upper secondary education stood at 84%, 72% and 48%, and were all respectively expected to reach 89%, 81% and 58% by 2030 (UNESCO Institute of Statistics, 2019). The same UNESCO paper pointed out that 1-in-3 young people in developing countries still cannot read, and about 750 million adults lack basic literacy skills. Sadly, they also acknowledged that, at the current rates of progression, the SDG-4 targets of equitable and quality education with effective learning outcomes by 2030 are unlikely to be met, unless policies with significant departures from past trajectories are put in place. The challenge of meeting this target is even made worse for countries in sub-Saharan Africa (SSA), where the school-age population is growing faster than elsewhere in the world (UNESCO Institute of Statistics, 2019). One fact that makes this population issue obvious is the fact that even though governments from both the developed and developing countries spend similar proportions of their GDPs on education, expenditure per pupil as a fraction of GDP in developing countries were much lower, possibly because they have a higher proportion of their population within school-age (Masino & Niño-Zarazúa, 2016). In the Year 2000, for instance, governments in developed countries spent 18.8% of GDP per capita per student on primary education,

while those in low-income countries spent just 7% (Gakusi, 2010; Kremer & Holla, 2009).

A World Bank report in March 2018 indicated that the alarmingly low learning levels in Africa fuel a vicious circle of severe learning crises that will perennially undermine both the economic growth and the well-being of its citizens (The World Bank, 2018). They opined that the need for high-quality education in the continent is not just a moral imperative but an economic necessity that, if met, will equip youths with the skills and human capital required to transform the region economically. Hopefully, the findings from this work will identify ways of boosting quality education and help reduce the anomalies so far pointed out in this thesis.

As is obvious in the arguments below, progress towards achieving international commitments to the SDG-4 is very much off track, with only one in two young people completing secondary school in the concerned countries (UNESCO Institute of Statistics, 2019). On the quality of learning among those in schools, less than half attain minimum proficiency in reading and numeracy by the end of primary school, with SSA, where only one in ten do so, being the most affected (UNESCO Institute of Statistics, 2019). Just a third of the way to 2030, projections published in July 2019 by the UNESCO Institute for Statistics and the Global Education Monitoring Report revealed that the world will not meet its SDG-4 education commitments without rapid accelerations of progress. At current rates, they project that only six in ten young people will be completing secondary education, while another one in six children between 6-17 years will still not be in school by 2030 (UNESCO, 2019a, 2019b; UNESCO Institute of Statistics, 2019).

In addition to the above, it is projected that test scores (or learning rate), which are the main educational outcome for this study, will continue their stagnation in middle-income countries and decrease by a third in Francophone African countries, while, in low-income countries, 20% of young people and 30% of adults will still be unable to read by 2030 (UNESCO, 2019b). This trend is alarming for a region desperately needing quality education to bridge the economic gap with the rest of the world. Adding to this is the fact that the high fertility rate and slow decline of populations in SSA lead to a slower demographic transition in the region relative to the trend in other developing regions (May & Guengant, 2020). Notably, the school-age population in SSA grew by 93% between 1960 and 1980 (as against the 18% envisaged in 1961) and was one of the reasons why countries in the SSA did not reach the Universal

Primary Education (UPE) target of 1980 (Fredriksen, 2023). For this and other reasons cited elsewhere in this work, the current SDG-4 targets remain at risk of following in the doomed footsteps of the UPE and its predecessors. The current study hopes to add to the evidence base that might assist with new policy dimensions that can help address this trend and accelerate the desired progress towards the actualisation of SDG-4.

The need to tackle these problems is further highlighted by the principle of "learning poverty" (the proportion of 10-year-olds that cannot understand a simple story), which provides additional justification for this study (World Bank Group, 2019). To meet its ambitious target of reducing "learning poverty", the World Bank stated that countries need to find ways of mobilising funds in ways that are effective, efficient, and equitable. In order to actualise this, they launched their "Global Platform for Education Finance" in October 2019, intending to assist governments in strengthening their relevant systems and improving learning outcomes (The World Bank, 2019). One of the key aspects of this World Bank initiative is the need to develop pieces of evidence that will inform education funding equitably and efficiently. Proponents of this platform hoped that the view of stakeholders in education funding for developing countries could shift towards long-term investments, emphasising the quality of education delivery, not just quantity (The World Bank, 2019). Such qualities can be judged by test scores and academic outcomes, which are desirable parameters that have already been linked to multiple desirable economic indices. This study makes an important contribution to this.

1.6. Financial incentives (aids) and education outcomes

Scholars have argued that influencing student behaviours can be leveraged to optimise educational outcomes (Le, 2020; Levitt et al., 2016), and the facts discussed so far underscore the consensus of the need to exploit these and improve these outcomes in developing countries. The educational parameters for assessing these outcomes are varied, and, according to experts (Brennan, 2023; Gibbs et al., 2009; Kremer et al., 2013), include improvements on multiple indices like:

i. School enrolments.
ii. School attendance.
iii. School retention.

iv. Graduation or completion rates.
v. Quality learning outcomes (like improved test scores).

Instigating positive behaviours from students and parents towards these outcomes, whether in isolation or various combinations, has been the focus of most education incentive programs. Multiple studies in the past, including systematic reviews (Baird et al., 2013) and large-scale randomised ones carried out in developing countries like Brazil (De Janvry et al., 2006; Glewwe & Kassouf, 2012), Mexico (Attanasio et al., 2012; Dubois et al., 2012), Colombia (Attanasio et al., 2005; Barrera-Osorio et al., 2008) Pakistan (Chaudhury & Parajuli, 2010), and Bangladesh (Arends-Kuenning & Amin, 2004), leave little doubt regarding the positive impacts of financial incentives on outcomes like school attendance (with improvements that range from 3% to 12%), retention and enrolments into post-secondary education, and graduation rates (Slavin, 2010). Newer publications also reveal similar observations (Frisancho, 2020; Kaiser & Menkhoff, 2020).

It has been acknowledged that while financial incentives might improve efforts on education, the impact on actual intelligence may be enhanced in all cases (Gignac, 2018). It therefore comes as little surprise that, of the five outcomes outlined earlier, improved test scores (which exemplifies quality learning) through financial incentives remain a much more challenging task. Little evidence exists to support its efficacy (Baird et al., 2013; Gibbs et al., 2009; Kremer & Holla, 2009; Le, 2020; Slavin, 2010), particularly in a country like Nigeria, where no published study on the subject exists. To this end, researchers have noted the fact that the impact of financial incentives on test scores and actual learning outcomes in developing countries remains generally doubtful and poorly understood (Berry et al., 2022; Gibbs et al., 2009; Slavin, 2010).

An observation from UNESCO captures this problem well, with the organisation stating that school enrolments and completion as educational indicators do not reflect the quality of the delivered education or students' achievements (UNESCO, 2014). Learning outcomes based on test scores in secondary, tertiary and vocational schooling have more defined relationships with economic growth, and clarity on their quality and identifying ways to boost them, are vital (Kremer et al., 2013; Le, 2020). These doubts orchestrate a knowledge gap that needs to be reduced if the potential economic and health gains from quality education in developing countries can be actualised and if there is any hope of meeting the SDG-4 by 2030. Since no convincing

empirical evidence exists to link financial aid to improved test scores/learning outcomes in developing countries, a need exists to find one. This study attempts to fill this gap through data gathering and research by analysing outcomes from a financial aid (incentive) scheme designed to facilitate mass improvements in test scores.

The United Nations (UN) General Assembly acknowledged the need for data gathering as key to achieving the set targets for the 2030 Agenda and called on stakeholders to strengthen the statistical capacities of developing countries (Kim, 2018). This work, which will generate fresh data sets that might help define relationships between financial aid in developing countries and academic performances, may help inform policies that will assist with the SDG-4 and can, therefore, be considered a direct response to this UN call. This provides additional justification for undertaking this study.

1.7. Availability and flow of educational incentives to concerned countries.

The evolution of education, discussed in the early part of this work (*Section 1.3*), will be incomplete if the associated evolution in financial aid available for education in developing countries is not discussed. As was made obvious in the early part of this work, policymakers in the 1970s and 1980s viewed post-primary education (upper secondary, tertiary and technical) as the main growth and development catalysts for developing countries (Masino & Niño-Zarazúa, 2016). As such, about 50% of all educational aid at the time went into secondary education, while one-third was allocated to both tertiary and technical education (Masino & Niño-Zarazúa, 2016). Since the late 1980s, however, improved access to primary education became the priority, given the subsequent acknowledgement that this level of education held the key to the highest economic returns for developing economies (Asiedu & Nandwa, 2007; Lewin, 2022; Psacharopoulos & Patrinos, 2004; Roser & Ortiz-Ospina, 2016). A further shift in focus occurred in the 1990s, following the declaration of “Education for All” by UNESCO in 1990 (Masino & Niño-Zarazúa, 2016). Until a few years ago, this latest approach dominated the policy direction for education aid in the developing world (Riddell & Niño-Zarazúa, 2016).

Since 2015, however, debates on education aid policies in these countries have shifted away from mere schooling access to improvements in learning quality, and this is expected to remain the focus of global developmental policies on education for developing countries in the years to come (Masino & Niño-Zarazúa, 2016). The

financing of education faces huge challenges due to policies that are not fiscally sustainable and were developed with a poor evidence base (The World Bank, 2019). Findings from this current study will, hopefully, make some important contributions to these debates and policies in ways that might be more sustainable.

Available data suggest that the pervading poor successes of education in developing countries partly lies in the weak flow of foreign aid from both governmental and non-governmental bodies. For instance, according to the World Bank, only 6.5% of the US$463 billion of global capital flows to developing countries went to aid in the year 2000, and of the US$2.5 billion committed to developing countries by non-governmental organisations (NGOs) and foundations in the same year, only 13.7% went to Education (Heyneman, 2009). More recent data revealed that, of the US$4.7 trillion expenditures on education globally, only US$22 billion or 0.5% were available to low-income countries (UNESCO Institute of Statistics, 2019). To make matters worse, estimates from the Institute of International Education and the Global Education Monitoring (GEM) indicate that just 1% of students in developing countries benefitted from public scholarships that were administered by countries in the developed world in 2015 and that the volume of global aid available for scholarships remains constant, at US$1.3 billion (UNESCO Institute of Statistics, 2019).

They also pointed out that there has been a consistent annual funding shortfall of at least US$39 billion since 2015 in developing countries, and that this will likely persist until the year 2030 unless education aids are increased by sixfold from its levels in 2010 (UNESCO Institute of Statistics, 2019). Meeting this expectation is extremely unlikely, given that education funding (of which financial aid is part) has largely stagnated since 2010 (UNESCO Institute of Statistics, 2019). Aids for education alone reached US$13.2 billion in 2017, out of which only US$5.4 billion was available for primary and secondary education in developing countries (UNESCO Institute of Statistics, 2019). Recently, UNESCO expressed concerns about this and warned that this unfortunate decade-long stagnation is hurting the most vulnerable developing countries that need help the most (UNESCO Institute of Statistics, 2019). These facts confirm the heavy reliance of developing countries on international aid, which remains inevitable if they are to sustain education financing or cope with the fast-growing youth population (Fredriksen, 2023; Gakusi, 2010; Kwasi-Agyeman et al., 2020; Roser & Ortiz-Ospina, 2016). This current study hopes to contribute in reducing this worrying trend, as it is designed to find ways of optimising whatever aid is available and using

it to maximise academic performances among students in Nigeria and, possibly, Sub-Saharan Africa if replicated on a wider scope.

The reality is that available funding is not enough, be it for core education activities in the developing world or as financial aid. Data from the World Bank, for instance, shows that education expenditures by developing African countries increased from US$109/child/year in the 1998-2001 reporting period, to just US$188/year/child in the 2014-2017 period, an increase of just US$79 in nearly two decades (The World Bank, 2019; World Bank Group, 2019). Such low funding and paltry increases are not enough to inspire the needed learning outcomes in developing countries and, by comparison, fall far short of expenditures by developed countries, whose spending rose from US$5,269 to US$8,089 over the same period (The World Bank, 2019; World Bank Group, 2019). In fact, in 2014, the amount spent by African governments per student for primary education was less than half of what was spent by governments in South Asia, the region with the next lowest level of spending (The World Bank, 2018).

The foregoing differences have some practical implications in outcomes, one of which is that 90% of children in “low-income” countries meet the criteria for “learning poverty”, while only 9% meet the same criteria in “high-income” countries (World Bank Group, 2019). These figures also present a constant threat to the progress of education in these developing countries, and their attainment of the SDG-4. For clarity, Learning Poverty, which was mentioned earlier, is the proportion of 10-year-olds that cannot understand a simple story and are, therefore, unable to read by the end of primary school.

Available evidence suggests that the concerned countries have little hope of increasing funds to education that will circumvent these issues, given that the little ones available compete, rather unfavourably, with demands from alternative sectors (like health, food and security) that also need urgent attention but yield more certain and immediate returns (Chapman & Moore, 2010; Chapman & Quijada, 2009; Lewin, 2022). As had already been stated, funding has basically stagnated in the past decade (UNESCO Institute of Statistics, 2019), and critics of past financial aids constantly question, with good reasons to do so, the impact and sustainability of those on desired learning outcomes (Al-Samarrai et al., 2002; Fredriksen, 2023; King & Mason, 2001; Nkansa & Chapman, 2006). Given all these, it is fair to acknowledge that education aids to the developing world may never meet the required levels, and adjustments that

allow efficient management of whatever resources are available can help reduce this problem. Experts advise that such adjustments should be the product of evidence-based strategies and that each country and region needs to develop what fits their educational needs to optimise outcomes (The World Bank, 2018). The way around this dire need is, therefore, to identify a robust, high-impact strategy that will stimulate the maximisation of the available but limited resources in ways that will inspire as many students as possible to achieve quality learning outcomes. This study aims to identify pieces of research evidence that will help achieve this and shape new policies that will ultimately lead to the economic emancipation of the developing world.

To drive home the need for fresh insights into expenditures and aids on education in developing countries, specific examples from a number of developing countries may help. In the Democratic Republic of the Congo (DR Congo), for instance, about four million children are not in school, and this is because of their families' inability to meet up with the fees (The World Bank, 2019). Even though the government of DR Congo has introduced salary increases for teachers along with free basic education, a sustainable fiscal measure is still needed to finance the reform. The same goes for Paraguay, where a US$1 billion trust fund has been designated for promoting research and education excellence, but the need exists for data and evidence-driven measures to be put in place (The World Bank, 2019). In Peru, another developing country, funding boosts and results-based budgeting in education have reportedly improved their national and international test scores, but ensuring that it benefits as many people as possible in sustainable ways, remains a challenge (The World Bank, 2019). Given that these aids are limited and that large populations need to benefit from them, it becomes imperative to find ways of optimising the inspiration of positive behaviours to as many potential beneficiaries as possible. This study is designed to help with these, in what is a further justification for its undertaking.

1.8. Proposed Solution, Further Justifications.

With just a few years to 2030, projections published in July 2019 by the UNESCO Institute for Statistics and the Global Education Monitoring Report revealed that the world will not meet its SDG-4 education commitments without rapid accelerations of progress towards those goals (UNESCO, 2019a, 2019b; UNESCO Institute of Statistics, 2019). The challenges highlighted in the foregoing sections of this paper appear to support these assertions.

To counter this dismal trend, this work evaluates a scholarship scheme introduced in parts of Southeastern Nigeria in 2017. The Scheme is explored in an attempt to make a case for a re-think in the overall design and implementation of scholarship incentive schemes, in ways that will help optimise the effects of whatever financial resources are available for educationally disadvantaged communities. Such a re-design needs to be evidence-based, robust, sustainable, and of high impact, and by evaluating the efficacy of that new Scheme in Nigeria, this work explores these possibilities.

This study's approach aligns with the call by the United Nations (UN) General Assembly on stakeholders to use data gathering in strengthening the statistical capacities of developing countries as a necessary step for improving learning outcomes and achieving some of the set targets of the 2030 Agenda (Kim, 2018). Part of the response to the UN call was the World Bank's launch of the "Global Platform for Education Finance" in October 2019 (The World Bank, 2019). This study can be seen as an additional response to that UN call. If effective, its findings may help provide key pieces of the missing puzzle that policymakers need to overcome the stagnation of vital aspects of educational goals in Sub-Saharan Africa and other developing African countries (UNESCO, 2019b). Other justifications for this work lie in the hope that the findings might help accelerate the desired progress towards the actualisation of the SDG-4 goals. In addition, this work may also fuel future research, as its advocated principles (detailed below), if proven effective in larger studies, may be adaptable to other disadvantaged communities across Africa and even the developed world.

1.9. The Underlying Principles of the Study

Three principles underpin the incentive scheme being evaluated in this work, and these were developed following the Literature Review as captured in *Chapter 2*. One was that, given the unique situation in most parts of the developing world in Africa, a hybrid scholarship scheme that selects recipients through a mix of needs and merits-based criteria might be more effective than the ones that have isolated approaches. This is so, given that most students who need help in developing African countries are often from poor backgrounds and have to be prioritised, especially as those from relatively affluent homes have better opportunities and can afford good schools (Hayes et al., 2017; Spaull, 2015). For any scholarship scheme to address the observed concerns, it should be designed to identify and benefit students from poor

backgrounds and will, therefore, be needs-based. In addition, it is vital to identify and select those with decent academic potential from these poor students, as this ensures that the incentives will not go to waste, particularly given that the required resources are scarce (as discussed earlier in *Section 1.6*). This consideration, therefore, warrants that such schemes must be merit-driven, fair, and balanced, with a transparent selection process in place. This merit component aligns with the observation that transparency in identifying and selecting scholarship recipients is associated with a higher impact on incentives (De Janvry et al., 2006; Glewwe & Kassouf, 2012).

The second principle of the scholarship scheme to be reviewed became necessary due to the need to address the scarce financial resources available for large numbers of potential beneficiaries in disadvantaged communities (Gakusi, 2010). As such, this work argues that, with the same amount of resources, the proposed scholarship scheme should be able to encourage as many students as possible at the same time (i.e., en masse motivation). This way, even if all of the targeted students do not receive the scholarship award on offer, it is expected that, when many are encouraged, their average test scores will be higher than would have otherwise been the case without this encouragement. An interesting observation from studies in Bogota, Colombia, supports the potential efficacy of this proposed mass approach, as they revealed increased school attendance among friends and associates of beneficiaries of financial incentives, at rates that were as high as those observed among those primary recipients (Attanasio et al., 2005; Barrera-Osorio et al., 2008). Through test scores, this study also evaluates the potential for this mass effect.

The third principle of the proposed scheme highlights the need for “community influence”, a measure supported by the Theory of Change Typology (TCT, discussed fully in *Section 3.2.2*), which further argues that financial interventions are much more likely to be effective at enhancing improved test scores (on writing, reading and mathematics) only when at least two of the three identified factors are combined, and particularly when incentives (which shift preferences and behaviours) are complemented by community participation (Masino & Niño-Zarazúa, 2016). In addition to the TCT, the additional rationale for community inclusion as a core principle of this study came from a study that observed that, by triggering a reallocation of responsibilities within households, financial incentives could alter family dynamics in ways that lead to positive educational outcomes (Barrera-Osorio et al., 2008). The

authors of the cited work noted that, when compared to families with non-scholarship recipients, benefitting families usually adjust in ways that allow the siblings of the scholarship winners to engage in more wage-earning jobs rather than attend schools themselves. For clarity, “Community”, as used in this work, includes families of the benefiting students and their teachers or school principals, as well as the media, leaders of their associated communities and government stakeholders.

As will be made obvious in the Literature Review (*Chapter 2*), very little work on scholarship schemes from Nigeria exists in the literature, with none found to have dealt with any of the three principles of concern in this work. The only available study from Nigeria looked at scholarship schemes broadly (with no focus on any particular scheme), and students in tertiary institutions, not high schools, were surveyed (Omeje & Abugu, 2015).

1.10. Prototype of the Proposed Scholarship Scheme

The “Ifedioramma Okafor Memorial Secondary School Academic (IFOMSSA) Scholarship Scheme (or Award)” is a prototype of the scholarship schemes advocated in this study. It was introduced by a Nigerian-Australian charity organisation (hereinafter referred to as “the Foundation”) in 2016 but had its first beneficiaries in 2017. It is an annual scholarship scheme that is functional in parts of South-eastern Nigeria, a quintessential developing African country that fits the characteristics of locations at risk, as explained in *Chapter 1*. The IFOMSSA Scholarship Scheme was named after the late father of the Foundation’s Founder and includes the “IFOMSSA Junior” and “IFOMSSA Senior” scholarship awards.

The IFOMSSA Junior Award is an annual, exclusively needs-based scheme covering all registration fees for eligible Junior Secondary School-III (JSS III) students preparing for the Junior Secondary School Certificate Examination (JSSCE). JSS-III is equivalent to Year 9 or 10 in Australia. It is the third (last) class of lower secondary schools in Nigeria, and the JSSCE is a Nigerian nationwide examination that must be passed before progression to the 3-year senior secondary school (SSS) studies. Details of the education structure in Nigeria are contained in *Section 1.2*. All students of Nsugbe origin (the hometown of the Founder of the organisation administering the Scheme) who are enroled to undertake JSSCE within the town’s only public secondary school (known as the Community High School, CHS, Nsugbe) in any particular year, receive the award for that year. Non-Nsugbe indigenes, even if enrolled at the CHS,

Nsugbe, are not eligible for the IFOMSSA Junior Award, which is not evaluated in this work.

Conversely, the IFOMSSA Senior Award covers the full examination registration fees of its beneficiaries for the two senior secondary school certificate examinations (SSCEs) in Nigeria. Only students in the final (third) year of senior secondary schools (SSS III, equivalent to Year 12 in Australia) from selected schools are eligible for this award. The two certificate examinations concerned are:

i. The “West African Senior Secondary School Certificate Examination, WASSCE”, which is available to all high schools in West Africa (not just Nigeria), and
ii. The “National Examination Commission, NECO” certificate examination which is exclusive to only Nigerians.

The IFOMSSA Senior Award has, since 2017, adopted all the three principles advocated in *Section 1.9* of this work and provides data that can assist with the analyses of the impact (or otherwise) of such a scholarship program. This is one of the main reasons why the IFOMSSA scheme was adopted for this work. The Scheme involves the communities (family, teachers, traditional leaders, and so on) of the potential beneficiaries, and its ultimate beneficiaries are chosen through hybrid selection criteria (OCI Foundation, 2016). The Scheme aims to instigate improved academic performances in whole-student populations (not just the eventual winners) as they go through SSS III. This design potentially allows it to maximise the number of beneficiaries to any available (usually fixed and limited) financial aid and does so by potentially inspiring a lot more people than would normally be the case had the IFOMSSA Senior Scheme not been in place. This highlights this work's “mass motivation” component, which will be explained later. Performances by students benefitting from the IFOMSSA Senior award in the certificate exams mentioned above constitute the learning outcome or test scores being incentivised by the IFOMSSA Senior Scholarship Scheme and are the main focus of this study. Details and justifications for choosing these exams as outcome measures are explained below (*Sections 4.3.2* and *4.3.3*).

The inaugural IFOMSSA Senior Award ceremony, during which the ultimate award recipients were rewarded, was held in March 2017 and has since been staged as an annual event. The selection process leading up to the ceremony commences in

January and ends before the end of March of the same year. The recipients are selected through a competitive process called the IFOMSSA Challenge (details are presented later in this work).

1.10.1. The IFOMSSA Senior Scheme: Background

The annual IFOMSSA Senior Scholarship Scheme is functional in parts of South-eastern Nigeria, a developing country that fits the needs of this study. The scholarship is available to eligible senior (upper) secondary school students, with the recipients chosen through a mix of merits and need-based selection criteria (OCI Foundation, 2016). The program is designed to instigate improved academic performances in whole-student populations as they go through the final class of eligible high schools.

Since its commencement in 2017, the IFOMSSA Senior scheme has had three pieces of anecdotal evidence that might indicate improved academic performances among students in the participating schools. Firstly, one of the benefitting schools, Community Secondary School (CSS), Umuoba-Anam (Anambra State, Nigeria), took third place in back-to-back (2018 and 2019) state-wide inter-school quiz competitions. Pictures of the winning team are attached as Appendix A, while a video (ABS TV, 2019) and news release (Nigerian Tribune, 2019) are also available. Equally impressive was the fact that the CSS Umuoba Anam was the only public-owned, rural school among the top three winners over the two years in focus. At the time of this work, Anambra State has about 261 public schools, in addition to nearly 700 privately owned ones (Federal Ministry of Education, 2021). According to the managers of CSS Umuoba Anam, this feat (from a rural, public-owned school) and the consistency showed by the students over the two years were unmatched in the State before the IFOMSSA scheme was introduced.

Alongside the foregoing, the second anecdotal evidence supporting the potential impact of the IFOMSSA Senior Scheme was that a number of beneficiaries of the scholarship had gained admission into reputable tertiary Nigerian institutions. Matriculation pictures from a few of them are attached as Appendix B (accompanying admission letters, though available, are not attached due to confidentiality reasons as they contain personal information). Appendix C reveals the official lists of the IFOMSSA scholarship recipients (Senior and Junior) from 2017 to 2018, showing the recipients' names at the time and those among them who had progressed to tertiary

institutions. Before the IFOMSSA Senior Scheme was introduced, this level of progression had been, according to the school managers, reportedly rare among high school students finishing from such poorly-equipped schools in disadvantaged Nigerian communities.

The final piece of anecdotal evidence comes from the fact that a number of these IFOMSSA senior scholars were successful in receiving the “Cyfed Undergraduate Scholarship”, which is the next level of scholarship also on offer by the same Foundation that manages the IFOMSSA scholarship scheme. The list of recipients from 2019 (the first time the IFOMSSA senior scholars were eligible to compete) is attached as part of Appendix D. The Cyfed Scholarship is very competitive, and the success of IFOMSSA scholars in obtaining that scholarship makes a case for their academic progression, which might, arguably, not have been possible without the IFOMSSA scheme.

Despite the above examples, an empirical research into the IFOMSSA Senior scheme is needed to clarify that it can actually improve test scores and that the three reported observations cited above were not by mere coincidence. If proven, these might prove that scholarship schemes with the proposed principles of this work (detailed in *Section 1.9*) might be effective. They may also justify the need for the investment of resources and wide-scale adoption of the model if the findings can be replicated in larger studies. From a quantitative point of view, it is also important to assess any improved academic performance to ensure that reported observations are statistically meaningful.

It should be noted that the entire selection process for the IFOMSSA Senior scheme commences in the final two to three months of the year before an award and ends in February or March of the award year. Recipients are selected through a merit-based, competitive process, with the final selection step being the “IFOMSSA Challenge”, details of which are in *Section 1.10.3*. Additional notes should also be made of the IFOMSSA Senior Award ceremonies. Eventual award recipients are rewarded at this event and community participation is also promoted. It has been held annually since the inaugural edition in March 2017.

The sections below present the full details of the study intervention, including how the measures for the three principles underpinning the study (the hybrid selection process, en mass motivation, and community participation) are actualised. *Figure 1*

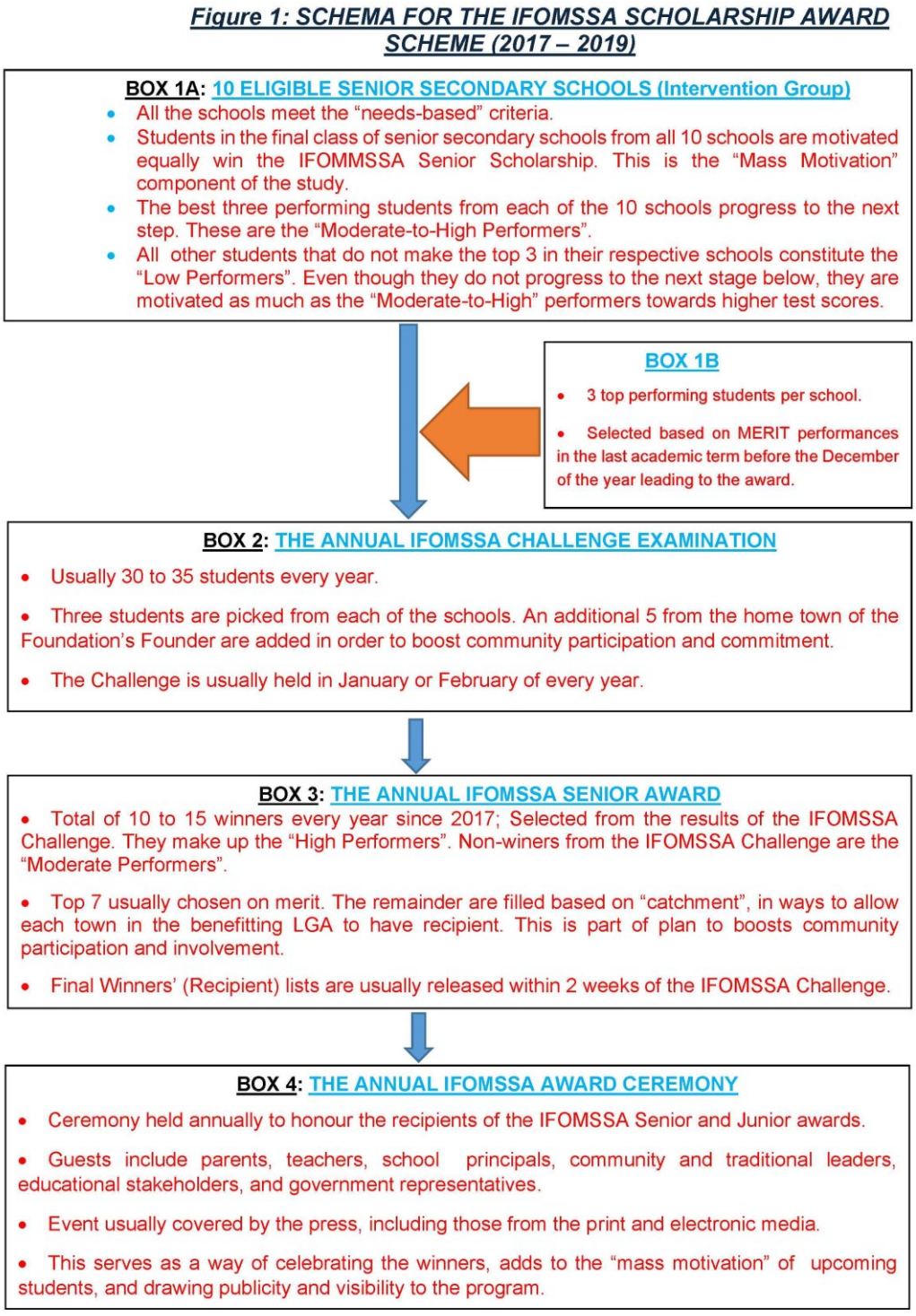
also presents a schematic representation of the entire Scheme, while the “technical details” of the Scheme are discussed in the sections below.

1.10.2. The IFOMSSA Awards: Details

Given the foregoing discussion, this study evaluates the IFOMSSA Senior Scholarship Scheme as a test case for a program that can improve academic performances for a large group of students using limited funds and enhanced community engagement. The scheme is designed to ensure that the impact of any available financial incentive is optimised to reach a lot more people than might typically be the case without the need to increase the exact amount of resources available. The key aim is to enhance the quality of education in parts of Nigeria, where this work is focused on. If replicated in relevant larger studies, other developing countries and communities in developed countries with similar challenges may also benefit from the ideas and principles underlying this work.

As was made obvious after the Literature Review (*Chapter 2*), the principles underlying the IFOMSSA Senior scheme offer novel approaches in terms of the combination of various components in the design of a financial incentive scheme.

Figure 1: Schema Summarising the IFOMSSA Senior Scholarship Award



1.10.3. The IFOMSSA Challenge, Mass Motivation, and Recipients

The annual IFOMSSA Challenge is a distinct component of the IFOMSSA Senior Scholarship scheme that contributes to its **"merit" aspect** (OCI Foundation, 2016, 2017, 2018, 2019, 2020). It is designed to create an academically competitive and fair process for selecting candidates who ultimately receive the IFOMSSA Senior Award. In real terms, this competitive and merit-based approach requires that all students in the designated class (SSS III) of the 10 eligible schools are motivated en masse to work hard, as they all, from the outset, stand equal chances of receiving the award. The underlying idea is that, with such wide-scale motivations, it is hoped that the overall academic performances of a greater number of students in these benefitting schools (not just the academically outstanding ones or the eventual winners) will improve, even though only a few of them will ultimately get the financial rewards. As explained in *Section 1.9*, this "merit" aspect of the IFOMMSA scheme combines with the "need-based" component (see below) to satisfy one of the three principles underlying the proposed scholarship model.

The "need-based" aspect *(See Figure 1)* arises from the fact that all the 26 schools involved in this study (including the Intervention and Control groups as detailed in *Section 4.3.1*) are located in an area of poor socioeconomic background (Enibe et al., 2019; Ikeogu et al., 2020). The inclusion of this need-based condition to the IFOMSSA Scheme was necessary, given a WHO report that stated that, in most countries (including those with high literacy levels), the largest access to education are concentrated among children with rich parents, among those living in urban areas, and among boys (The World Bank, 2018). The implication is that, if conscious efforts are not made to target students of low socioeconomic backgrounds, the overall beneficiaries may end up being students who do not need the financial assistance, even though they may still benefit from being motivated to greater academic achievements. These realities explain why the IFOMSSA scheme concentrated on a rural location, where poor families are predominant. It is also for this reason that it allows equal opportunities for both boys and girls. This uniform socioeconomic background also eliminates a potential for bias that might have otherwise imposed some unwanted limitations on the study.

Based on the literature review conducted as part of this work (*Chapter 2*), this needs- and merits-based combination makes this study one of the few, if not the only one, to adopt this hybrid approach. The aim is to explore a new and innovative way of

administering limited incentives available for merit-based scholarships that can positively impact millions of people in the needs-dominated societies of developing countries.

This “mass motivation” dimension of this study (the second requirement) comes from the desired ability of the scheme to stimulate all (not just the academically outstanding ones or the eventual recipients of the scholarship the students) in the final class (SSS III) of each of the ten intervention schools *(Figure 1).* Mass motivation is generally achieved in the lead-up to the IFOMSSA Challenge and starts for each student cohort around September of the year preceding the award. The school principals and teachers in each of the ten schools repeatedly inform the eligible students about the availability of the IFOMSSA Senior Award. The school authorities are also encouraged to notify the students that all of them in SSS III are eligible for the award, and constantly remind them that participation in the selection exam (IFOMSSA Challenge) is dependent on academic performances of the term before the selections are made (not previous performances before that). This understanding ensures that all students start on a fresh slate, and poor performers in previous assessments are not deterred. The academic term of concern runs from September to December of the year before the award. All the information above is put across to the students on a daily basis, largely daily during the compulsory morning assembly (gathering) that each school holds, as well as in their respective classes, all in an effort to motivate all of them to study hard and aim for good test scores. This component of this work is arguably unique and distinguishes the study’s design to achieve “mass motivation” by encouraging as many students as possible to aspire towards higher academic performances. These are all done without the need to increase the funds available for the IFOMSSA Senior Scholarship.

An additional measure that is in place to ensure “merit” can be found in the “recipient selection” aspect of the scheme. By January of the award year, each school is expected to submit the names of three of their best students academically (selected through the process described above) from each eligible class (SSS III) to designated officers in the Education Zone who work with the Foundation *(See Figure 1).* The three from each school are selected based on their scores in four selected subjects (English Language, Mathematics, Civic Education and Biology, with details in *Section 4.3.4*) in the term exams immediately before the end of that year (September to December, as already explained). As such, the selections are purely on academic merit, and, for the

purpose of this study, the selected students constitute the moderate-to-high academic achievers from each school. The unselected ones remain the “low achievers.” To further ensure that the respective schools uphold merit, school principals are made to understand that the nominated students from their schools would be competing against the best students from other schools, who would also be chosen on merit. This ensures that each school does its best to motivate its students and pick the best three that will give them a chance at the more general IFOMSSA Challenge involving representatives of all 10 schools. The entire process is summarised in *Figure 1*.

It should be noted that, as confirmed by the school managers and government officials in the study areas, no other similar interventions were in place for the schools and benefitting communities at the time of this study.

1.10.4. The IFOMSSA Senior Award Recipient-selection

With three participants from each school, at least 30 participants take part in the IFOMSSA Challenge. However, one school, the Community High School (CHS) located in Nsugbe, the hometown of the Foundation’s Founder, is allowed to nominate five additional participants, making a total of eight from the school. Of these eight, a minimum of three are indigenes of the town. As with the other schools' provisions, selections from the CHS Nsugbe are based on academic performance. However, the Nsugbe selection allows for an adjustable catchment consideration, which allows for the best three indigenes to be included in the eight if none of them would make it in the top eight. This method ensures that all non-indigenes enrolled in the CHS Nsugbe have their merits protected (as is the case with the schools) as they compete equally for a minimum of five slots. However, it also ensures that a sense of inclusiveness and fairness is inspired in the home community, thereby increasing community involvement from the hometown where the Foundation has its basis.

With the above format, there were 35 IFOMSSA Challenge participants in 2017 and 2018, with 10 and 12 winning the awards, respectively. In 2019, an extra 3 were allowed to participate from other schools as part of the preparation for the expansion of the scheme in 2020. As such, there were 38 participants in 2019, with 12 eventually winning the award. The participants in the IFOMSSA Challenge usually receive souvenirs from the Foundation behind the IFOMSSA Senior Scheme. The souvenirs vary, but usually include branded writing pads, pens (bics), and so on.

Questions for the IFOMSSA Challenge are set by the teachers responsible for the chosen subjects in the Educational Zone overseeing the academic activities and are designed to be at the same standard as those set for the two senior school certificate examinations that the students prepare for (WASSCE and NECO; details below in *Section 4.3.3*). After the Challenge of each year, the student's performances in each of the four subjects are scored out of 100% and ranked according to their aggregate scores across the four subjects. The marking of papers from the IFOMSSA Challenge is usually done by the supervising teachers for the exam on the same day of the Challenge. The results are subsequently tabulated on the same day as well and given to the “Domestic Liaison Officer (DLO)” of the Foundation for processing. The DLO is usually present alongside other officers of the Foundation at the exam. The whole essence of completing the scoring on the same day is part of the overall design of ensuring transparency and fairness, a key component of the scheme. The final results and recipients are made public within a few weeks of the IFOMMSA Challenge, and the financial rewards are handed out at the annual IFOMSSA Awards Ceremony, which is usually held in March or April of the award year (*Section 1.10.5*).

Annually, around 10 to 15 of the candidates who participated in that year’s IFOMSSA Challenge are expected to get the IFOMSSA Senior Scholarship Award *(Figure 1).* The top 7 performers get the IFOMSSA Award on merit, while the remaining winners are selected based on a catchment system introduced to guarantee that at least one student from each of the six participating towns in Anambra East LGA of the Otuocha Educational Zone gets the award. Like the earlier-explained measure that allows the CHS Nsugbe town to nominate a little more than other schools, this measure is in place so as to enhance maximum community involvement, the third major component of this study’s design aimed at leveraging community influences in inspiring academic performances. It should be noted that the catchment system in place for determining the final group of recipients is tied to the autonomous communities or towns, not the 10 schools, and represents one way of addressing this study's community and psycho-social component that will, hopefully, enable ongoing engagement from all the towns engaged with the project.

Apart from the catchment and the fact that each school is allowed up to three nominations, other measures in place to boost community engagement include staging an award ceremony, wherein community leaders, family members, stakeholders and others are in attendance. That ceremony is also covered and

reported in both print and electronic media, ensuring that the winners are known and celebrated, while the communities are kept constantly well informed and motivated for the subsequent years. These are all designed to increase the mass effect and community involvement in the scheme and are unique features of this study. A component of the research aims is to explore if these measures were effective in any way.

Apart from the catchment system and the fact that each school is allowed up to three nominations, another measure to boost community involvement is the "IFOMSSA Award Ceremony." The ceremony allows community leaders, family members, stakeholders, and others to attend.

1.10.5. IFOMSSA Award Ceremony and Community Involvement

The IFOMSSA Award Ceremony is an annual, official event held by the Foundation to recognise the recipients of the year's IFOMSSA Award. It is usually held before the end of April every year and is designed to aid maximum community involvement, which, as stated, is a key component of this study design. Given this, the award recipients are usually invited to the ceremony alongside their parents and/or family members, the principals of all the 10 scholarship-eligible schools, community leaders and other stakeholders from all towns in the Otuocha Educational Zone, as well as selected State Government officials. This community involvement in the program is a distinctive feature of the scheme design that facilitates the qualitative component of this research and creates room for assessing the impact of involving the families, the community and stakeholders in the scholarship scheme. The ceremony is also covered by the press and reported in both print and electronic media, ensuring that the recipients are known and celebrated, while the communities are kept constantly well-informed and motivated for the subsequent years.

1.11. The Research Question (RQ) and Sub-Questions

Based on the arguments and insights laid out in the foregoing sections, the aims of this work can be summarised in a fundamental RQ, which is:

What are the effects of a scholarship scheme that integrates communities in its design and selects recipients through a hybrid (mixed need- and merits-

based) criteria in an attempt to motivate students en masse towards improved test scores?

The above RQ has several sub-questions which spell out this study's overall goals. These goals are all realistic, measurable and achievable. They include:

a) What were the changes, if any, in test scores (as a marker of academic performance) of students enrolled in a set of schools eligible for the proposed scholarship scheme (the Intervention Group) relative to another set of schools that were not (the Control Group)?

b) What were the changes, if any, in the trend of test scores within a set of schools over the three years before the proposed scholarship scheme was introduced (pre- or before intervention) relative to the performances in the same set of schools in the three years after its introduction (post- or after intervention)?

c) In the three years following the introduction of the proposed scholarship scheme, what were the differences, if any, in test scores between “low achievers” in schools that benefitted from it compared to the “moderate-to-high achievers” within the set of same schools?

d) What were the changes, if any, in the enrolment patterns of students into the senior (high) school certificate examinations in schools that benefitted from the proposed scholarship scheme in the three years after the scholarship’s introduction, compared to the enrolments in the three years prior to that?

e) What are the perceptions and experiences of participants involved in a scholarship scheme that encourages community participation and adopts a hybrid (mixed needs and merits-based) selection criteria as key measures to simultaneously encourage large numbers of students towards improved test scores?

The major objectives of this work are to address all five research sub-questions, and this work adopts a mixed methods (quantitative and qualitative) research approach to evaluate the efficacy of the IFOMSSA scholarship scheme, a prototype that integrates all the proposed principles. The first four sub-questions will be answered using a quantitative research approach (*Section 4.3*), while the fifth will be handled using a qualitative research method (*Section 4.4*). This is the basis of the

mixed-methods design of this work, an approach whose rationale and other details are fully discussed in *Section 4.1*. The remainder of this work will now explore the Literature Review (*Chapter 2*) as well as the Theoretical Frameworks that guided the study (*Chapter 3*), and Methods (*Chapter 4*). These are then followed by the Results, of which the Quantitative (*Chapter 5*) and Qualitative (*Chapter 6*) components are presented differently. Afterwards, a detailed discussion is undertaken to review the findings and explore how they compare to published work in the existing literature (*Chapter 7*) before the Conclusions and Recommendations (*Chapter 8*) are considered. All of these aspects of the study are presented as stand-alone chapters.

CHAPTER 2: LITERATURE REVIEW

The literature was reviewed using the Traditional (or Narrative) approach to identify existing local, national and international publications related to this research work. This traditional method involves reading as much of the literature as possible, assessing its importance, and constructing relevant narratives afterwards (Onwuegbuzie & Frels, 2016; Pickering & Byrne, 2014). By allowing critical, objective and comprehensive analyses of existing and current knowledge on the topics of interest, this narrative approach was useful in the development of the research questions outlined in the Introduction (Machi & McEvoy, 2016). An alternative to the Traditional Literature Review would have been the Systematic Quantitative Literature Review (SQLR) advocated by Pickering and Byrne (2014). The SQLR is an approach that filters related publications through a systematic process that quantitatively assesses the literature in order to produce a database that identifies trends and gaps (Ahn & Kang, 2018; McClellan, 2020; Misra & Agarwal, 2018). Even though the SQLR is explicit, reproducible and comprehensive, with a structured approach aiming to reduce bias (McClellan, 2020; Pickering & Byrne, 2014), this work considered the Traditional approach a more suitable fit given its ability to also reliably identify gaps in the literature, compare multiple viewpoints, and pick out the needed studies before summarising or synthesising the overall information garnered (McClellan, 2020; Paré & Kitsiou, 2017).

Papers (books, journal articles, online publications, and so on) were identified through the search of multiple electronic databases like PsycInfo (a database of abstracting literature in psychology and related disciplines), Web of Science (a bibliographic database that allows advanced search and citation analysis), Google Scholar (which allows a broad search of scholarly literature across a wide variety of disciplines and sources) and MEDLINE (which is the bibliographic database from the National Library of Medicine that contains millions of references to journal articles in life sciences) (Gusenbauer & Haddaway, 2020). Access to these databases was gained through the University of Southern Queensland (USQ) Library, which includes them within its search facilities. The search terms, which were used individually and in various combinations, allowed the use of wild cards and truncations like “incentives”, “financial”, “high school”, “senior secondary”, “impact”, “scholarships”, “developing African countries”, “outcomes”, “learning”, “community”, “social”, “family”, and so on.

Wherever possible, and to ensure that a comprehensive search was done, information in the grey literature (reports, working papers, government documents, white papers and evaluations) was also sought.

With particular reference to developing African countries, the literature was explored to identify key publications on scholarship schemes and the influences of socioeconomic and financial factors on academic performances and test scores. This helped provide the required insights, with the ultimate emphasis being on the identification of literature that connected areas of interest to this study. The outcome was the identification of the impacts, where they exist, of scholarship schemes designed to motivate whole student populations to attain higher academic performances and test scores in developing African countries.

As indicated in *Section 1* of this paper, publications over the past 30 years (from 1995 onwards) were included in this work. While a shorter cut-off date would have been ideal, as that would have allowed the inclusion of only recent publications, the many decades of evolution of education in the developing world, as already discussed in the early part of this work *(Section 1.3)*, meant that such a limitation would exclude some significantly relevant academic papers that would otherwise provide vital depth and scope to this work. Publications older than 30 years might have introduced redundancy to the work, hence the decision to limit the scope as described.

Where multiple data separated in time were available for the same subject, the most recent ones were used. Cited references from the studies identified were followed to obtain secondary references, and all identified studies were filtered, using their abstracts to select relevant publications.

Following the literature review, no relevant study was found from Nigeria, even though a few publications showed interest in other aspects of scholarship schemes in the country (details below). Altogether, the literature search yielded studies that can be conveniently grouped into three main themes that cover all aspects of this work. Such “theme groupings” allow an organised presentation and discussion of the key issues in the literature as they relate to this work, and all combine to cover all aspects of the research questions of this work. Overall, 24 studies were deemed relevant to this work, and they include:

i. Outcomes and impact of the incentives, with 10 studies.
ii. The social aspects and roles of communities in such incentives, with four studies, and:

iii. Specific types and examples of merit and need-based incentives and how they compare to the unique combination of both schemes applicable to this study. Studies focusing on ten different grants (four merits-based and six needs ones were identified).

2.1. Outcomes and Impact of the Incentives

One notable fact from the 10 identified studies under this theme was that, like many other sectors (including health, agriculture, transportation, and so on), success in the education sector depended on the achievement of a functional balance within its own sub-sectors. A number of authors have argued that these educational sub-sectors are more or less the same as educational outcomes and include (i) school enrolments, (ii) school attendance, (iii) school retention, (iv) graduation and (iv) academic performances, also referred to, as learning outcomes or test scores (Gibbs et al., 2009; Heyneman, 2009; Kremer et al., 2013). As the cited authors noted, if achieved, a good balance between these outcomes (sub-sectors) can satisfy the desired educational aspirations of developing African countries. Most educational financial incentives, therefore, are designed to encourage and instigate positive behaviours from students and their parents towards one or more of these desired outcomes. Worth pointing out is the fact that there are other measures of success in education, some of which include soft skills (like creativity, motivation and cooperation) and other attributes like confidence, identity, pride, and aspiration (Asefer & Abidin, 2021; Succi & Canovi, 2020). Even though important to know about, these are not included in the education sub-sectors of interest in this work and will not be discussed further.

It should be noted that, alongside the foregoing, other commentators have argued that multiple contributory factors (like poor curricula design, pedagogic delivery methods, conditions of service for the teachers and infrastructural or institutional supports, among others) add to the steady decline in education within Nigeria (Ajagbawa, 2014). Even though a few research publications have shown interest in scholarship schemes in Nigeria (Nzeako, 2016; Omeje & Abugu, 2015), no relevant study relating to the five aforementioned outcomes was found as it relates to the country. This gap provided one of the many justifications for this research, its overall focus, and the research questions that guided it.

Fortunately, however, multiple studies (including large-scale randomised ones) carried out on incentive programs were found in other developing countries like Brazil (De Janvry et al., 2006), Mexico (Attanasio et al., 2012; Dubois et al., 2012), Colombia (Attanasio et al., 2005; Barrera-Osorio et al., 2008), Pakistan (Chaudhury & Parajuli, 2010), and Bangladesh (Arends-Kuenning & Amin, 2004). These leave no doubt regarding the positive impacts of the financial incentives on the majority of the stated educational outcomes. In these countries mentioned, the cited studies revealed evidence of widespread improvements in all but the last of the five listed outcomes, which was "academic performance or test scores" (Bettinger, 2004; Castleman & Long, 2016; Cornwell et al., 2006; Dynarski, 2003; Filmer & Schady, 2014; Gibbs et al., 2009; Kane, 2003; Kremer et al., 2013; Kremer & Holla, 2009; Mendez et al., 2011; Scott-Clayton, 2011; Slavin, 2010).

This lack of definitive evidence on the potential impact of existing financial incentives on test scores presents an important knowledge gap that informed the design of this study. Ironically, as discussed in the Introduction (*Section 1.5*), test scores hold a critical key to multiple economic developmental indices needed by developing countries to meet up with the rest of the world. These facts underline the need to identify ways of sustainably engendering improved test scores and quality education in developing African countries. They provide an additional basis for the research question of this research work and further explain why a novel approach in the design of educational incentive schemes in developing African countries in ways that will stimulate these test scores is needed. This study aims to achieve this. The ten studies identified under the first theme of the literature review will now be analysed.

The first of these was a regression analytical evaluation of Cambodia's Education Sector Support Project (CESSP) Scholarship Program (Filmer & Schady, 2014). The CESSP provided incentives on the demand side of education, which was aimed at the improvement of enrolments and attendance for secondary school students. It was primarily a needs-based scheme that focused on 100 out of approximately 800 schools in lower secondary schools across Cambodia. The 100 schools were chosen based on their high dropout rates and propensity to serve the poor. The scheme (which was complemented by other programs financed by international, governmental and non-governmental donors) distributed bicycles, school uniforms and other school materials. A number of positives were highlighted in the study that evaluated it. Firstly, it was found that, even though test scores among

the students were not improved, those who received the award stayed longer in school, a key objective of the program. It also found that the prolonged stay in school was maintained even after the scholarship eligibility of the beneficiaries elapsed, an indication that the awards might have had some medium-term effects. Despite these positives from the study, a few gaps relevant to this work were identified. One was its inability to establish the exact cause of the non-improvement in test scores among the benefitting students despite the acknowledged significant increases in enrolments and school retention. That study was not designed to identify this, possibly because of the non-inclusion of a qualitative component, which might have allowed an unravelling of the actual influencers to academic performances. This gap contributed to the recommendation of policymakers and academics who reviewed the study that searches for programs that can improve learning outcomes in poor countries, should continue. Through its mixed methods approach, this current work was designed to respond to this knowledge gap and the stated recommendation and can, therefore, be considered a direct response to them.

Another relevant study is a randomised field trial designed to explore the role of financial incentives in promoting resilience against poverty-related challenges among American students (Spencer et al., 2005). Like the CESSP, it involved the award of financial incentives for poor students of diverse backgrounds in order to maintain their academic standings. Student eligibility was based on the recommendation of counsellors, and selected students received monthly stipends, which were continued as long as the students regularly met the stipulated academic criteria. Those who met those criteria were judged to be in good standing. The randomisation approach, as well as the study's ability to distinguish between the performances of high and low achievers, were obvious strengths of the paper, which found that, after one year of administering the scholarship, recipients of the award were statistically more likely to maintain good grades compared to the non-recipients. The paper also observed that the evaluated scheme was ineffective among students who were already high-achievers and that it promoted academic successes at varying degrees and for different reasons, depending on the students' perceptions of the incentives (Spencer et al., 2005). These observations were among the reasons why the current study included high, medium, and low achievers in its analysis. The ability to identify the students' perceptions is considered another strength and was partly why a qualitative component that will explore the participants' perceptions was included in

this current study. Despite the stated strengths, it must be noted that the evaluated study also had a number of gaps, which the currently proposed study aimed to fill. Among these gaps were that the study was not carried out in a developing African country, and the mass motivation of the beneficiaries was not part of the scheme. In addition, the selection of the recipients relied on the suggestion of counsellors, and no merit component was included. To address these gaps found in the American study, the proposed research of this current work is being conducted in a developing African country, includes mass motivation, and has a merit component to the selection of recipients.

The Bolsa Escola Conditional Cash Transfer (CCT) incentive program was another needs-based scheme that benefitted eligible students from all of Brazil between 2001 and 2003, offering monthly stipends to poor mothers in return for their children to maintain regular school attendance (De Janvry et al., 2006). It was a decentralised program that entrusted the municipalities with the roles of selecting beneficiaries and implementing the CCT. An evaluation of the program found a strong impact in lowering dropout rates, with a 7.8% improvement in completed-year attendance. It was observed, however, that grade failure (a form of learning outcome) did not decrease but actually increased by 0.8%. This latter observation was probably because the scheme inadvertently maintained the attendance of pupils with less ability and less motivation, who would normally have dropped out had it not been for the scholarship. The possibility that the performances of low-achieving students might have contributed to the overall grade failure was theoretical and not backed up with any evidence from the research. This is considered a gap in that study, and the current work, which included measures to differentiate and analyse students as high, medium and low achievers, was designed to address this. One other gap from the study was that, even though it focused on a developing non-African country (Brazil), the outcome measure was grade failure, not improvements in actual test scores. The currently proposed study is designed to address this as well. With its mixed-methods approach, this proposed work also aimed to identify the underlying reasons for any changes in observed test scores, a factor not addressed in the Brazilian study but which will be important for the design of future scholarship schemes for developing African countries. One interestingly positive aspect of the evaluated Brazilian study was its observation that transparency in the identification and selection of beneficiaries, as well as strict enforcement of the transfer conditions, were linked to a higher impact of

the incentives. These lessons helped inform the rigorous enforcement of the key principles underlying the current study, as well as the research questions. Finally, the proposed scholarship scheme has a merit component, a feature lacking in the entirely needs-based Brazilian program. This measure, alongside the transparency of the researched scheme, is expected to, theoretically at least, help improve the impact of the financial incentives on test scores.

A fourth relevant literature was a randomised experimental study designed to evaluate the impact of a Mexican CCT program called *Programa de Educacion, Salud y Alimentacion* or PROGRESSA (Attanasio et al., 2012; Dubois et al., 2012). PROGRESSA (not a direct acronym) is derived from the Spanish acronym of the scheme (whose translation is not clear), which has since been renamed "Oportunidades". It was first introduced to rural Mexico in 1998 as an Education, Health, and Nutrition program that was designed to, through incentives, increase the human capital of children in poor and rural households by improving school enrolments and performances in passing grades. Attempts at achieving these goals were made through the provision of cash and kind benefits to eligible households, on the condition that the targeted children would attend schools and health centres. A positive impact across all levels of school enrolment was found. Even though a positive impact on grades was also observed at the primary school level, such was not observed for secondary schools. The researchers attributed this effect on secondary school grade performances to the "disincentive effect" generated by terminating the benefits after the third year of secondary school (Attanasio et al., 2012; Dubois et al., 2012). The randomisation method used in the study is considered a strength. Even though it also explored grades as an outcome (that aligns with the goals of this current study), like all the others already discussed, this Mexican study did not adopt a mass incentive or community approach, and the provided incentives were terminated early for beneficiaries in secondary schools. Potentially, this early termination, possibly in combination with other factors, accounted for some of the non-improvement in grades at the secondary school level. There was also no qualitative component that might have revealed the likely influencers of the observed academic performances. These identified gaps are, hopefully, addressed by the current work.

In 2005, the city of Bogota, Colombia, established a CCT scheme (called the "Conditional Subsidies for School Attendance" program) that was designed to improve student retention while lowering dropout and child labour rates (Attanasio et al., 2005;

Barrera-Osorio et al., 2008). Three variants of the intervention were concurrently implemented, allowing an evaluation of the various educational outcomes for the same targeted beneficiaries. The first was a basic CCT program administered based on school attendance, while the second delayed a chunk of the cash transfer that was linked to attendance and left it to be issued just before re-enrolment. A third approach made some of the transfers conditional on the students' graduation and tertiary enrolment, and not solely on attendance. The evaluation of the variations found that financial incentives increased all of attendance, enrolment and graduation rates, as well as matriculation into tertiary institutions (Barrera-Osorio et al., 2008). It also found that the scheme's structure had an impact, given that a simple postponement of the awards improved enrolments to both secondary and tertiary institutions without reducing daily attendance. The variations in the interventions adopted for the scheme is considered a major strength of this Colombian scholarship project, as it enabled the observation that appropriate variations of incentive schemes could influence educational outcomes for the targeted beneficiaries. The distinctive variations of the Colombian study contributed to the design of this current work, which adopted a varied structure that identified low, medium and high-achieving students alongside a robust selection process. The evaluated Colombian study did not have a qualitative component, and so could not reveal any underlying influencers. This gap, along with the absence of mass motivation and community participation components, are all addressed in the current work. A very interesting aspect of the Colombian research was that it reported a “mass effect”, in which friends and associates of those who received the incentive were motivated into attending schools at rates as high as those observed among the primary beneficiaries themselves (Attanasio et al., 2005; Barrera-Osorio et al., 2008). The implication was that this provided a measure of evidence that the impact of financial incentives could potentially spill over to non-recipients of those cash incentives. This possibility led the researchers to propose the approach as a strategy that can be used to reach many potential beneficiaries in environments where local, national or international donors are financially constrained (Barrera-Osorio et al., 2008). This observation remained largely theoretical, as the Colombian study was not designed to identify the actual cause of that potential spill-over effect. This current work, through the in-depth interview of its qualitative component that targeted both the scholarship recipients and the non-recipients, aimed to address this. It should be noted that, while the Colombian study was the only identified research that observed and

documented a potential “mass effect” of a scholarship scheme (making it similar to the design of the current research), it still differs from this study in that its focus was on school attendances, not test scores.

Another relevant study was an evaluation of the activities of the African Development Bank (ADB) in 2010 (Gakusi, 2010). The research revealed that improvements on both the quantitative (enrolment numbers) and qualitative (test scores) targets of the ADB in the education sector were not only below expectations but were impeded by multiple factors (like access to schools, social and gender equity issues, financing, and so on), particularly in sub-Saharan Africa (Gakusi, 2010). The researchers, therefore, called for improved efforts if the goals of the then “Education for all by 2015” were to be actualised. This target was clearly not met, leading to its succession by the “2030 Agenda for Sustainable Development” set by the United Nations at its 70th anniversary in September 2015 (United Nations, 2023). The researchers also called for fresh attempts at policies that would have more realistic and implementable options, form a better fit to a globalised labour market and economy, and would have applicability to all tiers of education, including primary, secondary, tertiary and technical. This study’s research design addresses most of these aspirations and can be considered a direct response to this call. Other gaps in the ADB study were that it was not structured to evaluate test scores and lacked measures to identify the impact of either community involvement or mass motivation of the beneficiaries. This proposed study addresses these gaps.

A seventh study of relevance to this theme was the one that looked at two forms of financial incentive programs established in the 1990s in Bangladesh (Arends-Kuenning & Amin, 2004). One was the Food-for-Education (FFE) program, which offered wheat to poor families with children attending primary schools on the condition that these children must maintain school attendance. The other program was the Secondary-School Scholarship Program (SSSP), which was a World Bank initiative that complemented the FFE, and was made available to all, particularly girls who attended secondary schools. The SSSP gave monthly stipends, in addition to complete waivers of all fees, in return for the beneficiaries attending classes. The parents of the benefitting girls were also to ensure that the girls were not married out before they turned 18. Overall, the incentives helped with fees and books, in addition to compensating the families for lost labour from the children that attended schools. Identified gaps in the work included the fact that there was no merit component to the

selection of its beneficiaries (it was entirely needs-based), as well as the fact that test scores were not evaluated. This study addresses these. It was interesting to note the study's observation that parents do respond positively to incentives, and that such responses remained, even if the amounts involved were small or not large enough to eliminate poverty. In fact, the researchers observed that, even when incomes were lost due to school attendance adopted in place of employment from previously employed students, the positive impact on parents' attitudes remained. These findings provided useful insights that inspired some aspects of this work and further justified the mass approach of motivating students with funds that might not otherwise be considered large for individual recipients. A reasonable spread of the incentives to reach and motivate more people, rather than giving out large amounts to a smaller number, may have the same level of outcome as the latter.

Another study, this time from India, focused more on ways of improving learning quality in urban slums and was based on the acknowledgement that merely adding school resources (supply-side incentives) in isolation was ineffective (Banerjee et al., 2007). It adopted two strategies for its incentives. One was through a remedial education program executed by the hiring of teachers to teach basic literacy and numeracy to pupils who were lagging behind in government schools. This was found to be very effective at increasing average test scores. The second approach used a computer-assisted learning program that allowed 4th graders to have two hours of shared computer time in a week. This reinforced their mathematics skills as they played educational games and were also found to be very effective at this (Banerjee et al., 2007). Both approaches were considered strengths of that study, as they contributed to improved test scores as targeted. The scheme being evaluated in this study, however, did not adopt any of these measures, partly because of the cost implications. In reality, while the two measures could potentially be adopted by developing African countries to boost learning quality and test scores, the cost requirements mean that most of the concerned countries cannot afford it on a wide scale. This is due to the limited aid available for such incentive programs in these countries, making them unsustainable. This reality rationalises the need for an approach that can use the same level of available incentive to motivate many more students in ways that are deemed sustainable. This sustainable approach is prioritised in the current work.

More insights were provided from the ninth study identified in the literature review, which reviewed published articles that explored the effects of incentive schemes on educational outcomes and came up with a number of key findings and recommendations for developing African countries (Gibbs et al., 2009). One such finding was that financial incentives increased school attendance at a range of three to 10 percentage points, even though it was largely limited to secondary schools, as attendance was already high in primary schools. Impacts on actual learning and graduation rates, however, were small, with the reviewed publications not designed to address these. The fact that this reviewed study did not explore the potential influencers that determined the non-improvements in actual learning rates also leaves a knowledge gap that the current work aims to fill. Some key recommendations from that work were very useful, though. One such recommendation was the need to devise strategies that will tap into the positive effects of financial incentives in ways that will be cost-effective and, wherever possible, combine them with improvements in the actual schools. Another recommendation was on the need to explore measures that can increase actual learning outcomes. Thirdly, and very importantly, the researchers observed that the amount of money attached to the incentives was less important than the recognition for accomplishment gained. This was very similar to the observations of the earlier-cited Bangladesh study on FFE and SSSP (Arends-Kuenning & Amin, 2004). The current research builds on these strengths and has incorporated a qualitative component that will further identify the underlying influencers of any observation, a feature not covered by the study from Gibbs et al. (2009).

The final contributory publication on this theme was one that used multiple criteria to analyse the findings of nine evaluation meta-studies, which were all focused on educational projects worth a combined US$ 6 to 8 billion and were carried out in developing countries by international aid-giving agencies (Chapman & Moore, 2010). It was found that the donor organisations focused a lot more on inputs rather than outputs, and only limited pieces of evidence were observed to support any possibility that the projects promoted student learning outcomes. These were obvious gaps in that research, given that, as had already been acknowledged earlier, outputs in the form of test scores and academic achievements have better correlations with the holistic growth and development in developing countries within Africa and elsewhere. As such, this current work focuses more on test scores. The publication by Chapman and Moore (2010), however, had some strengths that are worth acknowledging. One

was the fact that it was a meta-analysis that evaluated nine different studies, a research approach that is known to raise the robustness of observations and findings (Greco et al., 2013). A second strength was that all the included studies were from developing countries (though not in Africa), an area on which the currently proposed paper is focused. These strengths all add to the relevance of that paper to this current work.

Alongside the foregoing, the literature search of this work further identified a significant gap in the interplay between individuals, families, communities and socioeconomic factors and their potential influences on academic performances (test scores) associated with scholarship schemes. The studies under this "Community Involvement" theme, which provide further information that shaped the research questions of this currently proposed work, will now be discussed.

2.2. Community Involvement

A second theme that evolved from the literature review for this work centred on community involvement and its impact on educational financial incentives. Unlike the earlier theme on the "outcomes and impacts" of educational financial incentives designed to influence test scores, little was available in the existing literature for this theme, with only four relevant publications identified.

The first was a systematic review that explored studies targeting the quality of test scores as a learning outcome for students in developing countries (Masino & Niño-Zarazúa, 2016). The study's focus on "test scores", away from the traditional outcomes like school enrolment, attainment, repetition rates, dropout rates and pupil-teacher ratios, was very much aligned with the larger goal of this study. The argument that test scores were much better indicators of learning performances and achievements relative to other educational outcomes, which were considered poor indicators of education quality, contributed to the decision to focus on test scores in this study (Masino & Niño-Zarazúa, 2016). Following their study, Masino and Niño-Zarazúa (2016) identified three drivers that can improve student academic performances, and they categorised these as the supply-side elements (which include the provision of additional human and physical resources, as well as learning materials), the demand-side factors (which influence behaviours and choices by teachers, students, and families), and the bottom-up/top-down interactions and community interactions (through decentralisation of reforms, and the involvement of communities in school

programs). More significantly, they noted that financial interventions were much more likely to be effective at inspiring improved test scores (on writing, reading and mathematics) only when at least two of the three identified factors are combined and also when social norms and intertemporal choices are integrated into the policies. They observed that combining policy approaches, rather than relying on one approach, would likely improve learning outcomes. They argued that isolated interventions on the "supply side" of education are not very effective unless complemented by incentives that shift preferences and behaviours, or those that allow community participation. They reported that, in situations where the demand for educational services is constrained by societal and economic factors (a situation prevalent in most developing African countries), the supply of physical and human resources alone can often result in a waste of limited resources. One key strength of the study lies in the fact that it was a systematic review that analysed data collated from multiple experimental and quasi-experimental studies. That study also looked at community involvement and evaluated this alongside other intervention approaches. All these helped shape the research questions of this current work. Though, mass motivation was not a component of the studies reviewed by that work, and this is one gap that the current study was designed to address. These findings from Masino and Niño-Zarazúa (2016) strengthen the need for a re-think in the approach to motivating and incentivising pupils towards higher academic performances in developing African countries, with increased community participation being one aspect that is often neglected. Interestingly, this view is supported by arguments that interventions which combine student performance-based incentives (or demand-side incentives) with supply-side ones (like teaching aids and school or electricity infrastructures) are generally successful as they directly influence student's daily experiences and were less susceptible to the impact of exogenous factors (Hassan et al., 2022). Hassan et al. (2022) further advised policymakers to invest more in interventions incorporating these strategies if they are to enhance education quality. The proposed scheme of this current work incorporates some of these into its design in the hope of identifying cost-effective and sustainable ways to leverage community influences and improve academic outcomes.

Another research identified under this theme was the one by Barrera-Osorio et al. (2008), whose main part has already been discussed under the first theme. The study was a randomised controlled experiment that explored aspects of Colombia's

“Conditional Subsidies for School Attendance” program. It **was** found that family dynamics and peer influences can affect **parents' and children's** decisions on education. Among the strengths of that study was its ability to explore family and peer variations and how they interacted with student academic performances in the face of financial incentives. As stated earlier, the study also integrated various layers of analyses, allowing it to explore three different variations of the scholarship scheme, including a CCT delivered based on regular school attendance, along with another one that postponed some of the cash incentives and links it to levels of attendances till just before student re-enrolments. The final linkage of the CCT was to students' graduation and tertiary enrolments rather than just attendance. These approaches were similar to the multi-structure design of this current work, which has different layers and proposals to the proposed scheme (mass motivation that targets all of low, medium and high-performing students, the selection exam that focuses on medium and high-performers only, and then, the actual scholarship recipients, considered the high performers). Such an approach, it is believed, should help instigate positive impacts in different aspects of the desired outcomes and is considered a strength of the referenced study. Again, that study included neither mass motivation nor test scores as part of its study aims. These were also gaps that the currently proposed study aimed to address. Notably, the researchers’ observation that financial incentives could trigger a reallocation of responsibilities within households was very helpful in the inclusion of community influences in the design of this work, and helped inform this study’s decision to ask questions that will explore family readjustments, if any, with respect to the scholarship scheme. For instance, the authors reported that, when compared to those in families with non-scholarship recipients, the benefitting families may adjust in ways that allow the siblings of the scholarship winners to engage in more wage-earning jobs rather than attend schools themselves. The study also observed some evidence that peers of those who received financial awards were likely to be influenced to attend schools, even at the same level as those who received the actual awards. This represented an indirect but desirable “mass” effect of scholarship incentives. This observation was related to school attendance, not test scores. By aiming to motivate the students en masse, this current study hopes to evaluate the possibility of this mass effect with test scores, not just school attendance.

A third paper relates to a case study that involved a rural school district in Ghana whose findings were published in 2022 (Anlimachie et al., 2022). It found that interventions that integrated community participation with the removal of financial and geographical barriers led to improved educational improvements in rural settings (with senior school participation rates increasing by 22% within two years of the introduction of a Free Senior High School Policy, FSHSP). There were also increased performances among females, along with reductions in inequalities and poverty levels. The authors advised that collaborative community participation in educational schemes offers options that can help "leapfrog" inequality and poverty in Ghana and other communities that have contexts similar to those in the location studied. That study differs from the current one in that it did not include mass motivation and was not linked to a scholarship incentive scheme, areas that this work aims to explore alongside community impacts. There was also an evaluation of economic outcomes, which, even though not covered in the current work, strenghtens its argument that improved educational outcomes can boost economic growth.

A recent qualitative study conducted in South Africa explored the perceptions of 58 parents on their involvement in the education of their primary school children (Ngozwana et al., 2024). Those involvements were through different formats that included working indirectly with the schools and teachers or directly on the children by assisting with their homework, modelling positive behaviours in them and providing emotional support and career counselling where needed. The study concluded that these parental collaborations helped increase the academic achievements of the children, leading to the authors' recommendation that policymakers should work out strategies that can build on the ability of parents in this regard. Even though this South African study provided useful insights by confirming specific roles that community members (in this case, parents) can play in inspiring desired educational outcomes, it differs from the current work in several ways. Firstly, primary school pupils were the focus of the South Africa study, not senior secondary school students. Secondly, there was neither a financial incentive scheme nor a mass motivation component, and how they can contribute to higher educational outcomes, as are the goals of the current work. The current study aims to fill these gaps in that work.

While a few other studies identified in the literature provided insights into various aspects of the dynamics between families or communities and the

engagement of students with schooling, those studies were not focused on test scores or other school outcomes of interest in this work (Beeli-Zimmermann et al., 2024; Shrestha & Dangal, 2024; Sianturi et al., 2022). Reports from those studies, therefore, are not discussed in this literature review. However, insights gained from them may help contextualise some of the findings of this work, and they will be factored into the discussions in Section 7.6.

2.3. Types and examples of incentives (Merit and Need-based)

The literature on these was included to provide insights into specific examples and applications of these educational incentive programs in various forms across different countries. It also allowed the proposed scholarship scheme to be "compared and contrasted" with existing incentive programs. Not a lot of comparable grants were found in the developing African countries, where this current study is primarily focused. Literature findings from elsewhere will, therefore, be discussed.

In the United States, similar programs to the ones of the current work include the Federal Pell Grant, the Florida Student Access Grant (FSAG) (Bettinger, 2004; Castleman & Long, 2016), California's CalGrant program (Kane, 2003), the Promise Grants of Oklahoma (Mendez et al., 2011) and West Virginia (Scott-Clayton, 2011), as well as Georgia's Helping Outstanding Pupils Educationally (HOPE) Grant (Cornwell et al., 2006). A number of these are merit-based, while others are need-based, but none was found to be mixed, a feature that appears to be unique to the IFOMSSA Awards.

Among the merit-based awards from the examples above is the HOPE Scholarship Scheme, which has no associated means-testing or income restrictions, and was introduced in 1993 to cover the fees, tuition, and book expenses of students in Georgia colleges (Cornwell et al., 2006). It was found to be effective at increasing 4-year college freshmen enrolment for both students of African descent and Caucasians by 5.9%. The program benefitted mainly the middle- and upper-income students meaning that it gained lots of political support. Another merit-based financial incentive in the United States was the PROMISE program of West Virginia, which offered free tuition fees for those students that maintained a specified minimum Grade

Points Average (GPA) and course loads, and it motivated extra student efforts for academic achievements through this (Scott-Clayton, 2011). The largest impacts of the PROMISE program were mostly observed around the time of yearly requirements for its renewal, indicating that the inspirations on academic achievement had more effect than the relaxation of financial constraints. Outside the United States, Colombia's Plan de Ampliación de Co-bertura de la Educación Secundaria or PACES (Angrist et al., 2006) and Chile (Anand et al., 2009; Hsieh & Urquiola, 2006) provided examples of merit-based schemes, and these were delivered through school voucher programs designed to encourage enrolment and attendance for low socioeconomic students. These vouchers worked partly by influencing students' choices and motivated them to prioritise the time they allocated to education ahead of that used for their involvement in the labour market or on other distractions (Masino & Niño-Zarazúa, 2016).

Insights into Need-based awards were also provided by a number of identified publications in the literature. Studies on such grants in the United States were mostly designed to support college retention and included the Pell Grant, which supports persistence in college within 3 years (Bettinger et al., 2012), as well as another grant in Wisconsin designed to encourage college retention in the second year (Goldrick-Rab et al., 2012). In Florida, even though the *Florida Student Assistance Grant* (FSAG) had a positive effect on attendance and completion and increased enrolment by 3 to 4 percentage points for any extra US$1,000 spent, there was no evidence of improvements in learning outcomes (Castleman & Long, 2016). The CalGrant program also increased college attendance in California by 3 to 4% (Kane, 2003), while the Oklahoma Promise Grant, available between 2002 and 2006, increased the probability of college retention among beneficiaries compared to non-beneficiaries (Mendez et al., 2011). Outside the United States, the United Kingdom's Education Maintenance Allowance was a need-based award that used monthly financial stipends to improve attendance by teenage parents on welfare payments (Gibbs et al., 2009).

2.4. Summary of Findings and Gaps from the Literature Review

In summary, the reviewed literature discussed above leaves little doubt that major knowledge gaps exist on financial incentives and their relationships with test scores and the involvement of communities in developing African countries. A summary of these include:

i. As was clear from the identified studies, very little exists in the literature to indicate a positive and consistent relationship between financial incentives and increased test scores. A change in the approach to administering scholarships in developing African countries may hold the key to financial incentives to reliably and consistently stimulate positive test scores in the targeted countries. This proposed study is designed to assist with this.

ii. Another recurrent gap from most of the studies analysed was that mass motivation was not a component of existing designs and has never been deliberately researched as part of scholarship schemes. As already explained, the only study that reported on a purported mass motivation was not based on the study's deliberate design, but on an incidental finding. The currently proposed work might be the first to close this knowledge gap, as it appears to be the first to integrate such a measure in its design, at least with respect to test scores.

iii. A third key factor that emerged from the literature review was that there was a paucity of work on the role of communities in scholarship schemes, and this current work, through its qualitative component, is designed to explore this fully. It is now clear that the current study will be the first to explore the impact of scholarship schemes that combine financial incentives and community involvement to motivate large numbers of students with somewhat limited funding.

iv. Based on available information, this current study is also likely to be the first from Nigeria to explore issues related to financial incentives for education. Given the foregoing, the current study brings new perspectives to scholarship schemes from developing African countries, and the literature review has provided the key pieces of evidence that have shaped the research question of this work in order to achieve this. By filling this knowledge gap, this study will likely be the first from Nigeria to examine issues related to educational financial incentives.

v. Finally, apart from filling all the acknowledged knowledge gaps above, this work is also expected to add to the growing number of research papers on this field from African countries. It comes at an appropriate time when global policymakers are looking for fresh ideas on how to advance education in these regions in the hope of meeting the aspirations of SDG-4.

These knowledge gaps influenced the design of the proposed scholarship scheme of this work, in the hope that, if effective in reducing them, the advocated principles can translate into policies that may sustainably bridge the economic and educational gaps between the developing and the developed world and can potentially expedite the actualisation of the SDG-4 (UNESCO Institute of Statistics, 2019). These same gaps also led to a mixed methods study for the research into the IFOMSSA Scheme.

CHAPTER 3: THEORETICAL FRAMEWORK

This work's Theoretical Framework captures its mixed methods approach. It thus covers the Quantitative and Qualitative dimensions that frame the study design and ensure that all the aspects of the research sub-questions are addressed using well-established theories. The research question (RQ) and its sub-questions have already been laid out in *Section 1.11*.

The adoption of the quantitative approach is justified because the first four research sub-questions, which are all inferential, seek to explore the impact of a scholarship scheme on mass academic performances. They are all observable and quantifiable. Therefore, the best way to answer them is to use a systematic, rigorous, reproducible, and repeatable research method. As detailed in the Methods, the first three sub-questions will be addressed with inferential analysis, and their theoretical explanation is discussed below. The fourth sub-question, however, will be answered with descriptive data only and does not need a theoretical explanation.

In contrast to the first four research sub-questions, the fifth seeks to explore and understand the influences of socioeconomic and community variables on any learning outcome associated with the proposed scholarship. Therefore, a qualitative design is necessary, and these are discussed in *Section 4.4*.

The theoretical frameworks for the respective study approaches will now be discussed in detail.

3.1. Quantitative Component: The Null Hypothesis

The Null Hypotheses for the first three research sub-questions (*Section 1.11*) are as follows:

i. With respect to the three post-intervention years of this study, there is no significant difference in test scores between students enrolled in a set of schools eligible for the proposed scholarship scheme (the intervention group) compared to those enrolled in another set of schools that were not (the control group).
ii. With respect to the intervention arm of this six-year study, there is no significant difference in test scores observed among students within a set of schools in the three years before the proposed scholarship scheme was introduced (the pre-

or before-intervention years) relative to test scores for students in the same set of schools in the three years after its introduction (the post or after-intervention years).

iii. With respect to the three post-intervention years of this study, there is no significant difference in test scores of students who were “low achievers” in schools that benefitted from the proposed scholarship scheme compared to scores of the “high and/or moderate achievers” within the set of same schools.

The Null Hypothesis for each of these sub-questions that addressed three of the four quantitative goals of this work will be rejected if the test statistic is less than 0.05. As already stated, the fourth quantitative sub-question is to be addressed with descriptive (not inferential) data only and does not need a theoretical basis, and the Null Hypothesis does not apply to it. The theoretical frameworks for the fifth research sub-question, addressed qualitatively, will now be discussed..

3.2. Qualitative Component: The Theoretical Frameworks

Several theories identified in the literature were found to be relevant in building a framework that addressed the fifth sub-research question of this work. Two major ones were deemed the most relevant and have been discussed here. One theory concerns the direct impact of the financial incentives on the test scores of student participants, while the other deals with community involvement and its potential role, if any, in complementing the impact of the incentives on these student participants.

Just like the quantitative and qualitative components of this work were synergistic in answering the overall research questions of this project (please see Methods, *Chapter 4*), the two selected theories also complemented each other in explaining and understanding aspects of the findings of this work. As such, they are to be viewed as components of a composite whole, and were both useful, along with the literature review, in the design of questions for the qualitative interviews of this work.

Spencer’s Phenomenological Variant of Ecological Systems Theory (PVEST), the first of the two theories (Spencer et al., 2005), is expected to help explain the changes in academic (test scores) performances, if any, of the student participants. Conversely, the Theory of Change Typology (TCT) relates more to the potential influences from the various communities (teachers, families, community leaders,

government representatives, the media, and others) involved in the scholarship scheme (Masino & Niño-Zarazúa, 2016). Each theory will now be discussed in detail.

3.2.1. Phenomenological Variant of Ecological Systems Theory (PVEST)

The PVEST is a theoretical framework that adopts a developmentally appropriate, identity-focused and contextualised approach (Spencer et al., 2005). As stated, it will be useful in explaining any observed differences in test scores among the participants in the selection examination used to determine the eventual recipients (merit component) of the proposed scholarship scheme of this work. This theory allows for the categorisation of the student participants as “high-achieving” (participants who received the scholarship after undergoing the selection exam), “moderate-achieving” (those who were brilliant enough to qualify for and take part in the selection exam but did not eventually receive the scholarship), and “low-achieving” (students from eligible schools who did not qualify for the merit-based selection exam and, therefore, did not ultimately receive the scholarship). Details of the categorisations are contained in the Methods (*Chapter 4*).

The theory, therefore, asserts that should students be randomised into Intervention and Control groups, the intervention group would generally perceive the incentives offered to them as a validation of their chosen identities, compared to the Control group, even though both groups might live under similar conditions. As such, high-achieving students, who already see themselves as accomplished scholars, would view those financial incentives as validations to this identity, ultimately motivating them to maintain the hard work and high grades expected of them.

Three related arguments support the PVEST and help reveal the importance of the theory. One is framed around the idea that “schooling is based on expected gains” (Carneiro & Lee, 2011; Heckman et al., 2006). It argues that, without scholarships, students with higher academic abilities are more likely to attend and maintain a presence in schools relative to those with lower abilities. These high-ability students are not only expected to learn more in school, but they also expect higher returns. In contrast, they further argued that lower-ability students are more likely to drop out of school and are unlikely to learn as much from school anyway. As such, while any offer of scholarships may tempt these low-achievers to stay in school, their test performances are unlikely to be improved.

A second supporting argument for the PVEST was advocated by both Bourguignon et al. (2003) and Slavin (2010). They argued that students who are likely to be successful and motivated towards learning are likely to attend schools already unless they are prevented from doing so by other inevitable commitments (like caring for other siblings or contributing to family incomes). They also noted that expecting significantly higher test scores for an entire student cohort due to an educational financial incentive program may be unrealistic. This, they argue, is because any student cohort would normally have a mix of those who would normally attend schools (even without incentives) and those who would not attend (even with incentives). There will also be those who, even though they will be motivated by incentives to attend schools, will still not achieve much improvement in their learning outcomes. Similarly, those who attend school solely due to incentives are unlikely to be motivated or successful, even if they eventually do attend.

The third slightly different but useful insight comes from the argument that beneficiaries who receive incentives for specified behaviours would be very likely to engage in such behaviours (Bettinger, 2012). As such, incentives designed to attract and retain students in schools are expected to be effective, as the criteria for the incentive are tied to the desired behaviour. This assertion comes with a caveat. Slavin (2010), highlighted this when he observed that outcomes that are expected to subsequently evolve from those incentive-inspired behaviours (such as increased learning and test performances) may have more complex relationships, given that they are indirect and hypothetical. The resultant effect is that, even though it is expected that increased school attendance, supposedly inspired by financial incentives, might increase learning, this is not often the case since “attendance” is often volitional, while “attainment” is aspirational (Slavin, 2010). In other words, a student can be forced to (or decide to) attend school, take a course, and earn rewards for that, but that does not guarantee an improved test score.

The foregoing discussions provide compelling justifications for exploring the differences in test scores between high achievers, moderate achievers, and low achievers, and contributed to the study’s design, which includes these. It also created room for a variety of outcomes. For instance, since all the students (low, moderate and high achievers) in the eligible schools could potentially win the scholarship and were motivated equally to work hard for it, there existed a chance that the impact on test scores may be minimal, given the PVEST theory and its supporting arguments

discussed above. In addition, there was also a possibility that the scholarship incentive might boost attendance and enrolment in the certificate examinations. All these underlined the need to explore the differences in scores between the moderate-to-high achievers (who qualified for the scholarship selection exam) and those who did not qualify for that exam at all (the low achievers). This latter option allowed this work to assess if qualification and attendance to the selection exam only (as an outcome) was enough to influence academic performance.

Given the above arguments, it also became clear that the PVEST's underlying principles and supporting arguments would be vital in exploring the potential impact of any mass effect (or otherwise) that might be observed with the proposed scholarship scheme of this work. They might also help explain the differences (if any) between the high, moderate, and low achievers and any changes with enrolment patterns, should any be observed.

Now that a framework to help understand the potential impacts of the proposed incentive scheme is in place, it is necessary to explore another theory that will help understand the impact of any community involvement in the scheme. This way, all aspects of the research question will be understood. The next theory would be vital in this regard.

3.2.2. Theory of Change Typology (TCT)

The TCT is expected to help understand the impact (if any) of the proposed incentive scheme on both the scholarship recipients and their families or other concerned community members, particularly with respect to their attitudes towards the scholarship scheme. It is an established theory that has been utilised in a systematic review that explored the quality of education and learning outcomes in developing countries (Masino & Niño-Zarazúa, 2016).

It theorises that three main interventions can determine the quality of education. One is the so-called “supply-side interventions”, which include the provision of learning materials, physical resources (construction of schools and the provision of educational equipment) and human resources. The second is the use of incentives to influence the behaviour of teachers, families and students, while the third employs a “bottom-up and top-down” approach that includes the decentralisation of reforms and the encouragement of community participation in managing education systems. The proposed study integrates the last two of these three interventions into its design.

The ideological principle behind the TCT is that, for interventions to be effective at improving learning and education quality, they must integrate social norms and intertemporal choices into policy designs, and must combine at least two of the three identified interventions (Masino & Niño-Zarazúa, 2016). As a matter of fact, independent studies have backed this theory in showing that, in contexts where educational services are impeded by societal and economic factors, the supply of physical and human resources (the first determinant) alone can actually result in the waste of limited resources (Glewwe et al., 2009; Kremer & Vermeersch, 2005; Muralidharan & Sundararaman, 2010).

In the light of this theory, therefore, it comes as little surprise that the traditional educational policies in developing African countries of the years gone by were not very successful at improving educational quality, and this failure is, to some extent at least, probably due to their heavy reliance on the supply-side of education interventions. Since the 1990s, some of these unsuccessful policies, as reported by Gakusi (2010), include those developed from the Jomtien Conference (1990), the Dakar Conference (2000), the Fast-Track Initiative (2002), the UNESCO Global Initiative for Education (2012), and the Global Action Plan (2015).

The TCT is expected to help explore the potential impacts of enhanced community participation (from family members, community leaders, government representatives, and other stakeholders) as a core component of the proposed approach to scholarship schemes. Of particular interest is whether the behaviours and preferences of the benefitting students and their parents will be influenced in ways that would translate into improved students' academic performances in standardised national and international examinations. Some insights into the behaviours of the individual students (recipients and non-recipients) will also be gained through in-depth interviews, whose questions will be developed using the provisions of this theory.

Like the PVEST, the TCT is supported by several other viewpoints, which argue that cultural and psychological factors can be key influencers of the decisions that lead to learning outcomes. For instance, Slavin (2010) opined that families (and communities) can encourage their already-motivated wards to make the best of any offered incentives, particularly if the families see the financial incentives as honours. On their part, Spencer et al. (2005) framed financial motivation in education as a “function of normal cognitive and socioemotional development in challenging environments”, arguing that developmental, cultural, and phenomenological issues

within communities are pivotal to the understanding of the potential impact of financial incentives on the learning outcomes of students from different ethnicities. They viewed the incentives as ways of promoting resilience in the face of poverty-induced challenges and argued that the impact of financial incentives in promoting academic outcomes generally depends on the students' perceptions of what the incentives mean relative to their emergent identity. As such, they advised that to understand learning outcomes as they relate to financial incentives, the development of the students, and how they interact with their schools, families, environments and cultures must be taken into account. Were these to be ignored, they argued, there arises the risk of limiting achievement gaps to just personal attributes like inspirations and ignoring other salient influencers like safety, poverty-induced stressors, mental health, cognitive issues, and so on, which all influence outcomes.

In conclusion, it is worth pointing out that the theoretical frameworks provided by the foregoing theories (PVEST and TCT) played key roles in this research work's overall design, particularly with the quantitative and qualitative data collection and analytic methods. They will also be useful in the discussions.

CHAPTER 4: SETTING AND METHODS

4.1. The Mixed Methods Approach

This Study adopts a mixed methods approach to evaluate the efficacy of scholarship schemes that encourage community participation as part of a wider design to motivate large numbers of students and select its ultimate recipients through a mix of needs and merit-based criteria. This thesis argues that such schemes are expected to positively impact test scores among students in developing countries. The Ifedioramma Okafor Memorial Secondary School Academic (IFOMSSA) Scholarship Scheme (or Award), which can be considered a prototype (or Case Study) of such programs, is the focus of this Study. Details of the Scheme are discussed in *Section 1.10*.

As a mixed-methods study, this work incorporates both quantitative and qualitative approaches into its design, hoping to comprehensively resolve the research question and its five sub-questions, which, as explained in *Section 1.11*, constitute the Study's overall goals. Even though the quantitative component may identify the differences, should they exist, in the test scores of the students exposed to the IFOMSSA Scheme (the Intervention Group) relative to the students not exposed to this Scheme (Control Group), in isolation, this quantitative method may not be enough. This is because it lacks the ability to reveal the attitudes, behaviours, perceptions or community dynamics that might have influenced any changes in test scores observed from the quantitative arm of the study. The need to explore and understand these influencers informed the inclusion of the qualitative aspect of the study. As such, the mixed methods approach can be leveraged to provide useful insights into the potential impacts of the proposed project while also allowing an understanding of the underlying influencers of such impacts (Creswell & Creswell, 2018; Harrison et al., 2020; Hesse-Biber & Johnson, 2015; Tashakkori et al., 2020). Overall, given that the qualitative component should help explain observations made in the quantitative arm, this mixed approach is expected to increase the chances that this study might reveal evidence that is statistically robust enough to drive meaningful policy changes in managing education aids available to students in developing countries.

4.1.1. Justification of the Mixed Methods Approach

The adoption of the quantitative approach is justified because the first four research sub-questions were all observable and quantifiable. Scholars advise that the best way to answer such questions is to use a systematic, rigorous, reproducible, and repeatable research method, and a quantitative design provides the tools needed for this (Harrison et al., 2020; Hesse-Biber & Johnson, 2015).

Conversely, the fifth sub-question seeks to explore and understand the behaviours and lived experiences of the student participants, as well as the influences that socioeconomic and community variables might have had on any observed academic performances associated with the proposed scholarship scheme. As Hesse-Biber and Johnson (2015) also argued, a qualitative design, with the help of in-depth interviews, is best placed to resolve this research aim and will, therefore, be adopted.

It has been argued that mixed methods research and analyses can be justified if a project has research needs that can be met with one or more of the following (Flick, 2018; Morgan, 2019; Onwuegbuzie & Hitchcock, 2015):

a) Triangulation (multiple ways of data collection on the same topic).
b) Complementarity (where independent approaches can confirm or extend particular research findings).
c) Initiation (facilitation of scientific discussions to help identify issues for future research).

In keeping with these criteria, one can argue that the current research has questions that may be addressed with the first two criteria, triangulation and complementarity. “Triangulation”, which can help resolve information obtained from disparate sources, applies to this work because of the need to collect different sets of data across two different research paradigms, with one coming from participants’ test scores (quantitative), while the other comes from their lived experiences (qualitative).

Similarly, the condition on “Complementarity” was satisfied because, while any changes in test scores arising from the potential impact of the proposed scholarship scheme can be picked up through the quantitative approach, the need to understand the underlying influencers of those changes can only be gained through a qualitative one. The insight from the independent qualitative component will, no doubt, help “extend” the understanding of those quantitative findings, and this is what “complementarity” is all about, as stipulated by Onwuegbuzie et al. (2015).

In addition to the foregoing, further justification of this work's mixed methods approach is that it also satisfied other criteria for such studies as laid out by Onwuegbuzie et al. (2015). They advised that, in a genuine mixed methods study, analyses of data from the quantitative and qualitative aspects of the study should be conveniently done in one of three ways. These include:

a) Concurrent (i.e., in no chronological order).
b) Sequential (i.e., one before the other).
c) Iterative (i.e., a repetition that involves more than two phases) approaches.

This Study conformed with the “Sequential Analytical Approach,” wherein the quantitative method comes before the qualitative one, with the latter providing insights expected to help understand the former. This approach, also called the “Sequential Explanatory Design”, is one of the three Mixed Methods defined slightly differently by authors in other publications (Harvard Catalyst, 2024; Venkatesh et al., 2016). These sources revealed two other alternatives which are not suited to this work. One is considered the reversal of the current approach and is called the “Exploratory Sequential Design”. It starts off with an initial phase of qualitative data collection and analysis and ends with the quantitative components. The other alternative is the “Concurrent (or Convergent Design) that allows both the qualitative and quantitative data and analyses to be conducted simultaneously, with areas of convergence and divergence discussed accordingly afterwards.

4.1.2. Generalisability of the Mixed Methods Approach.

Efforts to ensure the “generalisability” of findings from this work are worth pointing out. While generalisability is important in all research, the concept might have more significance in qualitative research methods (compared to quantitative ones), given that, in most cases, the samples being studied are hardly representative of the population being studied (Cohen et al., 2018; Hesse-Biber & Johnson, 2015) and the attention is traditionally more on particular persons, groups or settings, not whole populations or generalisations (de Saint-Georges, 2018; Maxwell, 2021). If left unaddressed, this potential limitation of qualitative components of a mixed-methods study such as this work might impact the overall applicability of the findings. As such, ensuring generalisability will help guarantee that the ultimate findings can be applicable in other settings beyond this study’s primary area.

As observed by Onwuegbuzie et al. (2015), the ability to generalise requires a measure of confidence that the phenomenon whose data is being captured is real (subjectively or objectively) and stable (reliable and trustworthy). These imply that generalisations are a product of judgements based on probabilities. Qualitative research achieves this through subjective probabilities, while quantitative ones do so through theoretical probabilities that rely on confidence intervals (CIs) or probability (p) values (Onwuegbuzie & Hitchcock, 2015). These criteria or concepts are, therefore, included as much as possible in the design and analyses of this work and are further clarified as the methods for the respective qualitative and quantitative components are discussed in the coming sections.

4.2. Methods

The remaining parts of the methodology will now examine the Methods with respect to the quantitative and qualitative components. First to be explored will be the "Setting", as it jointly applies to this work's quantitative and qualitative aspects. **The** areas specific to the respective components of the mixed-methods (quantitative and qualitative) approaches will be discussed separately.

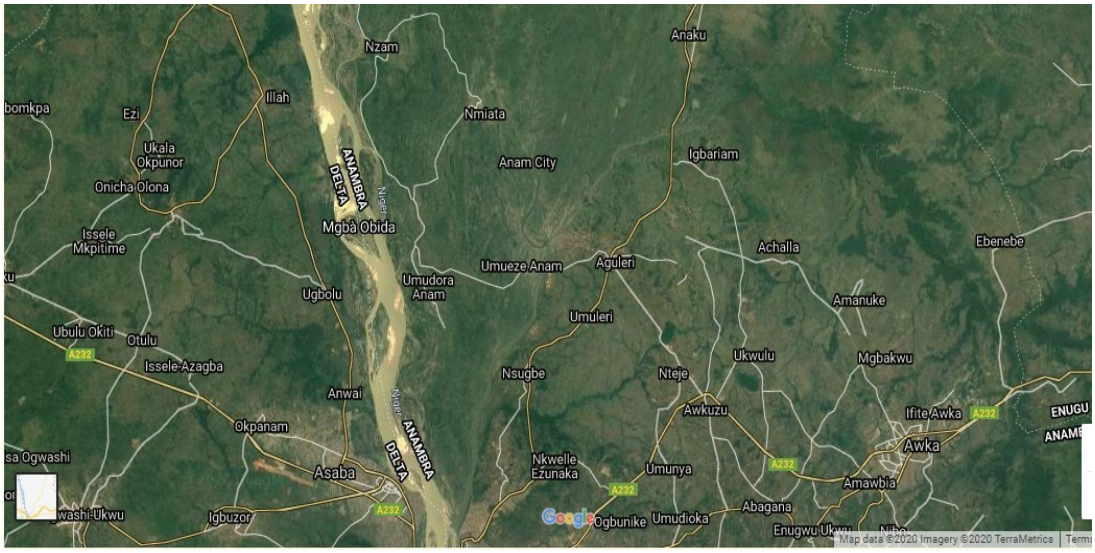
4.2.1. Setting

This Study looks at trends in students' academic performances over a six-year period (2014 to 2019) in 26 public-owned senior secondary schools in Otuocha Post Primary Schools Service Commission (PPSSC), Anambra State, South-eastern Nigeria. Anambra is one of Nigeria's 36 states, with an estimated 2016 population of 5,527,800 (National Population Commission of Nigeria, 2017). The Otuocha PPSSC, or Educational Zone, on its part, is one of the six in Anambra. It is headed by a Zonal Director of Education (ZDE) and covers three of the State's 21 Local Government Areas (LGAs). Apart from the ZDE, each PPSSC has zonal officers who administer educational activities alongside the various school principals and teachers.

A map of the Otuocha Area of Anambra State is shown in *Figure 2*. Residents of the three bs in the Zone have similar socioeconomic indices (Enibe et al., 2019; Ikeogu et al., 2020). The LGAs include Anambra East (population of 201,300), Anambra West (221,400) and Ayamelum LGAs (209,300) (National Population Commission of Nigeria, 2017). At the time of this Study, there were ten public-owned

secondary schools in Anambra East, nine in Ayamelum, and seven in Anambra West, totalling 26 in the Zone. All these were included in this study. The ten schools in Anambra East comprise the Intervention Group, while the 16 from the other two form the Controls. This arrangement depicts a 1:1.5 matching ratio between the two groups, based solely on the LGA cluster of schools, not the number of LGAs or student populations. Experts have argued that this method increases efficiency in intervention studies (Rose & Van der Laan, 2009). Its adoption can be considered a strength for this project. It should be noted that even though increasing the number of schools in the Control (or Intervention) groups would have been welcomed, including schools outside the Otuocha Educational Zone was deemed unacceptable as such schools have socioeconomic characteristics that differ from what is obtainable within the Zone.

Figure 2: Detailed Map of Otuocha and Near Places (TerraMetrics, 2020).



The Otuocha region has geographical coordinates of 6° 20' 0" North, 6° 51' 0" East (TerraMetrics, 2020). It is considered the “food basket” of Anambra State, with residents being predominantly rural farmers (Enibe et al., 2019). As such, most of the families and their children are small-scale farmers. The area is, therefore, of low socioeconomic status, and this significantly affects education in the region (Enibe et al., 2019; Ikeogu et al., 2020) and is one key reason for the IFOMSSA scholarship scheme (OCI Foundation, 2016). It also adds to the justification of the “needs-based” aspect of the Scheme, which, along with the merit component, has earlier been discussed in *Section 1.10*. The Igbo ethnic group, one of the three major tribes in

Nigeria, a country with over 300 ethnic groups and languages (Azinge et al., 2003), dominate the Otuocha region (Ifediora & Azuike, 2018).

4.3. Methods: Quantitative Aspects

To answer the stated quantitative research goals and explore the potential efficacy of the IFOMSSA Senior Scholarship Scheme, this paper adopted the "Controlled Before-and-After (CBA) Study", a quasi-experimental research design that is useful when randomised controlled trials (RCTs) are not practicable but the need to estimate the causal impacts of interventions exists (Grimshaw et al., 2000; Maciejewski, 2020). In isolation, the CBA may not unravel the underlying influencers of any observed outcomes (Hesse-Biber & Johnson, 2015; Wang et al., 2018). As such, a qualitative component, discussed separately in *Section 4.4*, was also included in this study. Alternatives to the CBA that were considered for this work, as well as its potential limitations, are considered further below.

The impracticability of randomisation in this study was based on the fact that it was impossible to randomise individual students in particular schools for the purpose of this research without risking contamination between the Intervention and Control groups. 'Contamination' arises when the intervention effect in a study can easily pass on from individuals in the targeted group to those in the control group. This generally happens when the participants are in the same location, and physically separating them would be impossible (Higgins et al., 2008). The only practicable option for randomisation in these situations would then be through a Cluster RCT, in which case, groups of participants, rather than individuals, are randomised (DeLong, 2016; Hemming et al., 2017; Higgins et al., 2008). Cluster RCTs are generally useful in evaluating specific interventions among groups like schools, villages, and so on and help minimise contamination risks.

Randomisation based on clusters of schools, of which there were 26 in the Educational Zone under consideration, was not feasible for a number of reasons. Firstly, the Foundation observed that the population of students in the eligible classes were small in most schools, possibly due to their rural locations. Such numbers in clusters, should they be used as such, would have posed a strong limitation to the validity of the findings, given that they may not give enough power to generate statistically robust findings (Hemming et al., 2011). To overcome this and still proceed with a Cluster RCT study, merging schools would have been the only other option that

would allow the creation of reasonably large numbers. However, such a measure would mean that the clusters formed would no longer come from independent schools, a situation that would be inappropriate for the Study.

A second difficulty with the Cluster RCT was that groups of schools under each LGA function as unofficial educational units, given that different schools under one LGA usually share the same sets of teachers and administrators. This meant that merging schools under one LGA would not be proper, and the geographical separations make mergers of schools drawn from different LGAs unrealistic. As was made clear from the earlier part of this paper, the teachers, school principals and other administrators are vital to the mass motivation component of this study, and any unit that shares them can be considered a single cluster, functionally speaking. This implied that all the schools in one LGA practically existed as a single cluster and explained why the research groups (Intervention and Control) were carved out based on LGAs. With three LGA areas in the Zone, there were only three clusters available for this study, as observed by Hemming et al. (2011), and this would be too small to allow any meaningful randomisation. In view of these limitations, a cluster RCT was also deemed inappropriate, just like the individual student randomisations.

Without a feasible randomisation study technique, the quasi-experimental CBA stood alone as the only appropriate research approach for this study. Grimshaw et al. (2000) stated that CBAs offer empirical interventional approaches that can identify causal impacts of an intervention under study without the need for randomisation. This ability helped the CBA minimise the limitation of randomisation, which has rendered the other options impracticable.

One strength of the CBA, particularly as it relates to this study, was its ability to handle potential confounders. As Mahajan (2015) pointed out, confounders in quasi-experimental study designs are handled in two different ways. One is to use Controls, while the other involves the inclusion of Pre-tests. For the first option, a need to “match” the control population to the intervention ones based on demographics arose. This was necessary so that the only difference between the two groups would be the ones related to the actual research intervention itself (Mahajan, 2015). This study achieved the first requirement by having the Intervention and Control groups in which the participants were expected to be of similar ages and socioeconomic characteristics. This, as explained under the Setting in *Section 4.3.1*, was achieved.

The second consideration arose because CBA studies need contemporaneous data collection between the intervention and control groups, including, for each group, data collection in the years before the Intervention (pre-test), and the years afterwards (post-test). Mahajan (2015) observed that, even though the group allocations to the intervention and control categories in CBA studies were usually not random, this pre-test demographic measurement generally reveals similarities, should they exist, between the two groups. The implication was that any pre- and post-intervention improvements or reductions in academic performances observed between the intervention and control groups could safely be attributed to a causal impact. This would have been difficult to make if the pre-test controls were not in place. With respect to the current study, this approach provided a measure of assurance that any observed changes in academic performances would not be the result of natural changes arising from other events that had occurred contemporaneously with the scholarship incentives and could, therefore, be reasonably attributed to the impact of the Intervention only (Mahajan, 2015).

Given that these two CBA study principles have been satisfied in this study, there is strong optimism that the quantitative research goals (the first four sub-questions) would be resolved appropriately.

It should be noted, though, that despite the foregoing advantages of the CBA approach, a number of limitations are linked to it. According to Mahajan (2015), one of these was that even though pre-tests and control groups limit the problems orchestrated by confounders, the risks of unidentified confounders would not be completely eliminated in non-randomised studies. While it is impracticable to completely eliminate this possibility, the potential impact on this work was expected to be minimal in view of the measures in place to counteract them. A second limitation, as Mahajan (2015) also argued, was the potential difficulty in identifying comparable groups that might serve as controls in a CBA study. This, however, was not applicable to this study, given that all three LGAs in the Educational Zone under study had similar socioeconomic circumstances, as already highlighted in *Section 4.3.2*. In addition, given that the students were all in the same cohort of study (SSS III), a non-difference in age and gender is expected. A final potential limitation of the CBA approach came from the fact that the generalisation of the findings may be potentially limited due to the non-randomisation (Mahajan, 2015). While this might have been the case, the major criteria required for generalisation, which were identified by Onwuegbuzie et al.

(2015) and discussed in the early part of the Methodology (*Section 4.1.2*), were met by this study. This minimises any potential impact from this.

4.3.1. Participant Selection for Quantitative Study: Considerations.

As already explained, all 26 schools in the Otuocha Educational Zone were divided into Intervention or Control groups. The Intervention Group comprised ten schools in Anambra East LGA, all eligible for the IFOMMSA Senior Scholarship Award. They are also referred to as the Scholarship-eligible Group. In contrast, the Control (Non-intervention or Scholarship-ineligible) group comprised the remaining 16 schools drawn from the two remaining LGA clusters, the Ayamelum and Anambra West LGAs, with nine and seven schools, respectively. These controls were not eligible for the awards.

Given that all 26 schools were located in areas with poor socioeconomic backgrounds, the participants met the needs-based criteria and further ensured that the only difference between the Intervention and Control groups was the scholarship incentive itself. This uniformity helped minimise potential socioeconomic bias that might have otherwise imposed limitations on the study outcomes. The rural locations of the targeted schools helped achieve this needs-based requirement and is supported by the WHO's report that, in most countries (including those where literacy levels are high), the largest access to education was concentrated among children with rich parents, those in urban areas, and among boys (The World Bank, 2018). This further explains why the IFOMSSA scheme concentrated on a rural location, targeted poor families and allowed equal opportunities for both boys and girls.

In addition to promoting the needs-based principle of this study, the selection process also ensured that the winners were picked on merit (as explained earlier), promoting the merit-based nature of the IFOMSSA Senior Award. This unique, hybrid (need and merit-based) combination makes this study one of the few to adopt this approach, if not the only one. It hopes to provide useful insights that will address all the research aims and, hopefully, establish a new and innovative way of issuing scholarships that can impact millions of people in the face of limited funds.

4.3.2. Inclusion/Exclusion Criteria

To be included in this study, research participants (males or females) must be SSS III (final year of senior secondary school) students enrolled in one of the 26 public-

owned schools in the Otuocha Educational Zone. Both males and females, as already stated, had equal opportunities, but students in all the private-owned schools within the Zone were excluded. These exclusion criteria were necessary to ensure that the Scheme remained needs-based, given that students in Nigerian private schools are generally from relatively wealthy homes, and the costs of attending those would be unaffordable to the poor students targeted by the proposed scholarship scheme (Härmä, 2016). As was also observed by Härmä (2016), government-owned public schools in rural areas of Nigeria, the focus of the IFOMSSA Awards, usually require low fees, and, are therefore, affordable to most. This meant that these rurally-located schools were almost exclusively for students from low socioeconomic family backgrounds.

4.3.3. Outcome Measures for the Quantitative Study.

The primary outcome measure was the “test scores” obtained from the West African Senior School Certificate Examination, WASSCE (*Section 4.3.3*), an exam taken yearly across Nigeria by students in the final year of all senior secondary schools (i.e., SSS III). Scores from the NECO examination were not included, given its non-compulsory nature (Erunke, 2021) and limited acceptability outside Nigeria (Dipo, 2017; Edeh, 2021) at the time of this work. These limitations lead to most students avoiding sitting for the NECO exam, making test scores from it less representative of overall student performance.

The secondary outcome measure is the “change in enrolment patterns for the WASSCE” over the six years of study. Given that the region of interest is of low socioeconomic status, with many dropping out of school before completing tertiary education (Amaonye & Anaekee, 2020), initiatives that enhance school and exam enrolments are welcomed, and, with this secondary outcome measure, this study evaluates the efficacy of the IFOMSSA scheme with this.

The WASSCE is a standardised, compulsory exam for high school graduation in Nigeria, and provides an “across-the-board” measurement that gauges educational abilities (Grade Power Learning, 2017). Its outcomes are validated, internationally acceptable, and at par with global standards, while it meets the main characteristics (objectivity, reliability, validity, norms, and practicability) required of psychometric tests (Aborisade & Fajobi, 2020; Bandele & Adewale, 2013; Olakunori, 2019; World Education News and Reviews, 2017). An assessment of aspects of WASSCE tests

administered on two separate occasions also revealed that similar results were obtained (Oluseyi, 2019), further justifying the use of WASSCE as the test outcome of this work.

It should be acknowledged, however, that using standardised test scores, which can be both performative and summative as students are motivated to do their best on the tests, has associated pros and cons. Understanding these advantages and disadvantages is important for a balanced grasp of their justification for use in this work, and a few of these will now be highlighted.

As articulated in a publication by a Canada-based educational company, Grade Power Learning (2017), standardised tests have several advantages. One of these is that they can provide valuable benchmarks for parents, teachers, and policymakers, allowing objective comparisons among students. Such tests can also help avoid subjective grading and assist with identifying areas of concern among students, schools, and curricula.

Among the identified cons, also from the same source, were that standardised tests can affect students' confidence and inadvertently be a source of stress for them as they are "pressured" to do well. Standardised tests can also tempt teachers to just teach for the sake of passing the tests rather than for the students to gain knowledge. Other disadvantages are that test scores can be limited in their ability to test for the "soft skills" required for success (like creativity, motivation and cooperation) and are largely focused on academic performances without considering external factors like home life and student anxiety. These later disadvantages are in line with the recent push that, for standardised tests to be of greater benefit to education, they should be able to assist with the provision of information on the strengths and learning gaps of the candidates involved and not just on academic performances (Rose et al., 2018).

As seen in the foregoing paragraphs, test scores' overall advantages are relevant to this study's goals, while their limitations are minimal and generally not applicable to them. As such, test scores from WASSCE are deemed suitable and appropriate as outcome measures. This is why they have been chosen for this work.

This study also explores the potential impact of various variables (called influencers) that might affect test scores and financial incentives. Studies have shown that demographic factors can have such influences, particularly gender (with girls known to have lower failure rates in reading than boys), ethnicity (poor outcomes in minority races), and socioeconomic backgrounds (poorer scores in low-income

groups) (Ikegulu, 2004; Rose et al., 2018; Uyeno et al., 2006b; Veloski et al., 2000). Age has also been explored in the past, even though the impact has never really been very clear (Veloski et al., 2000). Among these potential influencers, this study can only realistically explore the impacts of Gender and Age, given that the participants are all of the same ethnicity and similar socioeconomic backgrounds, as has already been explained. As such, the analysis will not further explore any impact from ethnicity and socioeconomic groups. In addition to age and gender, the impact of "the eligibility to the scholarship scheme," "being motivated to receive the IFOMSSA Award," and "actually winning the award" will all be explored as well. A sub-analysis that involved the schools and LGAs was also carried out.

4.3.4. Structure and Gradings of Quantitative Outcome Measures

The WASSCE has existed since 1952 and is available to all high schools in West Africa, not just Nigeria (Oke & Bello, 2018). The exam is administered by the West African Examination Council, WAEC, and, therefore, often referred to, as the "WAEC" exam, even though the official name is WASSCE. It is usually written around April/May of every year (one to two months after the IFOMSSA Scholarship Award ceremony is concluded), with the results released around October/November of the same year. Specific subjects are taken on the same day and time in every accredited senior secondary school and are marked (assessed) by trained examiners (who can be from any part of Nigeria or West Africa) external to the respective schools. As already discussed, the test is internationally validated and offers reliable test outcomes. These features allow uniformity of questions and standardisation of the outcomes and eliminate potential influences from the Foundation or the supervising Education Zone as it relates to the IFOMSSA Scheme.

Every candidate must register for a maximum of nine subjects in the WASSCE. Of the nine subjects, it is compulsory for students in Nigeria to register for English Language, Mathematics and Civic Education, which make up three of the four subjects undertaken at the IFOMSSA Challenge. Biology, the fourth subject of the IFOMSSA Challenge, is currently not compulsory for all students, but it was so until a few years ago, giving the expectation that most students still register for it as well. These are the reasons for selecting these four subjects for the IFOMSSA Challenge.

As explained by the World Education News and Reviews (2017), WASSCE grades or test scores range from one to nine. Grades one to three are classified as

“good or excellent”, while four to six are “credits”. Grades seven and eight are “passes”, while nine represents a “fail”. The same source also confirms that an acceptable test score or academic performance, which is the minimum required for progression into a tertiary institution in Nigeria, is any grade from one to six (credit, good or excellent). Anything from seven to nine is unsuccessful and is considered a poor outcome in this study because most Nigerian tertiary institutions will not admit a student with such. To be considered for admission into a tertiary institution, a candidate must have acceptable scores in at least five subjects, including all the compulsory ones mentioned earlier.

The goal of the IFOMSSA Senior Award is to motivate as many students as possible to achieve these acceptable scores in all 4 subjects tested in the IFOMSSA Challenge. For the purpose of the IFOMSSA Scheme and this research, a candidate is considered successful if he or she scores an acceptable score in all four (All Passed) subjects. Conversely, passes in just three or fewer subjects (All Not Passed) are considered a failure, given that the candidates are unlikely to progress to any Nigerian tertiary institution with such grades.

4.3.5. Data Collection for the Quantitative Study.

Test scores for all four selected subjects were extracted for all the students who undertook WASSCE in all 26 schools over the six years from 2014 to 2019. This period covered the three years before the Intervention (2014-2016) and the three years following (2017-2019). These sets of data were collected and analysed for each of the Intervention and Control (Lateral or Cross-sectional comparisons) clusters of schools. This lateral comparison ensures that one of the key requirements (discussed in *Section 4.3*) for a Controlled Before and After (CBA) study, was met. In addition to the Intervention-Control comparisons, intra-cluster pre-and-post-intervention (Longitudinal) comparisons were also carried out, satisfying the second CBA requirement. A template for extracting the required data is attached in *Appendix E*. Six staff of the Otuocha Educational Zone were engaged to extract the test scores, with two staff working on each LGA (a total of six staff for the three LGAs). These were staff that already oversaw the record-keeping of the test scores. They, therefore, already had access to them, thereby minimising confidentiality concerns. WASSCE results do not include age, and this data was not available for analysis as proposed in

Section 4.3.3. So, apart from gender, no other personal identifiers were collected. The entire data extraction took four weeks.

4.3.6. Sample Size and Accuracy/Credibility for the Quantitative Study.

Several approaches were used to ensure that the data obtained were accurate and reliable. Firstly, the fact that whole student populations, not sample sizes, were used, meant that the accuracy of the raw data was largely enhanced (Faber & Fonseca, 2014). Secondly, as explained in the last part of the Introduction (*Section 1.11*), the selected research goals were all realistic and measurable. Finally, the raw data were randomly re-checked by an independent assistant who works with the Otuocha Educational Zone but was not part of the six-person data collection team. To do this, results for ten students in each of the three LGAs were randomly picked and double-checked. No errors were found after this exercise with the raw data.

4.3.7. Data Analysis for Quantitative Study.

The Statistical Package for the Social Sciences, SPSS (*IBM SPSS Statistics for Windows, Version 27.0. Armonk, NY: IBM Corp, released 2020*) was used. The analyses included Descriptive and Inferential components. The descriptive component was presented as actual numbers, percentages or proportions. It summarised the participants' key results and demographic data over the six years under study, with particular attention paid to the gender, schools and LGAs.

For the Inferential Analysis, Logistic Regression (LR) was used to explore associations of any dichotomous learning outcomes with various explanatory variables measured on participants. These analyses generated Odds Ratios (OR) and their corresponding 95% Confidence Intervals (CIs). Even though the Probability (p) values were also generated automatically as part of these analyses and will be deemed significant only if <0.05, the emphasis was on the CIs, in line with modern statistical recommendations (Ranstam, 2012).

LR was considered more suitable for this approach than other alternative analytical approaches like the Chi-square and Log-linear analyses. This was so for a number of reasons. Firstly, Tansey et al. (1996) observed that the Chi-square analysis is merely descriptive, focusing largely on correlations between unrelated variables. It, therefore, neither requires dependent variables nor has the ability to reveal the extent

or degrees of relationships between the variables of interest. Tansey et al. (1996) also explained that the Chi-square analysis is not a modelling technique and, therefore, cannot predict either a value (as is obtainable with ordinary regression analysis) or predict group memberships (as is the case with LR analysis). For these reasons, the Chi-square analysis was not deemed suitable for answering the research goals of this work.

The other alternative, the Log-linear analysis, which is considered an extension of the chi-square test, can equally assist with hypothesis testing and model building. However, it is less suitable for this project, given its applicability only to situations where the variables are only categorical (Tansey et al., 1996). This is not entirely the case in this study, given that age, although not eventually included in the study as it was not available, is a continuous variable. The Log-linear analysis was also not very suitable because, according to Tansey et al. (1996), even though it can be useful in measuring the intensity of interactions between variables, it cannot make conceptual distinctions between dependent and independent variables, as these are usually treated the same in its calculations.

In view of the highlighted limitations of the alternatives, the LR was deemed the most suitable for this study. For instance, Tansey et al. (1996) observed that, in contrast to the Chi-squared and Log-linear analyses, LR can not only define a dependent variable explicitly but also utilise the independent (predictor or explanatory) variables in predicting the dependent or outcome variables. The LR can also be useful in forecasting a group membership for the outcome variables and in the instantaneous measurement of rates of change, should events occur as responses to changes in particular variables. The adoption of LR in this study was also justified by the fact that all the other assumptions needed for its use were satisfied, including the need for the outcome and predictor variables to be independent of one another, and for the study to have a large sample size, among others (Cohen et al., 2018). The foregoing features of LR are desirable to the resolution of the quantitative research sub-questions of this work and (*Section 1.11*), therefore, justify its adoption for this project.

4.3.8. Variables for Data Analysis in the Quantitative Study.

Given the dichotomous nature of the outcome variables involved, the Binary Logistic Regression (BLR) form of Logistics Regression will be adopted for this study. The outcome categories were “All four subjects passed” and “Not all four subjects

passed." These make up the two dependent variables for the main analysis. As an alternative to the BLR, an Ordinal Logistic Regression, OLR (or Cumulative Logistics Regression), would have been useful in circumventing the need to dichotomise the various layers of the outcome variables. However, the BLR is preferred in this study because it allows each layer to be treated separately so that it can be interpreted as an entity with respect to any impact of the scholarship scheme. The OLR will only give a result of one layer relative to the others, and any subtle impact of the scholarship scheme may be missed with that approach.

All the variables (dependent and independent) included in this study are captured in *Table 1*. Test scores, presented as "All-passed vs All-not-passed", make up the dependent or outcome variables. In contrast, the independent or predictor variables were those that might, in addition to financial incentives, potentially influence the test scores. As previously explained in *Section 4.3.3*, their choice was determined by published studies which have shown that such influences can come from socio-demographic factors like gender (with girls known to have lower failure rates in reading than boys), ethnicity (poor outcomes in minority races), and economic backgrounds (poorer scores in low-income groups) (Ikegulu, 2004; Rose et al., 2018; Uyeno et al., 2006b; Veloski et al., 2000). Age has also been explored in the past, even though the impact has never been very clear (Veloski et al., 2000). Among these potential influencers, only the impact of "gender" could be realistically explored in this work, given that ethnicity and socioeconomic influences are similar for all participants (as explained earlier). Age was not captured in the WASSCE result sheets and could not be obtained.

In addition to gender, three other predictor variables related to the eligibility of the IFOMSSA Scholarship Scheme were analysed (*Table 1*).

Table 1: Variables for logistics regression analysis

S/N	Variables	
A	**Dependent/Outcome Variables**	
	1) "All Subjects Passed" and "All Subjects Not Passed"	
B	**Independent/Predictor Variables**	
	1) Gender	Male vs Female
	2) Scholarship Status	Recipient vs Non-recipient
	3) Exam Challenge (Selection Exam) Status	Participant vs Non-participant.
	4) Scholarship Eligibility	Scholarship-eligible (Intervention) vs Scholarship-ineligible (Control)

***Note**: Four subjects (English Language, Mathematics, Civic Education and Biology) were involved.*

Those variables included:

i. Scholarship Eligibility, i.e., "Scholarship-eligible (or the intervention group)" vs "Scholarship-ineligible (or the control group)".
ii. IFOMSSA Challenge/Selection Exam Status (Participant vs non-Participant).
iii. Final Status with the Scholarship (Recipient vs non-recipient).

It is important to ensure clarity regarding terminologies for scholarship status (recipients, non-recipients, participants and non-participants). Among the eligible students, this study categorised them based on their academic achievements as "high performers", "moderate performers" and "low performers". As explained earlier, the high performers were students from the Intervention Group who were selected for the Exam Challenge and went on to receive the scholarship award after the Challenge (recipients). They are also referred to as the "Participant Winners". The moderate performers were those from the same Intervention Group of schools who were also selected for the Exam Challenge but did not eventually receive the award (Participant Non-Winners). Finally, the low performers were all the other students in the Intervention Group, who were eligible for the awards and were motivated for it (alongside the high and moderate performers) but were neither selected for the Exam Challenge nor received the Award (Non-Participant Non-Winners). These categorisations were necessary to allow for detailed discussions of the results. It also facilitated comparisons from related findings that were already reported in the Literature Review (Bourguignon et al., 2003; Slavin, 2010; Spencer et al., 2005).

4.4. Methods: Qualitative Aspects

The qualitative component of this study adopted the Case Study research method to investigate how involvement in the IFOMSSA Scholarship scheme might have impacted participants. Case studies are empirical inquiries that investigate contemporary phenomena within their real-life contexts (Hancock & Algozzine, 2011; Yazan, 2015; Yin, 2014), and are particularly suitable for program evaluation or research and when there is a need to garner in-depth details (Crowe et al., 2011; Yazan, 2015).

As already explained, the quantitative arm explored “changes in test scores from WASSCE” as its primary outcome measure, with “change in enrolment patterns for the WASSCE” as the secondary outcome measure. These two “changes” are the phenomena of interest in this study. By qualitatively engaging the participants in the IFOMSSA Scheme through a Case Study, this qualitative arm evaluated the underlying influencers of the observed changes in both phenomena. This strategy allowed this work to comprehensively explore, seek, understand, describe, interpret, and explain the experiences of the concerned participants (students and others). This was done by relating directly with the individual beneficiaries of the scholarship, their families, and their teachers, as well as the community leaders, government officials, and other education stakeholders in the Educational Zone involved.

4.4.1. Case Studies

The Case Study is considered the best fit for this work compared to other alternatives like phenomenology, ethnography, grounded theories and narratives. This is so given that the Case Study is "naturalistic", allowing for an in-depth exploration of the phenomena in their natural contexts, with the latter quality favouring it against “experimental” designs (like randomised controlled trials), which deliberately manipulate environments to test hypotheses (Crowe et al., 2011). Having established the basis for choosing the Case Study for this work, the following paragraphs will now provide the detailed rationale and justifications for this and make comparisons to the alternatives stated.

One obvious and natural advantage of the case study was that the IFOMSSA Scholarship Scheme was a prototype of the proposed scholarship model, and

exploring it as a case study was a natural fit. A second advantage was that case studies present strong realities, given that they are generally conducted in down-to-earth fashions. As such, they do hold the attention of participants while capturing unique details that could otherwise be lost in larger studies. A third advantage was that case studies could easily be undertaken by single researchers and have the flexibility to embrace uncontrollable and unanticipated variables.

Despite the stated advantages, case studies have several potential limitations. Respected authors have acknowledged that, like most qualitative research approaches, they may be open to subjective biases, and there are concerns with the generalisability of its findings (Cohen et al., 2018; Yin, 2013). Data collected from case studies may also be difficult to cross-check. These limitations largely arise due to the inherent lack of scientific objectivity, analysis and measurements associated with case studies and other qualitative research methods. Unaddressed, they can, theoretically at least, affect the reliability and validity of the information obtained.

As explained in the early part of this work, multiple techniques were adopted to ensure the generalisability of this work's findings (*Section 4.1.2*), and some of these are aligned with recommended measures by experts (de Saint-Georges, 2018; Smith, 2018; Yin, 2013). Also, as explained in *Section 4.3.5* for the quantitative arm of the study, the final data collected for this qualitative arm were also checked twice, and no significant errors were found. In addition to these measures, it should be noted that a multi-dimensional set of strategies was put in place to further mitigate the potential for bias. These are explained fully in *Section 4.6.1*, which covers Ethics and Reflexivity.

Another potential limitation of case studies is that they are not naturally designed to obtain the perspectives of large numbers of participants or stakeholders since they are focused primarily on the detailed exploration of a single or a few individuals. To minimise this prospect and broaden the insights obtained, this paper identified and conducted detailed interviews with multiple participants for each category of interest.

It should also be pointed out that the qualitative aspect of this work was largely in place to complement and provide insights that will help in understanding the more rigorous quantitative component. As such, the stated inherent weaknesses and potential limitations facing this qualitative arm would have been more prominent were they to stand alone, but are minimised by the mixed methods nature.

Phenomenology was a close alternative to the Case Study for this work. As Cohen et al. (2018) noted, the phenomenological approach matched most of the stated advantages of case studies. For instance, through in-depth interviews, phenomenology can obtain as many unique details as a case study. It can also be down-to-earth and hold the attention of participants during interviews. Phenomenology may also have an added advantage in obtaining details of lived experiences from multiple participants and stakeholders, not just one individual. Despite these, it is worth pointing out that the primary qualitative aim of this study was to understand the concept of the proposed scholarship scheme and how it relates to the lived experiences of the participants and associated stakeholders. As such, the case study provided a better fit. Phenomenology also shares some of the disadvantages and weaknesses of case studies, including generalisability concerns and potential bias cross-checking limitations. Given the foregoing, little doubt remains that case study offered the best design for answering the fifth research sub-question of this work.

Apart from phenomenology, case studies also hold advantages in answering the research questions compared to all the other remaining alternative approaches mentioned above. For instance, an Ethnography would only be more suitable if the study was about the collective, not personalised experiences of the participants, while a Grounded Theory would be more relevant if explanations of a course of action (and why it evolved) were the goal of this study, rather than the understanding of the actual experiences of participants. Similarly, a Narrative is designed to explore and compile information over periods of time while reviewing situations and their associated obstacles and opportunities. None of these would address the key research objectives.

In addition to the above justifications, further rationale for adopting a Case Study in this work was linked to the fact that the ultimate recipients of the scholarship were individuals, even though the proposed scheme sought to motivate groups of participants. As such, understanding the scheme's impact would be best done by exploring the experiences of the respective participants in the Intervention Group (including the award recipients and non-recipients), as well as their personal (subjective) attitudes, perceptions and interpretations of their engagements with the daily motivational talks from teachers in their schools, their respective school selection exams, the general "challenge" itself, and the awards ceremony. The case study approach allowed the researchers to understand the impact and limitations of this kind

of scholarship scheme through the eyes of the beneficiaries, participants and stakeholders.

4.4.2. Participant Selection for the Qualitative Study

The “Typical-case Sampling Technique (TST)”, a form of “Purposive Sampling”, was used for this study, as it allowed for the selection of participants based on their knowledge of the phenomenon under study (Cohen et al., 2018; Etikan et al., 2016; Laerd Dissertation, 2012). The TST is designed to ensure that no information obtained for the study comes from uniformed individuals and to avoid the possibility of receiving responses from deviant cases. Its appropriateness to this study was also premised on the fact that it was a design well suited to understanding and describing an event of interest from the point of view of participants who had not only experienced it but were also willing to share it (Laerd Dissertation, 2012; Speziale et al., 2011).

Purposive Sampling, which has six other types of techniques in addition to the TST, is a non-probability sampling technique whose primary goal is to focus on specific characteristics of interest in a population (Cohen et al., 2018; Etikan et al., 2016; Wang et al., 2018). It is useful when researchers need to answer relevant research questions. A clear answer to these questions was crucial to this study as it helped it override some of the potential limitations identified earlier, particularly the non-representative, subjective ones. The other types of Purposive Sampling, which were not suitable for this study, included the Extreme (Deviant), Homogenous, Maximum Variation, Critical Case, Expert and Population sampling techniques.

Apart from Purposive Sampling, the Quota and Snowball sampling techniques were the other sampling options for this work, as described by Cohen et al. (2018). None of them was suitable. Quota sampling, for instance, determines participants based on the need for proportional representations that are relevant to pre-defined characteristics or traits of interest. No such need for proportionality existed in this work. Similarly, Snowball Sampling, which relies on already-identified research participants to help find other suitable participants required for a study, is better suited to studies where the desired participants were either unknown or hard to reach. These were not the cases here, as the participants were all affiliated with the ten intervention groups of schools involved in this study or the Educational Zone overseeing them. As such, they were fairly easy to reach, particularly given the few years of healthy relationships they had established with the Foundation.

4.4.3. Inclusion Criteria for the Qualitative Study.

To be eligible for inclusion as a participant in an interview, the individual must have been a student or family member of a student eligible for the IFOMSSA Senior Scholarship Award between 2017 and 2022. It should be noted that participants who benefitted from the IFOMSSA Senior scheme after 2019 were invited to participate in the interviews as their lived experiences of the program were being explored. The qualitative arm of the study was not bound by the time factor as was the case for the quantitative arm. Post 2019 participants had more recent experiences and recollections of the scheme, a program that maintained the same standard even after the quantitative data collection ceased in 2019. As such, this flexibility only helped raise the robustness of the data collected qualitatively without affecting the quantitative component or the overall study outcome.

Other interviewees included teachers or principals in the ten eligible schools and community leaders and government staff in communities within the Otuocha Zone (*see Table 2*). *Table 2* also shows seven interviewee groups, three of whom were students, while the other four were parents, teachers, government staff and community leaders.

Based on how they participated in the IFOMSSA Scheme (as also shown in *Table 2)*, the student participants were grouped into three categories: low, moderate and high performers. The low performers (also referred to as the “non-participant non-winners”) were those who, even though they were eligible for the IFOMSSA Award (by virtue of their attendance at one of the ten eligible schools), did not qualify for the IFOMSSA Exam, and, therefore, did not receive the Scholarship. The moderate performers qualified for the Scholarship selection exam (called the IFOMSSA Challenge) and participated in it but failed to win the scholarship (participant non-winners), while the high performers were those who won the Scholarship after participating in the IFOMSSA Challenge (participant winners).

4.4.4. Sample Size for the Qualitative Study

According to experts cited here, interviewing two to 15 participants over a 30 to 60-minute period would ensure saturation in case studies, with “saturation” being the point when no new themes or information can be garnered (Creswell & Poth, 2018; Speziale et al., 2011). Given this, the TST was used to select a minimum of two

interviewees for each of the seven groups of participants, with only the high-performing student group having three participants. Therefore, there were a total of 15 participants from all the groups (*Table 2*). Students in the Control Group were not included in the interviews as they did not experience the phenomenon of interest in this work (which is exposure to the underlying principles of the IFOMSSA Senior Scholarship Scheme).

Table 2: IFOMSSA Scheme Interviews - Groups of Participants/Interviewees

Group	Participants/interviewees for the Study (interview category)	Numbers
1	IFOMSSA (Exam) Challenge Participants - Scholarship Recipients (Participant Recipients or Recipients) - *Category 1A*	3
2	IFOMSSA (Exam) Challenge Participants - Non-Scholarship Recipients (Participant non-recipients) - *Category 1B*	2
3	IFOMSSA (Exam) Challenge Non-Participants/Non-Scholarship Recipients (Non-Participants non-recipients) - *Category 1C*	2
4	Parents/Guardians of Recipients/Scholarship Winners - *Category 2*	2
5	School Teachers/Principals - *Category 3*	2
6	Government Staff - *Category 4*	2
7	Community/Traditional Leaders - *Category 5*	2
	Total participants for case study in-depth interview	**15**

***Note**: IFOMSSA stands for the "Ifedioramma Okafor Memorial Secondary School Academic Award".*

4.4.5. Data Collection and Consent for the Qualitative Study.

As already stated, data was primarily collected from in-depth, open-ended, semi-structured interviews. Interviews were justified for this study because they were the most suitable approach that helped with the deep exploration of issues from the participants, as well as in gaining insights on the associated values, feelings, opinions, attitudes and experiences with the scholarship scheme (Cohen et al., 2018; Wang et al., 2018).

Signed consent for participants aged 18 years and over (attached as *Appendix F)* and for those aged under 18 years *(*attached as *Appendix G)* was obtained from all 15 participants ahead of each interview. All the recorded interviews were transcribed, with the full versions available in *Chapter 6* (Results for the Qualitative Study). "Respondent-validation" of the transcripts, as advocated by experts, was carried out by inviting the interviewees to check the final transcripts (Yazan, 2015).

To ensure anonymity, participants were represented by their initials and assigned codes that were used to identify them throughout this study. *Tables 11 and 12* (on pages 113 and 114, respectively) capture these, along with other details and the respective relationships or roles of the participants to the IFOMSSA Scheme.

4.4.6. Structure of the Questionnaires for Qualitative Study

The questionnaires are included in *Appendices "H to M".* They were developed using standard approaches that first thematised the basis and goals of the entire research, followed by a question design and other necessary steps.

Each questionnaire had "pre-interview questions", which allowed for introductions, clarification of consent, and confirmation of the other relevant details as needed (like gender and levels of involvement in the IFOMSSA Scheme). Each participant was assured that there were no right or wrong responses and encouraged to respond exactly as they felt. These pre-interview questions also helped "break the ice" and eased tensions by allowing the interviewees to relax before the main questions were asked.

The main questionnaire had three parts (A, B, and C), in line with this study's three principles. These parts also represented the "themes" used for the data analysis. Each part had questions designed to explore each principle. The questions in Group A addressed the "hybrid (mixed needs and merit)" selection component, while those in Groups B and C covered "mass motivation" and "community involvement," respectively. For the teachers, questions on "enrolment patterns" in the certificate exams were also included as Part D.

At the onset, only the "what," "how," and "why" open-ended questions were used. Where necessary, probing follow-up questions were asked to get more in-depth clarifications. To ensure nothing was missed, each questionnaire ended with an invitation to make a general comment, observation or recommendation regarding the IFOMSSA Scheme.

Codes were assigned to the participant groups using Roman numerals (from 1 to 5). These were all captured for all 15 participants in Tables 11 and 12. *Table 11* shows all student participants with their codes and other details, while *Table 12* has the same information for non-student participants. All the interviewee groups, their codes, and their questionnaires are summarised as follows:

i. Student Participant Winners – Code 1A (Interview Questions: Appendix I).
ii. Student Participant Winners – Code 1B (Interview Questions: Appendix J).
iii. Student Participant Winners – Code 1C (Interview Questions: Appendix K).
iv. Parents/Guardians – Code 2 (Interview Questions: Appendix L).

v. Teachers/Principals – Code 3 (Interview Questions: Appendix M).
vi. Government Staff – Code 4 (Interview Questions: Appendix N; combined with Community Leaders).
vii. Community Leaders – Code 5 (Interview Questions: Appendix N; Combined with Government Staff).

4.4.7. The Interviews

The semi-structured approach allowed the respondents to dictate the direction of the interview, while the researchers could probe for details as the need arose by keeping it all on track with a pre-determined schedule. The whole exercise was "emergent" in nature, a process that allowed the number of interviewees within each group to be expanded if the information obtained warranted (Hesse-Biber & Johnson, 2015).

The interviews were initiated using a few broad, open-ended questions that generated the needed responses (the "what," "how," and "why" questions). These were then followed up with probing questions designed to clarify responses and facilitate in-depth descriptions. Ahead of these interviews, some data were collected from the participants by getting them to fill out questionnaires. These questionnaires gathered information on the basic, non-identifying demographic data and the interviewees' roles or degrees of involvement with the proposed scheme. These questionnaires are attached as *Appendices H to M*.

Two interviewers, specifically trained for the purpose, were involved in the data collection. To minimise bias, the lead researcher, who is also the Founder of the Foundation behind the IFOMSSA Scheme, was not part of the interview team.

Before the actual interviews and in line with established protocol, two participants not involved in the study assisted with piloting the questions designed for the main interviews (Yazan, 2015). The final set of questions, developed after the piloting, is included in *Appendices H to M*.

The substantive interviews, conducted with the final post-pilot questionnaires, were held over the four weekends from October 23rd to November 19th, 2022. These were done virtually (via Zoom) and separately for each of the 15 participants. As shown in *Tables 11 and 12*, the interviews averaged 37 minutes for each participant.

The use of virtual interviews offers a number of advantages. As enunciated by Cohen et al. (2018), one advantage it has for this work was that virtual interviews were

more feasible than the face-to-face (F2F) alternatives, given that almost all the participants interviewed were based overseas. As such, a F2F option would have required international travel, which comes with attendant risks. Virtual interviews were also cheaper and quicker for this work and were more flexible regarding the timing and reach to the participants. A third advantage of virtual interviews for this project was that, by minimising physical contact, virtual interviews helped improve privacy, anonymity and confidentiality, all of which helped improve the safety of the individuals involved and the quality of the responses collected (Smith & Coombs, 2003). According to Smith and Coombs (2003), these later advantages helped minimise the potential of a "Hawthorne Effect", which arises when participants unconsciously alter their behaviours due to the awareness that they are being watched. Other benefits associated with the virtual interviews of this work were that it allowed visual cues, that the discussions were easily recorded, and that it allowed greater interviewer control with more uniform and standardised questions (Cohen et al., 2018). Experts advocate recording semi-structured interviews, as it allows the interviewer to focus on the participants and avoid distractions (Wang et al., 2018). So, the ability of this work to record the interview was welcomed.

Despite its multiple advantages, a number of potential limitations can be associated with virtual interviews. One was that respondents may decide not to respond to the calls and can easily stop the interviews by simply cutting the call, situations which are usually better handled with F2F interviews (Cohen et al., 2018). However, this study did not observe these, possibly given the existing rapport that the Foundation already holds with the targeted participants. Technical glitches (mainly from internet network issues) were also encountered with a number of the interviews, leading to delays and some rescheduling of the interviews. As shown in Table 11, the recording from one of the interviewees was so poor that it had to be discarded. The final limitation came from the difference in time zones between Australia (+10 GMT; Brisbane) and Nigeria (+1 GMT). This Challenge was expected prior to the Study, and easily overcome as the two interviewers were well-prepared for it. One interviewer was a resident of Nigeria and had no problem at all with this time zone issue. The other interviewer lives in Australia but was already used to the time difference as he was originally from Nigeria.

Ultimately, the virtual interviews went very well, and data was well collated for 14 of the 15 participants. As stated, results from one interview were not included in the final results, given the inability to transcribe it due to poor audio quality.

4.4.8. Data Analysis for the Qualitative Study.

All analyses aligned with the underlying principles and research question of this work and included all seven steps advocated for the Framework Approach, FA (Crowe et al., 2011; Iliffe et al., 2015; Parkinson et al., 2016; Ward et al., 2013). These seven steps are listed below and were followed by this work in detail. It should be noted that the FA allows for a transparent audit trail and the entrenchment of rigour in data exploration. It makes a better fit into the Thematic Analysis of this paper than the inductive approaches (like grounded theory), whose methods are usually not pre-defined but are rather developed according to the data obtained (Crowe et al., 2011; Smith & Firth, 2011). The themes for this work were pre-defined and incorporated into the questionnaire design, represented by groups A to C of the questionnaire (*Appendices H to M*). This structure made the analysis easier.

The seven steps/stages required for the FA include (Gale et al., 2013):

a) Transcription
b) Familiarisation with the interview
c) Coding
d) Developing a working analytical framework
e) Applying the analytical framework
f) Charting data into the framework matrix
g) Interpreting the data

Each of these steps will now be discussed in detail.

To address the first stage of the FA (the transcription stage), this study adhered to the guidance provided by experts, which was that recordings with good audio qualities are needed and that these are always to be followed by verbatim transcriptions (Gale et al., 2013). This study achieved both. As can be seen in the attached files, which have links to the audio recordings (Ifediora et al., 2023b) and transcriptions (Ifediora et al., 2023a), all 14 (of the 15) interviews included in this study are of good quality. Due to the poor audio quality of 1A-3 (one of the student participant

winners), his interview was discarded, as transcription was not feasible. As such, 14 interviews were used, two from each group. A professional transcription company based in the United States of America was engaged for the transcription. Maintaining confidentiality was a major factor guaranteed before the company was hired, and all files were destroyed upon completion of the transcription. Post transcription, the transcribed files were re-checked for accuracy and, as explained earlier, the interviewed participants had the chance to review the transcripts to ensure that they reflected their expressed views.

This work also adhered to the suggestions on Stage Two of the FA, which is the "familiarisation with the interview". While waiting for the transcriptions, the author listened to the audio recordings in full for each interview. Following the transcription, each audio was again listened to, for the second time, this time while following the text on the transcribed documents. Notes were made during these two full listening rounds. This stage was very important in aligning the texts with their respective themes and allowed full immersion into the collated data.

Stage 3 of the FA, the Coding, was straightforward as the study method allowed a form of coding to be in place even before the interviews. This is as explained in *Section 4.4.6*. This approach, where the coding was already defined beforehand in line with the three stated principles underlying this study, is in line with what is advocated for deductive studies (Gale et al., 2013). Alongside the lead author and in line with established methods, the two people who handled the interviews also contributed to the coding, with each person handling his coding independently.

After coding, the next stage was to "develop a working analytical framework," which is Stage 4 of the FA. All three researchers involved in the coding ensured that the codes complied with the categories, as explained in *Section 4.4.6*. Ultimately, four categories emerged, and these constitute the Analytical Framework. As seen in *Chapter 6*, the qualitative results were presented along these categories of the Analytical Framework. These frameworks were:

i. The hybrid (needs and merits) mixed methods selection criteria.

ii. The mass motivation components.

iii. Community involvement and influences.

iv. Enrolment patterns into the WASSCE.

Stage 5, the “application of the analytical framework” follows on from Stage 4 and allows for the practical applications of the categorisations developed from the codes. The coding are defined in Tables 11 and 12, while the categorisations are as defined above. It was all done manually, and neither N-Vivo nor the Computer Assisted Qualitative Data Analysis Software (CAQDAS) were used. Even though both are qualitative analytical software packages that have been advocated by experts to assist with projects like this (Gale et al., 2013), they were not found useful in this study. This was possibly due to the fact that the categorisations were integrated into this study’s design, and the interviews and data collection followed the pre-defined steps. As such, sophisticated software was not necessary.

Stage 6 included the “charting of data into the framework matrix”. This required the summarising of the transcribed interview data into categories. Experts advise that this process requires the ability to have a balance between the need to reduce the statements from the interviewees without losing the original meanings, and the use of their exact comments in order to retain a “feel” and “flavour” of their exact statements (Gale et al., 2013). Overall, given the high chance of a conflict of interest in this work (see *Section 4.6*), the researcher chose to express the exact wording wherever possible. This measure, it was agreed, would help minimise the chance of bias from the authors presenting condensed information that might inadvertently favour their preferred interpretations. For this reason, most of the results and discussions would have exact comments quoted rather than summarised versions.

Stage 7 involved the “interpretation of data”. This was aided by the use of a Reflexive Diary, which, as explained in *Section 4.6.1*, was kept by the researchers throughout the study. Apart from the qualitative interview data captured and presented in *Chapter 6* of this paper, the actual interpretations are in *Chapter 7*, which is the Discussion.

4.4.9. How “Motivations” Were Analysed.

For clarity, it is important to explain how “motivations” at individual and en masse levels, were analysed in this study. Motivations towards higher student performances from the IFOMSSA Senior Scholarship Scheme on the students were

explored with respect to the perceptions of the 14 interviewees on how they felt that the IFOMSSA Senior Scheme impacted their (a) preparations for the WASSCE and (b) actual performances at the WASSCE.

Individual motivations towards the two parameters above were assessed based on the perceived impact of the project on the moderate-to-high-performing students (i.e., those students who participated in the IFOMSSA Challenge; *Section 4.4.3*). This was so because, once selected for these exams, this group of students had extra personal reasons and motivation to excel, given that the Scholarship was considered within their reach when they were told they would be sitting for the IFOMSSA Challenge. This group of students are those who might have been ordinarily inspired even if the IFOMSSA Senior Scheme's effort at mass motivation was not in place.

En mass motivations were assessed with attention paid to the students who might not have benefitted had the mass motivation principle of the IFOMSSA Senior Scheme not been in place. This assessment was achieved by gauging the potential impact of the Scheme on the non-participant non-winners (i.e., the low-performers; *Section 4.4.3*). As has been explained, the idea behind the en masse motivation was that "all" students in the eligible schools, not just the IFOMSSA Challenge participants or the eventual scholarship recipients, were to be inspired towards the attainment of higher scores.

As stated in the early part of this Section, the views of all 14 interviewees on the potential impact of the IFOMMSA Senior Scheme on the two groups of students representing the individual motivations (moderate-to-high performers) and the en masse motivations (low performers) were each gauged on two fronts. The first was on their preparations for the WASSCE and then on their actual performances at the WASSCE.

4.5. Ethical Considerations

The Human Research Ethics Committee of the University of Southern Queensland, Australia (ID: H22REA-17) provided full ethical approval for this Study. The research was conducted in accordance with all relevant guidelines and regulations as stipulated by them. Consent was also obtained from the relevant Anambra State government officials, as well as the officers in charge of the Educational Zone overseeing the selected schools.

Informed consent, as described by Groenewald (2004), was particularly important for qualitative interviews. As such, an “informed consent agreement” was developed (see *Appendices F and H*), with the following components clearly stipulated:

a) The participants agreed to participate in the research.
b) The purpose of the research, without revealing the main central research question.
c) The research procedures.
d) The potential risks and benefits.
e) That participation is voluntary, with no retribution for declining consent.
f) The procedures in place for protecting confidentiality. Names or other identifying information of the participants were not collected.

Efforts were also made to avoid asking deceptive questions during the interviews since they are known to be counter-productive by preventing insights (Groenewald, 2004). Groenewald (2004) also advised that guaranteeing honesty and confidentiality in interviews minimises suspicion and enhances sincere responses, adding that these qualities are lost if deceptive questions are used. Even though the interviewers involved in this study did not ask the central research question, and experts do not regard this as deception, as doing so might inadvertently influence the respondents to give what they felt were the desired responses (Kvale & Brinkmann, 2009).

Having explained how confidentiality and consent were achieved in this work, this paper will now discuss the efforts made to address conflicts of interest throughout the study.

4.5.1. Reflexivity and Conflict of Interest

It needs to be acknowledged that the Foundation responsible for the IFOMSSA Scholarship Awards was established by the researcher of this study. Despite this, the perceived conflict of interest that would ordinarily come with this was mitigated for a number of reasons.

Firstly, the author stood to benefit nothing from the findings of this work, either as an individual or as part of the Foundation. This was considered the case because

a finding of an increased, reduced, or no impact on academic performances by the IFOMSSA Senior Scholarship Scheme would only assist in (re)shaping policies for delivering education aid in Nigeria and, possibly, other developing African countries. Should such developments arise, they would only be directly considered and implemented by the concerned governments and the respective funding agencies without needing to consult with the Foundation. Secondly, no funding will need to be channelled through the Foundation, either now or in the future. These realities meant that there was little incentive for the researcher to influence the findings of this work in any way.

Despite the above realities, this work adopted multiple measures to ensure "Reflexivity" and minimise potential conflicts of interest (Lumsden, 2019; Whitaker & Atkinson, 2019). Four specific and practicable measures were put in place to ensure this.

The first was that the lead researcher was not directly involved in the interviews. He was involved in the design, piloting, preparations, and rehearsals for the interviews but was not directly involved in the actual exercise. Two other individuals who were not part of the Foundation and were unknown to any of the interviewees handled the interviews. One of them was an academic supervisor to this work, while the other was a research volunteer trained for the purpose. It should be noted that, with the consent of participants, all the interviews were recorded. This allowed the lead researcher to follow up on all interviews after they were done, ensuring that they were all conducted according to the study guidelines and expectations. Gaps between the interviews (they were conducted on different days across four weekends from October 23rd to November 19th, 2022) allowed for the recorded videos of completed interviews to be reviewed (as necessary) with the supervisors before subsequent ones were completed. This was particularly applicable for the first three interviews and was an approach that gave room for appraisals of the tone, facial expressions and body language displayed during the interviews. It also allowed room for the necessary corrections to be made as needed.

The second measure was that a Reflective Diary (or Reflective Journal) was kept, starting from the interview phase, and maintained throughout the study duration. This diary allowed the lead researcher to document his emotions on every active day of the research (Bassot, 2024; Wallin & Adawi, 2018). These were reflected upon at the end of each day. As part of the writing-up of this paper, referrals were made to the

entries in the diary, allowing for proper allowances to be made on the feelings, as necessary. This helped raise consciousness of any potential conflicts, and instigated measures to address them appropriately.

A third reflexive measure was that, during the writing up, the lead researcher constantly reflected on the interpretations given to the narratives gathered during the interviews. This helped ensure that personal experiences were checked on and not allowed to influence the work.

A final set of measures were those already discussed in the Methods, which were all put in place to ensure the minimisation of bias in the study. Some of these measures included double-checking collected data, interviewing more than one participant for each category of interest, and the mixed methods nature of the work, among others.

CHAPTER 5: RESULTS - QUANTITATIVE

5.1. Demographics and Relevant Associations

Table 3 summarises the Gender, Location, and Scholarship Status of all the participants who undertook WASSCE as part of the SSS 3 students at public senior secondary schools under the Otuocha Educational Zone of Anambra State, South-eastern Nigeria, over the six years of 2014 to 2019. The years 2014 to 2016 represent the pre-intervention or before-intervention years, while 2017 to 2019 are the post-intervention or after-intervention years. *Section 4.3.5* explained why data on age were not available for collation in this study.

The total number of students who wrote the WASSCE over this period, which represents the entire population included in this study, was 5,727. Of this total (as shown in the left-hand column of *Table 3*), there were slightly more males (2,907 or 50.8%) than females (2,820 or 49.2%).

As explained in the Methods, this study is a “Controlled Before-and-After (CBA) Study”, implying that there was an “Intervention vs. Control”, as well as the “Before (Pre) vs. After (Post)” components. The middle column of *Table 3* reveals the relevant numbers of these. Over the study's six years, a total of 2,303 students passed through the Intervention Group, with 1,088 (47.2%) being in the pre-intervention years and 1,215 (52.8%) in the post-intervention ones. For the Control Group, there were a total of 3,424 students, of which 1,648 (48.1%) were in the three pre-intervention years and 1,740 (51.9%) were in the post-intervention ones.

Given the foregoing numbers, students enrolled for WASSCE in the Study's Control arm were about 1.49 times (3,424 vs. 2,303) higher than those in the Intervention arm over the entire six years of the study. Table 3 also allowed comparisons to be made in the three pre-intervention years only and in the three post-intervention years only. For the three pre-intervention years only, it was also found that students in the control arm were 1.51 (1,648 vs 1,088) times relative to the intervention arm. Within the post-intervention years, the ratio was 1.43 (1,740 for the control arm and 1,215 for the intervention arm). These proportions give an approximately 1:1.5 between the Intervention and the Control arms, not just for the entire study but also for each of the pre and post-intervention years. The implications of these numbers for the entire study will be looked at in the Discussion.

The two columns on the far right of *Table 3* provide numbers regarding participation in the IFOMSSA Senior Scheme. It should be recalled that the IFOMSSA Scheme applied only to the post-intervention years, as the program was non-existent in the pre-intervention ones. Some students in those three post-intervention years participated in the IFOMSSA Challenge (the selection exam used to select the ultimate scholarship recipients), of which a few eventually received the IFOMSSA Scholarship awards. A look at the numbers reveals that, overall, a total of 106 students out of the 1,215 or 8.7% of the students enrolled in the ten eligible (Intervention) schools at the time sat for the IFOMSSA Challenge over the three post-intervention years. These were 24 in 2017, 35 in 2018, and 37 in 2019. Out of these 106, a total of 34 eventually received the IFOMSSA Senior Scholarships over those same three years (10 in 2017, 12 in 2018 and another 12 in 2018), representing 2.8% of the total eligible students. The implications of these numbers are huge for this study and will be explored fully in the Discussion (*Chapter 7*).

5.1.1. Demographics on the "Before and After Intervention" Groups

As shown in *Table 3*, a total of 2,772 students (or 48.4% of the total) wrote the exam in the three years before the Intervention, while 2,955, or 51.6%, participated within the three "post-intervention" years. About 51.8% (1,436) of the pre-intervention total were males, while the remaining 1,336 (48.2%) were females. The numbers were roughly equal in the post-intervention years, with males constituting 49.7% (1,471) of the participants, while females had 50.3% (1,484). The implications of these gender statistics are discussed in *Section 7.2*.

Table 3: Gender, Location, and Scholarship Status of ALL students in the final class of public Senior Secondary Schools' of Otuocha Educational Zone, South-eastern Nigeria (2014-2019)

S/N	Exam Year	Gender		Local Government Area (Intervention or Control Groups)			IFOMSSA Challenge Participation		IFOMSSA* Senior Award Status	
		Male (%)	Female (%)	Intervention Anambra East (%)	Control Anambra West (%)	Ayamelum (%)	Yes (%)	No (%)	Won (%)	Not Win (%)
Pre-Intervention *(the three years before the IFOMSSA Senior Award was introduced; 2014 to 2016)*										
1	2014	620 (51.8)	576 (48.2) 1196	701 (58.6)	284 (23.7)	211 (17.6)	0 (0.0)	1196 (100.0)	0 (0.0)	1196 (100.0)
2	2015	375 (52.2)	344 (47.8) 719	199 (27.7)	326 (45.3)	194 (27.0)	0 (0.0)	719 (100.0)	0 (0.0)	719 (100.0)
3	2016	441 (51.5)	416 (48.5) 857	188 (21.9)	310 (36.2)	359 (41.9)	0 (0.0)	857 (100.0)	0 (0.0)	857 (100.0)
	Totals			1088 (39.2)	920 (33.2)	764 (27.6)				
		1436 (51.8)	1336 (48.2)	1088 (39.2)	1648 (60.8)		0 (0.0)	2772 (100.0)	0 (0.0)	2772 (100.0)
Pre-Totals		2772 (48.4)		**2772 (48.4)**			**2772 (48.4)**		**2772 (48.4)**	
Post-Intervention *(the three years before the IFOMSSA Senior Award was introduced (2017 to 2019)*										
4	2017	557 (53.4)	487 (46.6) 1044	390 (37.4)	372 (35.6)	282 (27.0)	34 (3.3)	1010 (96.7)	10 (1.0)	1034 (99.0)
5	2018	418 (48.4)	446 (51.6) 864	353 (40.9)	237 (27.4)	274 (31.4)	35 (4.1)	829 (95.9)	12 (1.4)	852 (98.6)
6	2019	496 (47.4)	551 (52.6) 1047	472 (45.1) 1215 (41.1)	269 (25.7) 878 (29.7)	306 (29.2) 862 (29.2)	37 (3.5)	1010 (96.5)	12 (1.1)	1035 (98.9)
Post - Totals		1471 (49.7) 2955 (51.6)	1484 (50.3)	1215 (41.1) 2955 (51.6)	1740 (58.9)		106 (3.6) 2955 (51.6)	2849 (96.4)	34 (1.2) 2955 (51.6)	2921 (98.8)
GRAND TOTALS		2907 (50.8) 5727 (100.0)	2820 (49.2)	2303 (40.2)	3424 (59.8) 5727 (100.0)		106 (1.9) 5727 (100.0)	5621 (98.1)	34 (0.6)	5693 (99.4) 57270.0)

NOTE: *IFOMSSA: Ifedioramma Okafor Memorial Secondary School Academic.*

5.1.2. Demographics on the "Intervention and Control" Groups.

Table 3 also captured the demographics across the Intervention and Control groups. Over the six years under review, 2,303 (40.2% of the population) of the students wrote the exam across the public schools under the Anambra East LGA alone. This was the intervention arm of the entire study (comprised of the three pre-intervention and three post-intervention years). Of this total, 1,088 (47.2%) wrote WASSCE in the "before-intervention" years (2014 to 2016), while 1,215 (52.8%) did the same in the "post-intervention years" of 2017 to 2019.

Over the same six years, the control arm (i.e., public schools in Anambra West and Ayamelum LGAs) of the study had 3,424 students, or 59.8% of the entire study population, involved in WASSCE. Of this number, 1,648 (49.2%) students sat for the exam in the "before-intervention" years, while 1,740 (50.8%) wrote the same exam within the three "post-intervention" years.

5.1.3. Gender Demographics from the Three Post-Intervention Years.

Table 4 summarises the genders across the Control and Intervention arms of the three post-intervention years (2017 to 2019). Details on gender from the pre-intervention years were presented in *Table 3* but were not explored further, given that the actual IFOMSSA Senior intervention did not apply to those years.

The left half of the table revealed that, within the intervention cluster of schools, the total male-to-female proportions were 50% each, with males having 608 students and females having 607. A further year-by-year breakdown showed that males dominated in 2017 (222 or 56.9% to 168 or 43.1%) while females dominated in 2018 (205 or 58.1% being females and 41.9% or 148 males). The numbers in 2019 were approximately equal for both genders (238 or 50.4% males and 234 or 49.6% females).

Over the three post-intervention years, totals showed that the control cluster/arm recorded slightly more males (1,770 or 51.7%) than females (1,654 or 48.3%). A year-by-year breakdown showed slightly more males in 2017 (51.2%) and 2018 (52,8%) but more females in 2019 (55.1%).

Section 7.2 discusses the implications of these gender statistics and how they impact real-life recommendations.

Table 4: Genders of students in the "after" intervention years (2017 to 2019) who enrolled for the West African Senior School Certificate Examination (WASSCE) in Otuocha Educational Zone of South-eastern Nigeria and their statuses with the IFOMSSA Challenge and Scholarship

S/N	Exam Year	Intervention and Control (Local Government Areas, LGAS)				IFOMSSA Challenge and Award Status			
		Intervention Cluster Anambra East LGA		**Control Cluster** Anambra West and Ayamelum LGAs		**Participated in the** IFOMSSA Challenge		**Received** IFOMSSA Senior Scholarship	
		Males	Females	Males	Females	Males	Females	Males	Females
1	2017	222 (56.9)	168 (43.1)	319 (51.2)	(48.8)	13 (38.2)	21 (61.8)	4 (40.0)	6 (60.0)
	Total (%)	***390 (100.0)***		***654 (100.0)***		***34 (100.0)***		***8 (100.0)***	
2	2018	148 (41.9)	205 (58.1)	270 (52.8)	241 (47.2)	11 (31.4)	24 (68.6)	4 (33.3)	8 (66.7)
	Total (%)	***353 (100.0)***		***511 (100.0)***		***35 (100.0)***		***12 (100.0)***	
3	2019	238 (50.4)	234 (49.6)	258 (44.9)	317 (55.1)	17 (45.9)	20 (54.1)	8 (66.7)	4 (33.3)
	Total (%)	***472 (100.0)***		***575 (100.0)***		***37 (100.0)***		***12 (100.0)***	
	Overall Total (%)	608 (50.0)	607 (50.0)	1770 (51.7)	1654 (48.3)	41 (38.7)	65 (61.3)	16 (47.1)	18 (52.9)
		1215 (100.0)		***3424 (100.0)***		***106 (100.0)***		***34 (100.0)***	

NOTE: *IFOMSSA = Ifedioramma Okafor Memorial Secondary School Academic*

5.1.4. Gender Demographics on IFOMSSA Challenge and Scholarships.

The right half of *Table 4* revealed that, of the 106 students who participated in the IFOMSSA Challenge during the three post-intervention years, there were more females (65 or 61.3%) than males (41 or 38.7%). There were also more females in each of the three post-intervention years: 2017 (61.8%), 2018 (68.6%), and 2019 (54.1%).

Among the 34 who eventually received the IFOMSSA Senior Scholarship over the same three post-intervention years, females were also in the majority, with 18 (52.9%) being that gender. Apart from 2019, when males dominated the winning list with 66.7%, females maintained majorities in 2017 (60.0%) and 2018 (66.7%).

Again, *Section 7.2* discusses the implications of these gender statistics and their potential impact on education in Nigeria and other developing African countries.

5.1.5. Gender Demographics on Students' Performances in WASSCE.

Table 5 presents the study's observations on gender differences based on WASSCE test scores and their statistical connotations for the three post-intervention years (2017 to 2019). These are presented differently for the intervention group (left half of the table) and the control group (right half).

First, the left half of *Table 5* revealed that 77.0% of males in the intervention-only group of the three post-intervention years achieved acceptable pass scores (i.e., A1 to C6, as explained in *Section 4.3.4*) in English Language, compared to 69.3% of females. This difference was statistically significant (OR 1.49; CI 1.13-1.95). Males also significantly outperformed females in Biology (82.9% vs. 72.2%; OR 1.87; CI 1.30-2.70) and Civic Education (86.4% vs. 81/7%; OR 1.42; CI 1.02-1.98). In Mathematics, however, the difference was statistically non-significant, with males achieving a 92.4% pass rate while females recorded 93.1% (OR 0.90; CI 0.57-1.43). These observations appear to imply that males fared better than females in WASSCE over the three years of the IFOMSSA Senior Awards. This tends to be reversed when the focus is on those who actually participated in the IFOMSSA Challenge or received the actual scholarship (*Section 5.1.4*). The potential implications of these are discussed in *Section 7.2*.

As was shown in the right half of *Table 5*, the gender differences in test scores observed in the control arm of the three post-intervention years followed a different and inconsistent pattern to that in the intervention cluster. Males did not perform better in any of the subjects, with their test scores being significantly less than levels for girls in Mathematics (72.7% Vs. 77.0%; OR 0.79; CI 0.67 - 0.95) and Biology (61.9% vs. 68.6%; OR 0.75; CI 0.62 - 0.91). There was no difference in the gender performances for both the English Language (where boys scored 66.9% pass rate as against 68.8 in females; OR 0.91; CI 0.78 - 1.07) and Civic Education (67.4% vs 68.2; OR 0.96; CI 0.82 - 1.13). This inconsistent pattern in the control cluster of the post-intervention years implies that the intervention arm's findings might be related to the impact of the IFOMSSA Senior scholarship. The implications for this, if at all, are discussed further in *Section 7.2*

Table 5: Gender comparisons of public final year Senior Secondary Schools students of the Otuocha Educational Zone in the "after" intervention years (2017 to 2019) on their performances in 4 subjects of the West African Senior School Certificate Examination (WASSCE)

S/N	Subject	Status	INTERVENTION CLUSTER (2017-19) (Anambra East LGA) Males (M)	Females (F)	CONTROL CLUSTER (2017-2019) (Anambra West & Ayamelum LGAs) Males (M)	Females (F)
1	English Language	Pass (%)	426 (77.0)	364 (69.3)	950 (66.9)	919 (68.8)
		Fail (%)	127 (23.0)	161 (30.7)	471 (33.1)	416 (31.2)
			553 (51.3)	525 (48.7)	1421 (50.8)	1335 (49.2)
		Totals (%)	**1078 (100.0)**		**2756 (100.0)**	
		BLR	*(OR=1.48; CI=1.13-1.95; p<0.004*)*		*(OR=0.91; CI=0.78-1.07; p=0.27)*	
2	Maths	Pass (%)	509 (92.4)	485 (93.1)	1003 (72.7)	998 (77.0)
		Fail (%)	42 (7.6)	36 (6.9)	377 (27.3)	298 (23.0)
			551(51.4)	521 (48.6)	1380 (51.6)	1296 (48.4)
		Totals (%)	**1072 (100.0)**		**2676 (100.0)**	
		BLR	*(OR=0.90; CI=0.57-1.43; p=0.65)*		*(OR=0.79; CI=0.67-0.95; p=0.01*)*	
3	Biology	Pass (%)	277 (82.9)	265 (72.2)	579 (61.9)	613 (68.6)
		Fail (%)	57 (17.1)	102 (27.8)	356 (38.1)	281 (31.4)
			334 (47.6)	367 (52.4)	935 (51.1)	894 (48.9)
		Totals (%)	**701 (100.0)**		**1829 (100.0)**	
		BLR	*OR=1.87; CI=1.30-2.70; p<0.001*)*		*(OR=0.75; CI=0.62-0.91; p<0.01*)*	
4	Civic Education	Pass (%)	477 (86.4)	429 (81.7)	951 (67.4)	907 (68.2)
		Fail (%)	75 (13.6)	96 (18.3)	461 (32.6)	423 (31.8)
			552 (51.3)	525 (48.7)	1412 (51.5)	1330 (48.5)
		Totals (%)	**1077 (100.0)**		**2742 (100.0)**	
		BLR	*OR=1.42; CI=1.02-1.98; p=0.04*)*		*(OR=0.96; CI=0.82-1.13; p=0.64)*	

***Notes**: OR: Odds Ratio; CI: Confidence Interval; BLR:* Binary Logistics Regression
**Statistically Significant (≤0.05); LGA = Local Government Area*

The above presentations highlighted findings for one gender relative to the other (inter-gender) between the Intervention and the Control groups in the three post-intervention years. In an attempt to further underscore the potential impact of the IFOMSSA Senior Scholarship intervention, this paragraph examines only the intra-gender (within each gender) performances in the intervention arm relative to the control arm within the three post-intervention years (*Table 5*). This means that the scores from males in the intervention arm are compared to those of males in the control arm, while those of females in one arm are compared to females in the other arm. Only descriptive (with no inferential) statistics are presented for these comparisons as the idea is to just assess the pattern within each gender.

The pass rates in the control groups were notably lower for both genders compared to the intervention group's performances. For instance, in the English Language, 77.0% of males in the intervention arm achieved acceptable test scores compared to 66.9% in the control group, while 69.3% of females with the same result in the intervention group was slightly higher than the 68.8% of females did the same in the control group. The same pattern was observed in the other three subjects across the three post-intervention years. Mathematics saw males and females record respective 92.4% and 93.1% pass rates, while the corresponding numbers in the control arm were 72.7% and 77.0%. In Biology, it was 82.9% for males and 72.2% for females in the intervention-only group, but 61.9% for males and 68.6% for females in the control-only group. Pass rates in Civic Education were 86.4% for males and 81.7% for females on the intervention arm, and 67.4% and 68.2% for the Control, respectively. These all support the fact that performances within the intervention arm of the post-intervention years were consistently higher than those in the control groups across all four WASSCE subjects of interest.

The foregoing results have only provided insights into relevant demographics of the participants involved in this study, particularly as it relates to gender, which was the only demographic on which data could be obtained. Information provided in this section is necessary in order to understand basic aspects of this work, and put it into perspective by comparing it with details from comparable studies. These are reviewed further in the Discussion (*Chapter 7*). The sections below will now explore results that relate to the research goals of this study, which are all outlined in *Section 1.11*

5.2. Results from Lateral Comparisons - Intervention and Control Groups.

This section addressed the “Control” part of this Controlled Before and After (CBA) study and is otherwise referred to as the “lateral comparison” as it looked at students’ performances in the intervention arm relative to those in the control arm. Its findings, which are summarised in *Tables 6* and *7*, address the first of the five research sub-questions, which is:

> *“What are the changes, if any, in test scores (as a marker of academic performance) of students enrolled in schools eligible for the proposed scholarship scheme, relative to schools that were not?”*

Table 6: Comparing Performances by Students in the INTERVENTION and CONTROL Cluster Groups in 4 subjects of the West African Senior School Certificate Examination, WASSCE ("After" Intervention Years - 2017 to 2019)

S/N	Intervention Cluster *(Anambra East Local Government Area, LGA)*						Control Cluster *(Anambra West and Ayamelum LGAs)*				
	Subject *(Students Enrolled)*	Pass or Fail	**2017**	**2018**	**2019**	**Total**	Subject (*Students Enrolled)*	**2017**	**2018**	**2019**	**Total**
1	English (1078)	Pass (%)	239 (74.7)	191 (59.5)	360 (82.4)	790 (72.2)	English (1354)	352 (67.6)	118 (32.1)	389 (83.7)	859 (61.1)
		Fail (%)	81 (25.3)	130 (40.5)	77 (17.6)	96 (27.8)		169 (32.4)	250 (67.9)	76 (16.3)	495 (38.9)
		Total (100.0)	**320**	**321**	**437**	**1078**		**521**	**368**	**465**	**1354**
2	Maths (1072)	Pass (%)	304 (95.6)	305 (95.0)	385 (88.9)	994 (93.2)	Maths (1274)	308 (70.6)	284 (76.8)	403 (86.1)	995 (77.8)
		Fail (%)	14 (4.4)	16 (5.0)	48 (11.1)	78 (6.8)		128 (29.4)	86 (23.2)	65 (13.9)	279 (22.2)
		Total (100.0)	**318**	**321**	**433**	**1072**		**436**	**370**	**468**	**1274**
3	Biology (701)	Pass (%)	155 (80.7)	143 (61.1)	244 (88.7)	542 (76.8)	Biology (935)	199 (57.2)	142 (56.3)	266 (79.4)	607 (64.3)
		Fail (%)	37 (19.3)	91 (38.9)	31 (11.3)	159 (23.2)		149 (42.8)	110 (43.7)	69 (20.6)	328 (35.7)
		Total (100.0)	**192**	**234**	**275**	**701**		**348**	**252**	**335**	**935**
4	Civic Education (1077)	Pass (%)	309 (96.6)	259 (80.7)	338 (77.5)	906 (84.9)	Civic Educatio n (1352)	428 (82.5)	310 (84.5)	234 (50.2)	972 (72.4)
		Fail (%)	11 (3.4)	62 (19.3)	98 (22.5)	171 (15.1)		91 (17.5)	57 (15.5)	232 (49.8)	380 (27.6)
			320	321	436	1077		519	367	466	1352
		Total	(100.0)	(100.0)	(100.0)	(100.0)		(100.0)	(100.0)	(100.0)	(100.0)

Binary Logistics Regression (BLR) comparing WASSCE performances between students in the INTERVENTION vs CONTROL clusters of the POST-SCHOLARSHIP INTERVENTION (2017 to 2019) years of the IFOMSSA Senior scholarship program

S/N	Subjects *(Number of included participants)*	Odds Ratio *(Intervention Vs Control)*	Confidence Intervals (CI)	Probability (P) Value
1	English (2432)	1.58	1.33 - 1.88	*<0.001**
2	Maths (2346)	3.57	2.74 - 4.66	*<0.001**
3	Biology (1636)	1.84	1.48 - 2.30	*<0.001**
4	Civic Education (2429)	2.07	1.69 - 2.54	*<0.001**

***Notes**:*

- **Statistically Significant (≤0.05)*
- ***Pass** = Scores 1 to 6 (out of 9) in each WASSCE subject*
- ***Fail** = Scores 7 to 9 (out of 9) in each WASSCE subject*
- *IFOMMSA: Ifedioramma Okafor Memorial Secondary School Academic (Award*
- ***Post-Scholarship Intervention**: The first three years following the introduction of the IFOMSSA Senior Scholarship Award.*

Table 7: Comparing student performance in 4 subjects of the West African Senior School Certificate Examination (WASSCE) over the "BEFORE" SCHOLARSHIP INTERVENTION YEARS (2014 to 2016) for schools in Anambra East Vs Anambra West/Ayamelum Local Government Areas (LGAs)

S/N	Anambra East Local Government Area (LGA) *(Equivalent to the INTERVENTION CLUSTER)*						Anambra West and Ayamelum LGAs *(Equivalent to the CONTROL CLUSTER)*				
	Subject *(Students' Enrolled)*	**Pass or Fail**	**2014**	**2015**	**2016**	**Total**	**Subject** *(Students' Enrolled)*	**2014**	**2015**	**2016**	**Total**
1	**English** (933)	Pass (%)	365 (57.5)	86 (50.9)	63 (48.8)	514 (52.4)	**English** (1402)	305 (70.0)	292 (68.5)	413 (76.5)	1010 (71.7)
		Fail (%)	270 (42.5)	83 (49.1)	66 (51.2)	419 (47.6)		131 (30.0)	134 (31.5)	127 (23.5)	392 ((28.3)
		Total	635 (100.0)	169 (100.0	129 (100.0)	933 100.0)		436 (100.0)	426 (100.0)	540 (100.0)	1402 (100.0)
2	**Maths** (931)	Pass (%)	290 (45.7)	152 (89.9)	92 (71.9)	534 (69.2)	**Maths** (1402)	234 (53.8)	356 (84.4)	416 (76.3)	1006 (71.5)
		Fail (%)	344 (54.3)	17 (10.1)	36 (28.1)	397 (30.8)		201 (46.2)	66 (15.6)	129 (23.7)	396 (25.5)
		Total	634 (100.0)	169 (100.0	128 (100.0)	931 (100.0		435 (100.0)	422 (100.0)	545 (100.0)	1402 (100.0)
3	**Biology** (740)	Pass (%)	483 (86.9)	87 (71.3)	33 (53.2)	603 (70.5)	**Biology** (894)	185 (68.5)	187 (64.5)	213 (61.8)	585 (64.9)
		Fail (%)	73 (13.1)	35 (28.7)	29 (46.8)	137 (29.5)		85 (31.5)	103 (35.5)	121 (36.2)	309 (34.4)
		Total	556 (100.0)	122 (100.0	62 (100.0)	740 (100.0		270 (100.0)	290 (100.0)	334 (100.0)	894 (100.0)
4	**Civic** Education (883)	Pass (%)	449 (75.5)	86 (52.4)	30 (23.8)	565 (64.0)	**Civic Education** (1390)	219 (50.9)	239 (57.0)	428 (79.1)	886 (62.3)
		Fail (%)	144 (24.3)	78 (47.6)	96 (76.2)	318 (36.0)		211 (49.1)	180 (43.0)	113 (20.9)	504 (37.7)
			593 (100.0)	164 (100.0	126 (100.0)	833 (100.0		430 (100.0)	419 (100.0)	541 (100.0)	1390 (100.0)
		Total									

Binary Logistics Regression (BLR) comparing WASSCE performances between students in the INTERVENTION vs CONTROL clusters of the PRE-SCHOLARSHIP INTERVENTION (2014 to 2016) years of the IFOMSSA Senior scholarship program

S/N	Subjects *(Number of included participants)*	Odds Ratio *(Intervention Vs Control)*	Confidence Intervals (CI)	Probability (P) Value
1	English (2335)	0.48	0.40 - 0.57	*<0.001**
2	Maths (2333)	0.53	0.45 - 0.63	*<0.001**
3	Biology (1634)	2.33	1.85 - 2.93	*<0.001**
4	Civic Education (2273)	1.01	0.85 - 1.21	0.91

Notes:

- **Statistically Significant (≤0.05)*
- *Pass = Scores 1 to 6 (out of 9) in each WASSCE subject*
- *Fail = Scores 7 to 9 (out of 9) in each WASSCE subject*
- *IFOMMSA: Ifedioramma Okafor Memorial Secondary School Academic (Award)*

Table 6 focused only on the lateral comparison of the three "post-intervention" years (2017 to 2019) and compares the test scores of students from the intervention cluster to those from the Control within these years only. An interesting observation here was that, in the Intervention arm, the 59.5% that passed English Language in 2018 was much lower than the 74.47% in 2017 and the 82.4% in 2019. While the reason for this is unclear, it appears to be a widespread pattern with the quality of the examination itself or the level of preparation among the cohort (as against an error in the data collection), given that it mirrored the pattern in the Control arm, where only 32.1% passed the subject in 2018 as against the 67.6% and 83.7% that did the same in 2017 and 2019, respectively. *Table 7* does the same lateral comparison for only the intervention and control arms of the three "pre-intervention" years (2014 to 2016). It is worth pointing out that the "longitudinal comparison" covers the "before and after" arms of the CBA study and is presented in *Section 5.3*.

5.2.1. Intervention vs. Control Groups in the Post-intervention Years.

Over the three post-intervention years (2017 to 2019), 790 of the 1,078 (72.2%) students in the intervention arm achieved acceptable pass scores in English Language, while 859 out of 1,354 (61.1%) did the same in the control arm. The higher pass rate in the intervention arm was statistically significant (OR 1.58; CI 1.33-1.88). A deeper look at the respective years revealed that the lowest pass rates across the intervention and the control groups were in 2018 (59.5% and 32.1%, respectively), while 2019 had the highest pass rates (82.4% and 83.7% for the respective groups).

Performances in Mathematics (with pass rates of 93.2% in the Intervention and 77.8% for the Control - OR 3.57; CI 2.74-4.66), Biology (76.8% in the Intervention and 64.3% for the Control - 1.84; CI 1.48-2.30) and Civic Education (84.9% pass in the Intervention and 72.4% for the Control - OR 2.07; CI 1.69-2.54) were also all statistically significant, following the pattern observed in English Language.

These results indicate that, over the three post-intervention years, WASSCE test scores among students in the intervention group were statistically higher than those among students in the control group. This implies that the first Null Hypothesis of this work (in *Section 3.1*), which states that, concerning the intervention group of the three post-intervention years, *"there is no significant difference in test scores between students enrolled in schools eligible for the proposed scholarship scheme*

(i.e., the intervention group) compared to those enrolled in schools that were not (i.e., the control group)", is rejected.

5.2.2. Intervention vs. Control-equivalent in the Pre-intervention Group.

Table 7 focuses on observations in the three "pre-intervention" years of 2014 to 2016 and compares the WASSCE test scores of students in the intervention-equivalent arm to those of their counterparts in the control-equivalent arm. The comparison revealed no statistically consistent patterns of increase or decrease for the four subjects. The intervention-equivalent cluster fared statistically better in Biology (70.5% pass rate in the intervention arm and 64.9% for the control; OR 2.33; CI1.85 - 2.93) but worse in English (52.4% pass rate in the intervention arm and 71.7% for the control; OR 0.48; CI 0.40 - 0.57) and Mathematics (69.2% pass rate in the intervention arm and 71.5% for the control; OR 0.53; CI 0.45 - 0.63). There was no statistical difference in test scores in Civic Education, where 64.0% and 62.3% passed in the intervention-equivalent and control arms, respectively (OR 0.91; CI 0.85 - 1.21). The implications of these findings, particularly concerning those from *Section 5.2.1*, are discussed in *Chapter 7*. As stated in *Section 3.1*, the Null Hypothesis only applied to the three post-intervention years of this work (detailed in *Section 5.2.1* above), not the three pre-intervention years explained in this section.

5.3. Results from Longitudinal Comparisons - Pre and Post-Intervention.

This addresses the second of the five sub-research questions, which asks the question:

> *"What are the changes, if any, in the trend of test scores within a set of schools after the proposed scholarship scheme was introduced, relative to the performances in the same set of schools before its introduction?"*

As already stated, this section makes a "longitudinal comparison" that covers the "before and after" arm of this CBA quantitative study. It focuses on the entire six years of study, with comparisons made on test scores of students who undertook the WASSCE in the three years before the IFOMSSA Senior Scholarship intervention came about (i.e., 2014 to 2016), compared to the scores from students who sat for the

exam in the same sets of schools over the three post-intervention years (2017 to 2019).

The findings are summarised in *Table 8*, with the Intervention arm (students who enrolled in public schools within Anambra East LGA) represented on the left-hand part, while the Control arm (students who enrolled in public schools within Anambra West and Ayamelum LGAs) are on the right.

Table 8: Performances in 4 subjects of the West African Senior School Certificate Examination (WASSCE) Before (2014-2016) and After (2017-2019) the IFOMSSA Senior Scholarship: Compares Intervention and Control Clusters

S/N	PERFORMANCES (Pre and Post-Intervention) in the Intervention Cluster/Arm *(Anambra East LGA)*					PERFORMANCES (Pre and Post-Intervention) in the Control Cluster/Arm *(Anambra West and Ayamelum LGAs)*				
	Subject *(Number of Students)*	**Pass Or Fail** *(%)*	**Before/Pre** *(2014 to 2016) (%)*	**After/Post** *(2017 to 2019) (%)*	**Totals**	**Subject** *(Number of Students)*	**Pass Or Fail** *(%)*	**Before** *(2014 to 2016) (%)*	**After** (*2017 to 2019) (%)*	**Totals**
1	English (2011)	Pass (%)	514 55.1)	790 (73.3)	1304 (62.2)	English (2756)	Pass (%)	1010 (72.0)	859 (63.4)	1869 (67.7)
		Fail (%)	419 (44.9)	288 (28.7)	707 (36.8)		Fail (%)	392 (28.0)	495 (36.6)	887 (32.3)
		Total (%)	933 (100.0)	1078 (100.0)	2011 (100.0)		**Total** (%)	1402 (100.0)	1354 (100.0)	2756 (100.0)
		*BLR (Pre vs. Post-interventions); OR=0.45; CI=0.37-0.54; p<0.001**					*BLR (Pre vs. Post-interventions); OR=1.49; CI=1.26-1.74; p<0.001**			
2	Maths (2003)	Pass (%)	534 (57.4)	994 (92.7)	1528 (75.1)	Maths (2676)	Pass (%)	1006 (71.8)	995 (78.1)	2001 (75.0)
		Fail (%)	397 (42.6)	78 (7.3)	475 (24.9)		Fail (%)	396 (28.2)	279 (21.9)	675 (25.0)
		Total (%)	931 (100.0)	1072 (100.0)	2003 (100.0)		**Total** (%)	1402 ((100.0)	1274 (100.0)	2676 (100.0)
		BLR *(Pre vs. Post-interventions);* OR=0.11; CI=0.08-0.14; *p<0.001**					BLR *(Pre vs. Post-interventions);* OR=0.71; CI=0.60-0.85; *p<0.001**			
3	Biology (1441)	Pass (%)	603 (81.5)	542 (77.3)	1145 (79.4)	Biology (1829)	Pass (%)	585 (65.4)	607 (64.9)	1192 (65.2)
		Fail (%)	137 (18.5)	159 (22.7)	296 (20.6)		Fail (%)	309 (34.6)	328 (35.1)	637 (34.8)
		Total (%)	740 (100.0)	701 (100.0)	1441 (100.0)		**Total** (%)	894 (100.0)	935 (100.0)	1829 (100.0)
		BLR *(Pre vs. Post-interventions);* OR=1.29; CI=1.00-1.67; *p = 0.05**					BLR *(Pre vs. Post-interventions);* OR=1.02; CI=0.84-1.24; *P*=0.82			
4	Civic Education (1960)	Pass (%)	565 (64.0)	906 (84.1)	1471 (74.1)	Civic Education (2742)	Pass (%)	886 (63.7)	972 (71.9)	1858 (67.8)
		Fail (%)	318 (36.0)	171 (15.9)	489 (25.9)		Fail (%)	504 (36.3)	380 (28.1)	884 (32.2)
		Total (%)	883 (100.0)	1077 (100.0)	1960 (100.0)		**Total** (%)	1390 (100.0)	1352 (100.0)	2742 (100.0)
		BLR *(Pre vs. Post-interventions);* OR=0.34; CI=0.27-0.42; *P<0.001**					BLR *(Pre vs. Post-interventions);* OR=0.69; CI=0.59-0.81; *P<0.001**			

***Notes**:*

- **Statistically Significant (≤0.05)*
- ***Pass** = Scores 1 to 6 (out of 9) in each WASSCE subject*
- ***Fail** = Scores 7 to 9 (out of 9) in each WASSCE subject*
- *IFOMMSA: Ifedioramma Okafor Memorial Secondary School Academic (Award*
- ***BLR***: Binary Logistics Regression*; **OR** – Odds Ratio; **CI** – 95% Confidence Interval*

5.3.1. Pre and Post-Intervention Years Compared: The Intervention Arm.

As can be seen for the intervention arm (left half of *Table 8*), performances in three of the four subjects were consistently and significantly lower in the three "pre-intervention" years relative to the three "post-intervention" ones. The three subjects involved were the ones compulsory for every student undergoing WASSCE (as explained in *Section 4.3.4*), and include English language (with a pass rate of 55.1% before intervention and 73.3% after intervention; OR 0.45; CI 0.37-0.54), Mathematics (57.4% before and 92.7% after; OR 0.11; CI 0.08-0.14) and Civic Education (64.0% before and 84.1% after; OR 0.34; CI 0.27-0.42). Performance in Biology (the only non-compulsory subject), however, was significantly higher in the "before-intervention" years (81.5% before and 77.3% after; OR 1.29; CI 1.00-1.67).

These observations imply that, over the six years in the intervention arm of this work, the second Null Hypothesis of this work (as expressed in *Section 3.1*) should be rejected for the compulsory subjects, given that there were significant differences in test scores between students that wrote WASSCE in the pre-intervention years compared to those that did the same in the post-intervention years. That null hypothesis stated that concerning the intervention arm of this six-year study, *"there is no significant difference in test scores observed among students within a set of schools in the three years before the proposed scholarship scheme was introduced (the pre- or before-intervention years) relative to test scores for students in the same set of schools in the three years after its introduction (the post or after-intervention years)".*

5.3.2. Pre and Post-Intervention Years Compared: The Control Arm.

The right part of *Table 8* reveals that WASSCE test scores in the study's control arm were more varied and inconsistent when the three pre-intervention years were compared to the three post-intervention years. For instance, relative to performances observed in the post-intervention years, test scores in the years before the IFOMSSA Scheme was introduced were significantly lower in Mathematics (71.8% pass before the intervention and 78.1% afterwards; OR 0.71; CI 0.60-0.85) and Civic Education (63.7% before and 71.9% after; OR 0.69; CI 0.59 - 0.81), but higher in English Language (72.0% before and 63.4% after; OR 1.49; 1.26-1.74). The scores were statistically non-different in Biology (65.4% before and 64.9% after; OR 1.02; 0.84 - 1.24). The implications of the findings of the longitudinal comparisons are discussed

in *Chapter 7*. As stated in *Section 3.1*, the Null Hypothesis only applied to the intervention arm of this work (detailed in *Section 5.3.1* above), not this control arm.

5.4. Test Scores Analysis Based on Participation in the IFOMMSA Challenge

This addresses the third research sub-question, which is:

> *"What are the differences, if any, in test scores between "low achievers" in schools that benefitted from the proposed scholarship scheme, compared to the "moderate-to-high achievers" within the set of the same schools"?*

Tables 9 and 10 summarise the observations, which are focused on students' test scores categorised based on their participation (or otherwise) in the IFOMMSA Challenge. IFOMSSA Challenge, as explained in the methods, is the selection exam used to determine the ultimate recipients of the IFOMSSA Senior Scholarship Scheme. As also explained in the Methods, all participants in the IFOMSSA Challenge, who were the top three performers from each of the 10 public schools in the Intervention Group, make up the "moderate-to-high achievers or performers". The "low achievers or performers" are all the non-participants in that exam. The next couple of sections will present how these groups fared in the WASSCE following their exposures to the IFOMSSA Senior Scholarship Scheme.

5.4.1. IFOMSSA Challenge Participants and Non-Participants Compared.

As shown in *Table 9*, even though the test scores of the IFOMSSA Challenge Participants (moderate-to-high performers) were higher in all four subjects relative to the non-participants (low performers), the observed differences were not statistically significant in three of the four subjects. Those three subjects were Mathematics (92.9% pass among participants and 92.7% among non-participants; OR 1.02; CI 0.43-2.43), Biology (85.0% among participants and 76.3% among non-participants; OR 1.76; CI 0.93-3.34), and Civic Education (89.5% among participants and 83.7% among non-participants; OR 1.67; CI 0.82-3.40). English Language was the only exception, with WASSCE performances among the IFOMSSA Challenge participants (84.9%) being just over twice the levels among those from the non-participants (72.3%), a statistically significant difference (OR 2.15; CI 1.18-4.00).

Table 9: Performances in 4 subjects of the West African Senior School Certificate Examination (WASSCE) by students who PARTICIPATED in the "IFOMSSA Challenge Scholarship Selection Examination".

S/N	Subject	Pass/Fail	Participants in the IFOMSSA challenge (2017 to 2019: Post Scholarship Intervention Years) 2017 (n=34)	2018 (n=35)	2019 (n=37)	Totals (2017- 2019: Post-Intervention Years) All participants	All non-participants	Both
1	English	Pass %)	26 (89.7)	19 (93.1)	28 (90.3)	73 (84.9)	717 (72.3)	1078
		Fail (%)	3 (10.3)	7 (26.9)	3 (9.7)	13 (15.1)	275 (27.7)	(100.0)
		Totals	29 (100.0)	26 (100.0)	31 (100.0)	86 (8.0)	992 (92.0)	
2	Maths	Pass (%)	26 (96.3)	25 (96.2)	27 (87.1)	78 (92.9)	916 (92.7)	1072
		Fail (%)	1 (3.7)	1 (3.8)	4 (12.9)	6 (7.1)	72 (7.3)	(100.0)
		Totals	27 (100.0)	26 (100.0)	31 (100.0)	84 (7.8)	988 (92.2)	
3	Biology	Pass (%)	22 (81.5)	20 (83.3)	26 (89.7)	68 (85.0)	474 (76.3)	701
		Fail (%)	5 (18.5)	4 (16.7)	3 (10.3)	12 (15.0)	147 (23.7)	(100.0)
		Totals	27 (100.0)	24 (100.0)	29 (100.0)	80 (11.4)	621 (88.6)	
4	Civic Educati on	Pass (%)	28 (96.6)	26 (100.0)	23 (74.2)	77 (89.5)	829 (83.7)	1077
		Fail (%)	1 (3.4)	0 (0.0)	8 (25.8)	9 (10.5)	162 (16.3)	(100.0)
		Totals	29 (100.0)	26 (100.0)	31 (100.0)	86 (8.0)	991 (92.0)	

Binary Logistics Regression comparing the performances of "PARTICIPANTS" vs "NON-PARTICIPANTS" of the IFOMSSA Challenge

S/N	Subjects (n)	Odds Ratio (Pass vs. Fail)	Confidence Intervals (CI)	P-Value
1	English (1078)	2.15	1.18 – 4.00	0.01*
2	Maths (1072)	1.02	0.43- 2.43	0.96
3	Biology (701)	1.76	0.93 - 3.34	0.09
4	Civic Education (1077)	1.67	0.82- 3.40	0.16

***Notes**:*

- **Statistically Significant (≤0.05)*
- ***Pass** = Scores 1 to 6 (out of 9) in each WASSCE subject*
- ***Fail** = Scores 7 to 9 (out of 9) in each WASSCE subject*
- *IFOMMSA: Ifedioramma Okafor Memorial Secondary School Academic (Award*
- ***Binary Logistics Regression analysis** was not done for the "WON" group, as some cells have small numbers <5. So, the criterion is not met.*

These findings imply that the third Null Hypothesis of this work (stated in *Section 3.1*) is largely upheld for three of the four subjects. That hypothesis stated that, concerning the three post-intervention years of this study, "*there is no significant difference in test scores of students who were "low achievers" in schools that benefitted from the proposed scholarship scheme compared to scores of the "high and/or moderate achievers" within the set of same schools."* In simple terms, this means that even though the improvements in test scores observed among the moderate-to-high-performing students (i.e., "all participants" of the IFOMSSA Challenge as depicted in the Totals column of Table 9) exposed to the IFOMSSA

Senior Scholarship Scheme were generally higher than the improvements noticed among the low achievers (i.e., “all non-participants participants” of the IFOMSSA Challenge as depicted in the Totals column of Table 9) exposed to the same scheme, the difference in the increments between those two groups were not statistically significant. The significance of this might be huge, as explained in *Chapter 7*.

5.4.2. IFOMSSA Senior Award Winners and Non-Winners Compared.

Table 10 provides subject-specific and year-specific insights into the actual performances of the final recipients of the IFOMSSA Senior Scholarship across the three post-intervention years studied. Due to the low number of students involved (with the numbers in the various cells ranging from zero to 11, as shown in *Table 10*), inferential statistics from the BLR could not be generated, as a minimum of 30 is required to ensure a that statistically robust findings are obtained, in compliance with the Central Limit Theorem (CLT) is upheld for findings (Ganti et al., 2024; Islam, 2018; Kwak & Kim, 2017). As such, only the descriptive data are available.

The table reveals that the highest average among these high performers was in Civic Education, with a 93.1% success rate across the three years. The average rates in all the other three subjects were above 80%, with English Language, Biology and Mathematics being 89.7%, 82.8% and 82.1%, respectively.

Concerning the specific years, 100% of the 10 recipients achieved acceptable pass scores in both English Language and Civic Education in 2017, while 85.7% and 62.5% did the same in Mathematics and Biology, respectively.

All (100%) of the 12 winners from the 2018 cohort achieved pass scores in Civic Education only, while 90% did the same in Mathematics and Biology. The English Language recorded an 80% pass rate this same year.

Of the 12 recipients of the IFOMSSA Senior Awards in 2019, approximately 91% were successful in English Language and Biology, while 82% and 73% recorded such in Civic Education and Mathematics, respectively.

Similarly to *Section 5.4.1*, the observations in this section and their implications are discussed in *Chapter 7*.

Table 10**: Performances in 4 subjects of the West African Senior School Certificate Examination (WASSCE) by students who WON the "IFOMSSA Senior Scholarship Award"**

S/N	Subject	Pass/fail (%)	2017 (n=10)	2018 (n=12)	2019 (n=12)	Totals (%)
1	English Language	Pass (%)	8 (100.0)	8 (80.0)	10 (90.9)	26 (89.7)
		Fail (%)	0 (0.0)	2 (20/0)	1 (9.1)	3 (10.3)
		Totals	8 (100.0)	10 (100.0)	11 (100.0)	29 (100.0)
2	Maths	Pass (%)	6 (85.7)	9 (90.0)	8 (72.7)	23 (82.1)
		Fail (%)	1 (14.3)	1 (10.0)	3 (27.3)	5 (17.9)
		Totals	7 (100.0)	10 (100.0)	11 (100.0)	28 (100.0)
3	Biology	Pass (%)	5 (62.5)	9 (90.0)	10 (90.9)	24 (82.8)
		Fail (%)	3 (37.5)	1 (10.0)	1 (9.1)	5 (17.2)
		Totals	8 (100.0)	10 (100.0)	11 (100.0)	29 (100.0)
4	Civic Education	Pass (%)	8 (100.0)	10 (100.0)	9 (81.8)	27 (93.1)
		Fail (%)	0 (0.0)	0 (0.0)	2 (18.2)	2 (6.9)
		Totals	8 (100.0)	10 (100.0)	11 (100.0)	29 (100.0)

***NOTES**:*

- *Initials: The participants' initials were used instead of the real names. This maintains anonymity.*
- **Statistically Significant (≤0.05)*
- ***Pass** = Scores 1 to 6 (out of 9) in each WASSCE subject*
- ***Fail** = Scores 7 to 9 (out of 9) in each WASSCE subject*
- *IFOMMSA: Ifedioramma Okafor Memorial Secondary School Academic (Award*
- ***Binary Logistics Regression analysis** was not done for the "WON" group, as some cells have small numbers <5. So, the criterion is not met.*

5.5. Changes in Exam Enrolment Patterns following the IFOMSSA Scheme

This addresses the fourth of the five research sub-questions, which was:

"What are the changes, if any, in the enrolment patterns of students into the senior (high) school certificate examinations in schools that benefitted from the proposed scholarship scheme"?

Table 8 captures the relevant research findings that answered this question. As explained earlier, this is the secondary outcome measure of this study and seeks to establish whether there were changes in enrolment patterns in any way following the introduction of the IFOMSSA Senior Scholarship Scheme. Descriptive data was deemed enough to address this question, and inferential statistics BLR were not necessary and, therefore, not generated.

For the intervention arm (left half of *Table 8*), total enrolments for WASSCE were higher in three of the four subjects in the three post-intervention years (i.e., after the introduction of the IFOMSSA Senior Scholarship Scheme; 2017 to 2019) compared to the three years before it was introduced (2014 to 2016). The three subjects were all the compulsory ones, which included English Language (total student enrolments increased from 933 to 1,078), Mathematics (enrolments increased from 931 to 1,072), and Civic Education (increased from 883 to 1,077). In the same period, student enrolments for Biology in WASSCE, the only non-compulsory subject, dropped slightly from 740 across the three years before the IFOMSSA intervention, to 701 over the years after the intervention.

In contrast to the observations over the six years on the intervention arm of the study, changes in the control arm (right half of *Table 8*) appeared to be a mirror reversal for the three subjects with increments in the intervention arm. WASSCE enrolments decreased for English Language (from 1,402 total in the three pre-intervention years to 1,354 in the post-intervention ones), Mathematics (from 1,402 to 1,274) and Civic Education (from 1,390 to 1,352). Enrolments in Biology maintained the slight drop observed in the intervention arm, from 894 to 935. The differences in enrolment patterns between the intervention and control arms hold important insights and will be discussed further in *Section 7.6*.

Put together, *Chapter 5* has quantitatively addressed the first four research sub-questions as contained in *Section 1.11*. Only the fifth sub-question remains. As explained previously, this was answered using Qualitative Methods, and observations from the case study interviews that tackled this are captured in the next Section, *Chapter 6*.

CHAPTER 6: RESULTS - QUALITATIVE

This Chapter addresses the qualitative findings of this work and responds to the study's final and fifth research sub-question, which is:

> *"What are the perceptions and experiences of participants involved in a scholarship scheme that encourages community participation and adopts a hybrid (mixed needs and merits-based) selection criteria as key measures to encourage large numbers of students towards improved test scores simultaneously?"*

As has been explained in *Section 4.1*, results from this qualitative component complement the quantitative findings presented in *Chapter 5*, and capture the perceptions of the 14 interviewed participants regarding the IFOMSSA Senior Scholarship with respect to:

1. The Scheme's Needs and Merits (Hybrid) components.
2. The Scheme's "Mass Motivation" aspects and how it impacts student beneficiaries.
3. Community Involvement and Influences on the scholarship beneficiaries.
4. Enrolment Patterns into the WASSCE and the potential impact on this from the IFOMSSA Senior Scheme.

This section is presented along the lines of the groupings above, which equate to the themes or thematic frameworks defined earlier in *Section 4.4.8*. The full transcripts and audio versions of each of the 14 interviews are available as online data files (Ifediora et al., 2023a, 2023b). *Tables 11 and 12* capture the details of all the participants interviewed, including students and non-students.

Table 11: Student Participants' Details and Summary of Demographics

S/N	Initials[a] and Gender[b]	Age (Yrs)	SSCCE[c] Exam Year/ IFOMSSA[d]	School and Town	Code	IFOMSSA Participation Status	Interview Duration *Hrs/Mins/Secs*
			High-Performing Students (A) - Interview Category 1A				
1	C.M. (M)	19	2020	CHS[e], Igbariam	1A-1	Participant Winner	0.22.53
2	T.G. (F)	18	2022	CHS, Nsugbe	1A-2	Participant Winner	0.29.20
3	S.K. (M)	21	2019	CSS[f], Omor	1A-3	Participant Winner[g]	0.28.46
			Moderate-Performing Students (B) - Interview Category 1B				
4	P.A. (F)	20	2019	CHS, Nsugbe	1B-1	Participant non-Winner	0.33.22
5	J.I. (F)	20	2019	CSS, Umuoba Anam	1B-2	Participant non-Winner	0.21.46
			Low-Performing Students (C)- Interview Category 1C				
6	E.O. (M)	22	2021	CHS, Nsugbe	1C-1	Non-Participant Non-Winner	0.44.13
7	J.O. (F)	21	2018	CHS, Nsugbe	1C-2	Non-Participant Non-Winner	0.31.26
			Interview Times				
			Total Duration of Interviews				3.51.46
			Average Duration of Interviews				0.33.40

NOTES:

a) *Initials: The participants' initials were used instead of the real names. This maintains anonymity.*
b) *Gender: F = Female; M = Male*
c) *SSCE: Senior Secondary School Certificate Examination*
d) *IFOMMSA: Ifedioramma Okafor Memorial Secondary School Academic (Award)*
e) *CHS: Community High School*
f) *CSS: Community Secondary School*
g) *Discarded due to poor audio quality of the recorded interview.*
h) *All interviews were held over the weekends from October 23rd to November 19th, 2022.*

Though already explained in *Section 4.4* of the Methods, a summary of how the students were categorised is important here to ensure a clear understanding of the results. As revealed in *Table 11,* the students interviewed for this study were grouped into three categories representing the blocks of students in the entire schools eligible for the IFOMSSA Senior Scholarship (intervention arm) over the three post-intervention years (2017 to 2019) being reviewed. These include three categories: three "Participant Winners" (high performers who participated in the IFOMSSA Challenge and eventually won the scholarship), two "Participant Non-Winners" (moderate performers who participated in the IFOMSSA Challenge but failed to win the scholarship), and two "Non-Participant Non-Winners" (low performers that, even though they were enrolled in the schools eligible for the IFOMSSA Senior Scholarships, failed to qualify for the IFOMSSA Challenge and also did not win the scholarship). As already pointed out, the recording and transcript from one of the three Participant Winners, 1A-3, was discarded due to poor

audio quality, leaving two students in that category, just like in the other categories. So, overall, interviews with six students were used for the study.

Table 12: Details of the Non-Student Interview Participants

S/N	Initials/Sex (Female; F) (Male; M)	Code	Relationship With Benefitting Students/Participation Status	Interview Duration *Hours/Minutes/Secs*
			Parent (P) Or Guardian - Interview Category 2	
1	P.G. (F)	2A-P	• Parent 1	0.26.33
2	E.O. (M)	2B-P	• Parent 2 (A Guardian)	0.39.16
			School Teacher (T) - Interview Category 3	
3	J.O (M)	3A-T	• Teacher 1	0.40.22
4	S.E (M)	3B-T	• Teacher 2	0.51.45
			Government Staff (S) - Interview Category 4	
5	V.U. (F)	4A-S	• Government Staff 1	0.45.32
6	V.O. (F)	4B-S	• Government Staff 2	0.47.45
			Community (C) Leader - Interview Category 5	
7	J.E. (M)	5A-C	• Community Leader 1	0.50.22
8	I.E. (F)	5B-C	• Community Leader 2	0.44.24
			Interview Times	
			Total Duration	4.12.02
			Average Duration	0.43.05

***NOTES**:*

- *To maintain anonymity, the participants' initials were used instead of the real names.*
- *All interviews were held over the weekends from October 23rd to November 19th, 2022.*

As explained in the Methods and summarised in *Table 12*, eight non-student participants were also present, including two each of the parents/guardians, school teachers, government staff, and community leaders. All eight interviews were included in this work, as they all had good audio qualities. As stated previously (*Section 4.3.4*), the WASSCE is sometimes referred to as WAEC, and the transcripts and quotes included in this text might show respondents using that expression. Any mention of 'WAEC" is a reference to WASSCE.

6.1. Hybrid (Needs and Merits) Components Plus Family Economic Status

This is the first of the four analytical frameworks or themes developed from the interviews (*Section 4.4.8*). It also represents one of the three principles underlying this study, which were explained in *Section 1.9*. As shown in the *Appendices H to M*, one question each was used to assess the "Family's Economic Status", "Needs", and "Mertis Components.

Overall, the 14 interviewed participants (students and non-students alike) unanimously agreed that the targeted beneficiaries of the IFOMMSA Senior Scheme were of low socioeconomic status. Details of this will now be presented, starting with the "needs' component. First to be explored were the perceptions of the financial and economic needs of the families and students primarily involved in the interviews. This is presented in *Section 6.1.1*. Thereafter, the perceptions of the financial needs of all the other students enroled in the same schools eligible for the IFOMSSA Senior Scholarship (including those not involved in the interviews) are captured and presented in *Section 6.1.2*. The need to capture insights into the individual and wider student populations was to ensure that the financial capabilities of the entire student students in the intervention group and their families (and not just the capabilities of the few that were involved in this study's interview) were properly gauged. This approach, it is believed, offers a reasonably comprehensive insight into the economic and financial needs of those motivated en masse by the IFOMSSA Senior Award. It allows for an empirical verification that the targeted students were indeed poor, a key part of the requirement to be satisfied regarding the "needs" component of the hybrid (the first of three) principle required for this study (*Section 1.9)*.

6.1.1. Needs Component - Economic/Financial Status of Families.

The generic question used to assess the economic needs of the students and families interviewed was: "*How do you view the economic/financial status of your family?*"

As explained in the last paragraph of the section above, this question was only asked of the six students (*Appendices H, I and J*) and the two parents (*Appendix K*) involved in the interviews. An assessment of the perceptions of the economic needs of the wider student community is in *Section 6.1.2* below, and views from all 14 interview participants, not just the parents and students, were sought.

The unanimous response among the six students regarding the economic and financial status of their respective families was that of low economic and financial underprivilege. One of the, 1A-1, who was a student "Participant Winner", had this to say:

> *"Actually, my family's not that financially stable . . . . So, When I won the scholarship, . . . my dad was overwhelmed because, . . . to pay my WAEC fee*

at that time was very hard, and the moment he heard that I won the award…, he was very happy . . .".

1A-2, another "Participant Winner" was a bit more blunt, stating that:

"My family is not rich. I'm from a poor family. Yes, very poor…. We are poor. So, I . . . need financial support for my education".

1B-1 was a "Participant Non-winner" who described her family as "*not stable*," while 1B-2, another "Participant Non-winner," put her own family's economic status at "*40%*" with respect to their degree of financial comfort.

On his part, 1C-1, a "Non-Participant Non-Winner" who says that both his parents were late, described his family as "*second-class citizens*", adding that he relied on his older siblings to get through senior secondary school. 1C-2, the other "Non-Participant Non-Winner", summarised it all by saying:

"Well, my family . . . are not that financially buoyant . . . . By now, I should have been in school, … but due to financial issues . . . I can't afford . . . school. So, I have to drop [out] after taking our WAEC . . . . We have to stop there and start hustling for life . . .".

Responses from the interviewed parents and guardians also supported views on the students' regarding their low socioeconomic statuses. On this, 2B-P, a guardian, stated, *"We didn't have good financial health, so we live by what we earn from agriculture."* 2A-P, a parent, elaborated more, saying that:

"*Things [were] very hard . . . very hard. Now is 20 years of my marriage . . . . I'm the one paying my children's school fees . . . . God is helping. With the little amount of money they pay me for my salary as a classroom teacher, I was able to pay their school fees, and that is why I registered them in that public school because if I have good money, they will go to [a] good school because this my daughter . . . likes education".*

6.1.2. Needs Component - Economic/Financial Abilities of Students.

As explained above, this section assesses how the 14 interviewees perceive the financial needs of the wider student population in the intervention group. As shown

in *Appendices H to M*, the question to gauge this section was: "*How do you see students' economic/financial abilities in your school*?"

Again, nearly all the interviewed students believed that those attending the same schools were as financially disadvantaged as themselves. 1A-1, a "Participant Winner", captured it thus:

> *"Actually, you know, Igbariam is a village, a community. Some students, some of them . . . their parents were not really financially stable . . . . Some didn't even write exams because of school fees. As of then, some of them brought their parents to the principal and begged them to allow their kids write the exam, that they will pay in due time".*

1A-2, the other "Participant Winner", stated that:

> *". . . anybody that goes to Community High School, Nsugbe . . ., as the name implies, 'Community', . . . it's a poor, public school. It's not a private school. So, anybody that goes to a public school is not rich . . . they also need financial support."*

1B-1, a "Participant Non-Winner," added that "Most of us do struggle with certain things," while 1B-2, also a "Participant Non-Winner," stated that she did not know about his schoolmates' financial status.

A "Non-Participant Non-Winner", 1C-1, provided further insights as follows:

> *". . . my set back then in school . . . I can tell you that they are not . . . financially stable enough to afford education. But with the help of the . . . Foundation then . . ., when we* are *about to pay for our WAEC, some of them wrote WAEC under the scholarship of the . . . Foundation".*

1C-2, also a "Non-Participant Non-Winner", delved deeper, explaining that:

> *"The truth is that when it comes to my set, . . . almost 90% of us struggled to pay our school fees. I can remember when the WAEC fee was announced, a lot of people, in fact, half of the class stopped coming to school because they start(ed) going about trying to, especially the guys, they start(ed) going about trying to look for something doing in order to help them pay their WAEC fee . . . . My set, we really don't have rich students among us, . . . All of us, we manage. We were just managing".*

The non-student participants gave more perspectives on the financial status of the students targeted by the IFOMSSA Senior Scholarship Scheme. A Teacher, 3A-T, had this to say:

> *". . . payment of school fees is a very big issue in my school, most especially the WAEC and NECO itself. To the extent that, even during the exam time, students are being . . . asked to pay for school fees…Parenting has been an issue, because . . . they are into farming . . . farming as their major source of income. And the students, some go all the way to do menial jobs to pay their school fees, to pay their bills in schools. So I think the foundation has been of help to them".*

Buttressing the point above, 3B-T, another teacher, added the following:

> *"To be honest with you most of them are not the rich, most of them. I know in my school, and in some other places, most of them have poor parents and they needed that help. And that is why if that help comes, if you see this jubilation".*

A Government Staff, 4A-S, gave more details:

> "*Look, let me tell you, my experience in Otuocha Zone. Those students are not from even average families because they come with their parents to collect this scholarship. And you see them, you know that these are really people that need this scholarship. And you know in that area, many people are indigent. They don't have people to train them. So with that scheme, many people are lucky. Many people are lucky. Those that don't even have . . . in that area, we know them with farming. So instead of going to the farm . . . they have high ambitions, like going to university . . . .*
>
> *". . . you don't even know how the papers are marked. They don't know anything about it. So, the only thing is that the result will be out, principals are informed, they start rejoicing, "Oh, this child is from my . . . ." They now inform the parents in that area, "Please, your child is among . . . ." Then that day, when the child will collect the money for their scholarship, the parent will be there or the guardian".*

4B-S, another government staff, broadened the discussion, and provided valuable insights not previously captured with the previous speakers:

> *“Otuocha zone is . . . known mainly in Anambra State for farming. That's why you sometimes see them having the name ‘food baskets of the state’ . . . when it comes to education, they are disadvantaged in the sense that these children that have their parents as farmers, they find it very, very difficult to go to school. Even some of them whose parents, maybe they love education, you see that along the line, some of these parents may not be able to cater for their school fees.*
>
> *‘There was a time I was still in the classroom. You find out that a student can come just to pay 3,000 Naira school fees. A student can come and give you 800 Naira [Nigerian currency]. He'll tell you that, "I'll pay. My mom or my parents said they'll pay the balance later." They might come up tomorrow and give you 500 for you to be recording. He'll continue paying in instalments till he completes the 3,000 naira. So you can see the type of . . . students we have in that area. These are the student[s] that we expect to sit for WAEC. That is WASSCE, or to sit . . . paying something like 10,000, 14,000, when it is difficult for them to pay the 3,000 termly school fees. So you see . . . that the students, whenever they know that the exam is coming up, you see them struggling, working very hard so that they'll see that they are qualified for the award.*
>
> *“. . . even apart from the financial difficulty . . . you find out that it's hard for you to just let them know that education is important. Some of them prefer even to farm, they prefer to go for early marriages. But a program like this is what we need to make them know that it is good to be educated. So when they see this program like this, it's very encouraging. It gives them that encouragement that even after your WAEC, if you do very well, this foundation is ready to take you up to university level, that what you need to do is just for you to sit down and read your book and make good grades.*

To the same question, 5B-C was a community leader, responded as follows:

> *“Some of them . . . are from families that are farmers. Most of them have parents that are farmers . . . we can say that economically, the parents really need the*

assistance, they really need the assistance . . . . They cannot get further than secondary school, most of them . . . those of them that won the scholarship are really the people that need it."

5A-C was another community leader who provided an answer that made a direct link between the poor status of most of the students and their families to the IFOMSSA Scholarship Scheme:

"The activities of IFOMSSA . . . to the rescue of indigent students, and intelligent students that have no sponsor, . . . is a good development. Particularly at our area, that is [an] educationally-backward area . . . the activities of IFOMSSA is a good one to us. You may have brilliant children that have no sponsor, and they can't develop their talent."

". . . they are two-fold. One, the indigent ones that don't have those who will help them to further the education. Two, the brilliant ones, that is the one that merited by the standard of selection methods we adopt…with these type of incentives, we will not only gain from the brilliant ones, we'll also gain that those that don't have people who will help them or pay their school fees . . . he is the messiah of the people. It's a very welcome effort."

6.1.3. Merit Component - The selection process for the IFOMSSA Awards.

The foregoing sections explored qualitative insights that addressed the needs component of the hybrid selection criteria (the first of the three principles underlying this study, which are all listed in *Section 1.9*). This section now presents the interview findings that addressed the merit component of that hybrid principle.

As shown in the *Appendices H to M*, the question that addressed this was, "*How do you view "merit" in the entire selection process for the IFOMSSA Awards?"*

All but one of the students interviewed expressed their conviction that the entire processes surrounding the IFOMSSA Senior scholarship scheme were based on merit. The exception came from 1C-1, one of those who neither got the award nor participated in the IFOMSSA Challenge (Non-Participant, Non-Winner). He believed that it was not merit, given that students who were indigenes of Nsugbe, the host community where he attended school, were favoured. According to him:

". . . it has been happening right from my JS3 [Junior Secondary School 3]. That was when I started hearing about the . . . scholarship . . . They will just come to class, pick this, go to another class, pick this person, go to another class, pick this person. When you check all these students they picked, all of them are from Nsugbe. Believe me, majority of them are from Nsugbe. You can barely find outsiders from them. It's more like after the . . . maybe when they don't see enough people that could represent the school well, then they'll start looking for others. It's not only me. Believe me, we had a group then in school that anytime they start doing that kind of selection, we separated ourselves. We separated ourselves from them.

". . . I have a lot of people that went to participate the exam, . . . our performance in the class, when you check, I'm far more above them. But then, when it comes to the exam, they were picked. Personally, I was not pleased by that . . . It's not based on our results. It was more based on human selection. They select. Yes, that's what it was. They select, they picked. And most of them are Indigenes. They are people from Nsugbe if you check very well."

A detailed discussion around this view from 1C-1, with possible explanations on its rationale or otherwise, is contained in the Discussion (*Section 7.3.2*). It appears to be an isolated perception, though. 1C-2, who, like 1C-1, was also a Non-Participant Non-Winner, held a different view, which, incidentally, aligned with that of all the other 12 interviewees. When asked if those who deserved the awards were getting it, 1C-2 said "*Yes, of course. Yes*". She went on to add that, "*I don't think there was fraud*", before providing more details:

"…in our school, before we moved for the exam, they gave us something like exam in the school first, to test the students. So, I think they chose those people that are better... that are brilliant…more than others… So I don't think they're selecting based on a friend, …their favourite students, I don't think they selected it that way."

1A-2, a Participant Winner (who was an ultimate recipient of the scholarship) agreed with 1C-2, and provided further insights by saying that:

"We have to write…100 questions, I can remember, from five different subjects. So, we were told to read our books and prepare for the exam. So, it's not

because anybody is the principal's brother or that you know someone. Even our teachers weren't allowed to enter the exam hall that day. We wrote on our own". It's only the OCI organisers that were there, so the teachers didn't enter. So, I think it's by merit. Those that made it, . . . They deserved it".

1A-1, another Participant Winner, agreed that the Scheme was delivered on merit. According to him:

"*Yeah. The exam is based on merit, . . . I guess the people that were selected as the merit were those that passed the exam*".

When asked if there had been bribery or financial inducements, 1A-1 replied, "*No, there was nothing like that*."

Like the two eventual winners, the two interviewees who participated in the IFOMSSA challenge but failed to win (Participant Non-Winners), also believed that the IFOMSSA Senior Awards were delivered on merit. In a statement that mirrors that from 1B-1, 1B-2, for instance, had this to say:

"It's fair. Everything it's fair. There was no partiality, everything went well. So the selection is okay, everything they did is okay. Everything's fair".

Even the parents appeared to share the same views expressed above that the processes behind the IFOMSSA Senior Scholarship Scheme were on merit. One of them, 2A-P, responded as follows:

". . . it is based on merit. The student that merited it will go for it . . . just those brilliant people . . . from first to 10th position, they will select people that will write the exams".

On his part, 2B-P, a guardian, had this to say:

"*There's no partiality in IFOMSSA . . . my sister have been a part of this program . . . they take a kind of exam. In that exam, she took third position . . . if you score what IFOMSSA need, they will give you your scholarship".*

On the same issue, 3A-T, a teacher, said:

"There is nothing like bias, because the body organising that exams, . . . at the . . . spot, they mark the exam script . . . from there, they will pick merit. Now,

students are picked on that . . . . They will pick you based on your score. If you did not meet the merit cut-off mark, even under that catchment, they will still pick based on what you score. So, it's treated fair, there is no issue of being biased".

Another teacher, 3B-T, who was part of designing the IFOMSSA Challenge, added these comments:

". . . from the beginning, we thought of how to evaluate the students with the same standards so that whoever passes and declared the best is the best here and elsewhere . . . We have people who set the questions, people who vet it. They are not the same…at the end of it you find out that whoever is able to pass these papers, must be the best. Since this program started, we've not had things like manipulation or say that this person is awarded this on the ground that …his father was the poorest. No, it must be what you are able to. If you are intelligent and your father is poor, you are good to go. If you are intelligent and your father is rich, you're good to go, but you are motivated according to your merit. So no partiality. We ask others, how do you see these exams . . . ? They said, that, for now,…the best in Anambra state, in terms of standard, in terms of being able to present everything the way they should be as an international thing. And again, during the exams, is covered on a camera so nobody goes around them telling them answers or what. In fact, honestly, it is the best so far. It's the best. Not because I am a teacher. It's because that is how it is."

4A-S, a government staff, sounded a similar tone to the teachers, stating that:

"Yes, it's on merit. It's on merit. It's just on merit. [He] is doing that thing with all his sincerity. And those people that are involved,… we are all open and sincere to it. So, we don't have leakage of paper, . . . the whole thing is just clean and clear to everybody."

4B-S, also a government staff, added more:

"The exams, the questions are normally set by experts, specialists in those areas. They set the questions, . . . at the end of the questions, we normally invite, not just one expert to set, but two people, . . . then we collate. We collate

through an expert again in the field. Then bringing out the final questions . . . We have an examination committee that takes care of the exams. Finally the committee comes up with these questions on biology, chemistry, English and mathematics. That is how we do it."

"No [partiality] because… in my office, we have about five people in the IFOMSSA award team, it's this team that will come up with the questions that will be used on the examination day. So, there is nothing like partiality. …So, don't say, 'because I am a teacher in a government technical college, Umueri, I set the question. So I'll now go and tell my students, this is what I set?' No. Nothing like that."

Views obtained from community leaders were also aligned with all the foregoing. One of them, 5B-C, had this to say:

"It's based on merit. It's based purely on merit, purely on merit. Although, you can get one or two from the homestead of the . . . [Foundation's founder] . . . that can come in after we must have chosen the ones that came in merit. But it's purely on merit . . . . The exams are done there. The exams are marked there . . . nobody takes the exam home that you can see any falsification or any fraudulent practice. Everybody sees their result before going home, so there's no way it will be falsified. So, it's purely on merit".

To the same question, another community leader, 5A-C, replied that:

"In every class, we choose first and second, or third students. Then you collect such, in the number of schools from [the] zone, about 28 secondary schools."

On the possibility of manipulation, 5A-C was quick to say:

"No, no, no, no. No. We have a seasoned staff that monitor the affairs of those competitions. We are not looking at the face of who you know, . . . it's based on merit. If you merit it, you own it".

Having obtained multiple views from all the study participants regarding the hybrids (needs and merits) aspects of the IFOMSSA Senior Scholarship Scheme, the qualitative interview also attempted to explore its "Mass Motivation" component by seeking insights from all 14 interviewees on how this was experienced. Findings from those interviews, which represent the second of the three principles underlying this work (Section 1.9), will now be explored.

6.2. Mass Motivation for Student Beneficiaries

As explained in the Methods and in *Appendices H to M*, multiple questions were used to explore Mass Motivation. Answers to these questions helped assess if the design of the IFOMSSA Senior Scholarship Scheme helped with any mass motivation of students towards higher WASSCE test scores and should that be the case, to gauge the participants' views on how effective that might have been.

As explained in *Section 4.4.9*, two levels of motivation were assessed. One was to gauge any motivations from the IFOMSSA Senior Scheme for all eligible students in their preparations for the WASSCE, while the other was to check if receiving the IFOMSSA Senior award or merely participating in the IFOMSSA Challenge selection exam had any impact on the actual performances at the WASSCE.

Insights from the first assessment (on performances) were sought from all 14 participants (students and non-students) and used the question: "*What do you think about the IFOMSSA Scholarship Scheme and students' preparations for the senior certificate exams*?"

The second assessment, as expected was in two parts. One was exclusive to the few high performers (Participant Winners) who ultimately received the IFOMSSA Senior Scholarship. The question was, *"What do you think about winning the IFOMSSA Scholarship and your own preparation for the certificate examinations?"* It focused on the possible impact of actually receiving the IFOMSSA Senior Award or participating in the IFOMSSA Challenge. The other part of the second assessment focused on the potential impact of just participating in the IFOMSSA Challenge, even if the scholarship was not eventually received. For this, the moderate performers (Participant Non-Winners) were asked, "*What do you think about your participation in the IFOMSSA Challenge and your preparation for the certificate examinations?"*

As with the initial questions for all aspects of this qualitative study, all three questions above were broad. However, further follow-up questions that helped explore

students' perceptions of the academic performances of their colleagues at WASSCE were included. This way, the potential impact of the scheme on those who did not qualify for the IFOMSSA Challenge was gauged, not just from the two Non-Participant Non-Winners but also from all the other 12 interviewees. This is one way of assessing en masse motivation, not just the individual ones. The non-student participants were asked a variation of the above questions. The responses received from all 14 participants will now be presented.

6.2.1. IFOMSSA Scholarship Scheme and Students' Preparations.

The views expressed on the impact of the IFOMSSA Senior Award on the preparations for WASSCE were mixed. 1A-1, for instance, a student Participant Winner, believed it had no impact on his preparations and eventual test outcome, stating that:

> *"The IFOMSSA scholarship award does not have any effect on the preparation of WAEC for outgoing students like SS 3 and JSS 3 because it's an exam, and normally, the student's [are] supposed to be expecting exam any moment. For me winning the award that time…was one of the best achievements that I ever made . . . . That time . . . my family was not too financially stable to pay my fees. I passed it so things would get easier for me to be able to pay my WAEC that year, but it did not affect my WAEC".*

1B-2, a Participant Non-Winner who participated in the IFOMSSA Challenge but did not eventually win the scholarship, also did not think that her preparation was affected. In her words:

> *"I don't think there is much difference because it is the same way we prepare for our WAEC, and at the same way we prepare for the OCI [scholarship]…, you just have to read your book, . . . nothing else".*

Unlike 1A-1, however, 1B-2 believed that the entire process impacted her performance in WASSCE. When asked about the impact on her eventual performance in WASSCE, she had this to say:

> *"Yes. I think it's so [it helped] because we prepared for the IFOMSSA before our WAEC, so we got to understand some things. So it really helped . . . it helped because we prepared for it before WAEC, and it helped us, too".*

1A-2, however, another Participant Winner, felt that her WAEC preparation and eventual test outcome (performance) were positively affected. Her comments went thus:

> *"I would say the preparations are the same (for the IFOMSSA and WAEC exams) because the questions they ask us are from the things that we are taught in school. So, anybody that is preparing for IFOMSSA Awards is also preparing for WAEC . . . because, possibly, the questions might be similar. Like, this year I saw two questions that we answered at that exam, . . . I saw them in WAEC.*
>
> *"It helped. It helped because IFOMSSA came first before WAEC . . . I used to read my book always. I like reading. I love reading. So even before IFOMSSA, I have been preparing for my WAEC. I have been reading. I have been preparing for this. So, when the IFOMSSA came, I just had to double my reading. With the IFOMSSA date approaching fast, I had to double everything that I am doing to meet up. When I won, I continued reading for my WAEC too, . . . so I continued reading".*

1B-1, another Participant Non-Winner, agreed with the above, stating that:

> *". . . It did affect in a positive way . . . First, I discovered that I was playing and I need[ed] to be more serious with my studies if I want to win this, if I don't want to repeat the exam again I have to be focused, take things serious, and stop playing around".*

Further insights from the potential impact of the IFOMSSA scheme on WASSCE preparations and the eventual test scores came from the two interviewees who neither participated in the IFOMMSA Challenge nor received the scholarship (the Non-Participant Non-Winners). One of them, 1C-1, had this to say:

> *". . . the preparation is quite all right, because they announced [it] to the participants on time, and the teachers do encourage them to study very well ahead of the exam so they could at least come up with something better . . . . I can remember then, there's this friend I have . . . . He's a guy. He is actually among those that went for the exam . . . . When it was announced, he practically changed. He practically changed. You'll always find him in the library, reading and solving some equations because he's preparing for the exam.*

“Yes. Yes. Actually, it really, really reflects it because at the time, some of us, they started telling us that . . . we should go ahead and study well in order to make it . . . . So some of us don't have any choice than to grab our notes and textbook and started studying ahead of the WAEC. I think when our result came out, it was quite surprising. We made it. We did well in our results”.

On the specific way the IFOMMSA exam helped, 1C-1 had this to add:

“I think . . . is because, on my mind was, "Wow, if you pass this exam now, your WAEC fee will be paid by them." Because, then, it was so tough. It was very tough for us, the…financial issue and other things…It has helped the parents because then we're writing our WAEC, . . . they did do late entry . . . you pay penalty. So, with the help of IFOMSSA, OCI Foundation Scholarship, they will pay. If you pass the exam, they'll pay for you. So there's nothing like a penalty then. So everybody had to, you know, prepare and read ahead so that he or she would be the one to get the scholarship. So it helped us a lot. So even though . . . we did not even go for the exam, . . . we did not participate, at least it helped us in [our] exam, for [our] own benefit also. So it's really helpful”.

1C-2, the other non-participant non-winner, was also emphatic in her response, stating that:

“It helped a lot, because once we heard about the exam, the teacher will urge you to read your book ahead because you go for scholarship, they're about to pay your WAEC fee. So, it helps students to prepare ahead more better than they're doing before, so that they can get the scholarship. So even if at last they did not, but at least it helps students to prepare ahead for their upcoming exam and other things. So, it's helping students a lot. Yes, it's helped me a lot . . . . I'm not a participant, but then they told us that time of this is coming up, so we should prepare . . . we were all prepared for the exam.”

The non-student participants also expressed their views, and all appeared to believe that the IFOMSSA Senior Scheme played positive roles motivating the students on both the preparations for the WASSCE and the eventual performances at it. 2A-P, a

parent, had this to say regarding the possible impact of the IFOMSSA scheme on her daughter:

> *"It help[ed] her a lot, because when she was preparing towards . . . that IFOMSSA exam, she's also preparing for WAEC . . . . If she pass the IFOMSSA exam and she did not do well in her WAEC, it will affect her. So she was preparing for both of them. She was leaving no stone unturned to ensure that she scored high grade[s]".*

On the possible impact on other students, 2B-P, a guardian, observed that:

> *". . . IFOMSSA motivates students a lot. Students feel very good about it, because . . . many students are working towards it . . . in order . . . to gain . . . scholarship . . . . This scholarship have motivated so many students a lot for them to read . . . . Before the scholarship, they are reading but not up to the way they are reading for them to get the scholarship. The thing will increase their performance . . . . IFOMSSA helps students a lot in order for them to increase in their knowledge. IFOMSSA didn't affect students negatively. Rather they affect student positive by making the students for them to have the urge to read more".*

2A-P went on to add the following:

> *"Yes, it help[ed] her a lot, because when she was preparing towards the IFOMSSA Scholarship Award, she was reading very hard to pass the exam . . . . I told her, 'If you do not pass your WAEC, there's no way the IFOMSSA Award will be active. So, you have to work hard so that when you pass IFOMSSA, you will also pass your WAEC. So that everything will be balanced'."*

To the same question, a teacher, 3A-T, had this to say with respect to the preparations orchestrated by the introduction of the IFOMSSA Senior Scheme:

> *"Let me use my students as a case for study . . . [they] go for extra lessons, apart from school . . . there is a lesson centre. I run part of it . . . to get grounded in the subject they want to take, most especially the five subjects that gives you access to any course in the university.*

Another teacher, 3B-T, added the following:

“Honestly, it gives them that . . . all-round preparation that even take[S] them to WAEC, because when you read first term, second term, third term work, scheme of work, it means you've covered for WAEC”.

4A-S was a government staff, revealed that a good number of students entering SSS 2 and SSS 3 in the Otuocha Educational Zone tend to drop out in favour pursuing money through businesses, with Onitsha, a commercial city that is close to the Zone, being a top destination. She made the following contribution:

“With the IFOMSSA, for a child that have already come onto SS-2, SS-3, what . . . is normally on their heads is to go down to Onitsha. Onitsha is very close to that area. They just ferry across from the sea. They just ferry across and enter Onitsha. So they want to go hustle there and make money. But we keep on telling them that hustling is not the only way to life. So with this IFOMSSA introduction, they have now seen . . . some of those people who got the award. They want to be like them. It changes a lot of things. When you enter university, at least you can bet me, your life will change . . . if you sit down and concentrate and read, sky is your limit. You can pick that money without that hustling which you feel you should be doing at Onitsha.

“Look, I'm just telling you people, [OCI Foundation] is really creating future generation for Otuocha Zone. He's creating manpower capacity for Otuocha Zone”.

Another government staff, 4B-S, added more:

“The IFOMSSA scholarship, like I said earlier, is... I'll say it's a Godsent. I started with it…It is a foundation that has the interest of the students and the interest of the children at heart. …The IFOMSSA is a continuous scholarship award, touching the lives of students, trying to know, at the end of this year's one, what are we going to do to improve? . . . It is a household name. It has become a household name in the schools because the children know that this Foundation has their interests at heart. It has come to stay, and it will stay.”

6.2.2. IFOMMSA Scholarship Scheme and Students' Performances.

This section focuses mainly on views expressed on the potential impact of the IFOMSSA Senior Scheme on WASSCE Preparations. Some responses captured in Section 6.2.1 provided insights on this, but this section is more dedicated to the responses on this. 2A-P, one of the parents, had this to say on the potential impact of the IFOMSSA Scheme on the performance of her ward:

> *"Yes, it help[ed] her so much. It help her so much in her exam, because most of the questions that she come in contact [with], in the IFOMSSA exam, she also meet those questions in her exams, and she doesn't find it difficult to tackle the question. She was able to answer the question without tension."*

2B-P, a guardian to one of the students, added:

> "*IFOMSSA affected her position positively . . . because she know she's in a scholarship, she now try and be the among the best. So IFOMSSA help her to read harder, to the extent that even some of her friends are coming to her place in order for them to read with her. So, she made a very good, excellent result in all her WAEC, including JAMB [Joint Admissions and Matriculations Board]".*

3A-T was a teacher, and explained that:

> *"Since 2017, to the best of my knowledge, those [that] the Foundation registered for WAEC and NECO, their results have been amazing . . . at least the results they have can take them to a university".*

Another teacher, 3B-T, explained further, stating that:

> *"All the question we set, is WAEC-standard . . . If you see their WAEC [results], out of that many other students that took the exam, . . . they are always better. So, my general observation on WAEC, 2019 precisely, is that those people who took IFOMMSA exams, even if they're not within that their school, if they wrote the WAEC outside that school where they wrote their IFOMMSA exams, they are always outstanding. So they are better prepared".*

4A-S, a government staff, provided additional insights on how she reported tracking the performances of the IFOMSSA Senior Scholarship winners. According to her:

"I followed their WAEC for two years. And I stopped because the WAEC was okay for two years. I pick those . . . students that were given the scholarship. I just checked through their results were okay. So I said it's of no use checking again. We have never had a situation where anybody that excel in IFOMSSA exam failed this thing . . . The WAEC exam. That preparation for the IFOMSSA actually help them. Actually, helped them".

4B-S was another government staff who provided additional perspectives by explaining how the IFOMSSA Senior Scheme has inspired students who would normally have pulled out from even attempting the WASSCE at all due to their belief that their families' lack of funds meant that, even if they do well in the WASSCE, they would not be going into tertiary education. In her words:

"They do help them perform better in WAEC. Example now, there are some schools that, in the past in that our area, some schools that did not even register for WAEC. But you find out that during WAEC registration, no student will come for WAEC to register because they have no money. They'll tell you they have no money, [that] they will sit for WAEC any time they have the money. But you found out that with this exam, they then know that if they pass, that somebody will pay for their exam, all they need to do is to sit down and read. It helps them, because I told you earlier that motivation is the key. When you motivate somebody, the person will do wonders.

"So the reading, they must do, and reading they have been doing. So from 2017 now, the students till date, there have been changes in the result of the students in their performances from 2017, 2018, 2019 to this day. From the results so far we have seen, it do help them."

A community leader, 5B-C, expressed her view as follows:

"Yes, it should. It should. For a child that prepared...once…you are preparing for this . . . IFOMSSA award exam, you are also preparing for the WAEC. If you prepare and prepare it very well, it'll go a long way to help you in passing WAEC. I think anybody that gets ready for any exam before any other exam, I think it is expected that that person should do better work. I think it should improve their results. It should improve their results".

5A-C was another community leader, and had this to say:

> *"It helps them…one, it helps them to study hard. Two, it encourages them . . . because you have somebody who is paying . . . fund is no longer the barrier. All you need to do is go ahead, study, and get the certificate. It was a big motivation for them, and it spur them to greater actions than we observed in the past."*

On the degree of impact of the IFOMSSA Senior Scheme, 5A-C stated that it affects things,

> *". . . greatly. Because if you don't have a sponsor, if you don't have people who encouraged you, many of them could have fallen by the wayside."*

She went on to tell a story of how a student was inspired:

> *"There was one case that happened [during] one of the selection period[s] we held at the Otuocha Zone. A young boy came all the way from Nzam . . . the . . . headquarter[s] of Anambra West [LGA]. His name was not among the list of the students that benefited from the scholarship of that year, that selection of that year. But because he was desirous to further his education, he just travelled all the way from that Nzam to the selection centre. And we were all there when he came . . . he showed the interest that he's desirous of furthering his education. And all the people there were moved . . . including some of the people that are responsible for the management of the IFOMSSA activities, one Barrister . . . instantly awarded him a scholarship, to encourage him, because he has seen the spirit in that young man. Having travelled all the way from Nzam, to partake, without knowing whether his name was among the list. And everybody present in that occasion fell for the young man. But to the glory of God. Because God used the IFOMSSA group to clean the tears, and push him to realize his ambition. I believe by now, the young boy should be in the senior secondary school".*

6.2.3. Role of Community Groups in IFOMSSA Scheme Motivations.

Having looked at the responses and views of the interview participants regarding the possible impact of the IFOMSSA Senior Scholarship program on the preparations and performances of students concerning WASSCE in the Otuocha

Education Zone, this section now reports the views expressed by these same interviewees on the potential roles played by the various community groups (parents, teachers, government staff, community staff and the media) involved in the scholarship scheme. 2A-P, a parent, commented below regarding what she thought about parents' motivations in general. She also talked about the role she personally played in motivating her own child:

> *"Not all of them [the students] are motivated to be among the winners . . . . I won't blame some of the students because some . . . don't have somebody that will encourage them. Yes, these children . . . need encouragement from parents. Maybe their parents . . . don't have time for them. But me, I have time for my children. That is why when she told me about the IFOMSSA . . . She was the one that came back and told me about IFOMSSA, and I said, '. . . this is the opportunity we are looking for. So, and we will work towards it'."*

Regarding more specific motivations for her child, 2A-P added this:

> *"I register[ed] her to attend [extra-curricular] lesson . . . . Even though I pay too much for the lesson, . . . I don't care. All I know is that I want my child to pass. Yes. So she went through the lesson, when she comes back, she read her book. We will do all that research to make sure that she did well".*

On his part, 2B-P, a guardian, had this to say on the motivations he provided for his ward:

> *". . . I told her to read harder . . . because I strongly believe that when she read harder, she can be able to make the prize. The scholarship made her to read harder . . . some of their friends . . . are left behind. Few of them registered for JAMB. But because of this IFOMSSA, I motivated her to put JAMB. She put and enrol[ed] in it. So, she made a very beautiful mark in it . . . . If not because of this IFOMSSA exam, she would . . . just be reluctant".*

3A-T, a teacher, provided some insights into his own role:

> *"I spend bulk time with students . . . . I'll tell them more about IFOMSSA. Everything…with the Foundation. I take them on Mathematics, to prepare them for the exams, because I'm not part of the body that organise[s] the exams. So, I motivate them with two ways. I tell them that if you are able to make the merit*

list or the catchment list, automatically, your name is on the foundation. When you go into the university, you can [also] apply with that privilege that you got in secondary school scholarship.

Another teacher, 3B-T, broadened the perspective on the role of teachers. According to him:

"When a student comes around to ask you when the exam is coming, . . . the . . . thing at the mind of a teacher is that this child is preparing, that is motivation. The first motivation for a student is whatever that gives you the courage to read more. And when you see a student who is preparing, that person is definitely getting better. I must tell you, they're motivated whenever they hear about the exams. I tell you, when we were growing up, there was this exam that when you hear about it, everybody will say, "I am not involved, I am not involved. I'm not involved. But this time when they hear this exam, everybody's saying, "I have to. Let me be part of it. But because we have standards, it's not everybody . . . . More people who are not part of the exam last time, Do you know they're asking, 'How do we get involved? What do we do to get involved?' You see. So it is the same motivation that even those who have not been involved are moving into. And some of their friends are telling them, "See what you do. Do this so that you become part of IFOMSSA exam and you get your award." So they are motivated.

". . . now, we're preparing for first term … very soon, it will start. We've told them that this . . . . If you are the first person in your class, you have a better opportunity of getting involved in things like IFOMMSA exams . . . . So if you don't give yourself that time to read and prepare, it will affect you later because we don't choose from the back.

"Education is costly, very costly here. So a little opportunity from another person who is not looking for interest, who you're not going to borrow and pay with interest, is a motivator. In fact, they know that it's a relief to them and they encourage the children as well.

"And for us in school, . . . Like my own Civic Education, every student . . ., even those ones that are not eligible . . ., that are still very fresh students, who I'm teaching Civic Education, I still tell them, 'Look, prepare yourself. Because more better things are coming and if you're not prepared, there's no way you can do well."

Even the government staff recounted their own roles in motivating the students. One of them, 4A-S, explained that *". . . the students are being motivated enough to read".* She then went on to elaborate:

"Yes, it affected them. Because there was a student who, one day, they gave the award. He was so happy that he came down to my office because we did that at Father Joseph Memorial Secondary School. So I came back to the office to attend to some of the people that were waiting for me since morning. So when I came, this boy came and hugged and say, 'Mummy, so, I can now go to university. Let me go and farm and get money to move to university'. In short, I started shedding tears that day. I started shedding tears. I said, 'Why? Why should you go farm?' He said, 'We don't have. But I will do it.' I said, 'Okay. If you pass your exam, let me know.' But you find that . . . [the Foundation] . . . did not stop there. There are people he's training with the university if he has the knowledge of what is happening."

4B-S was another government staff who provided her own insight with these comments:

"Motivation is always the key for success when it comes to making the student to move forward. Students who find it difficult to take three square meals. Students who find it difficult to pay their school fees. When you give them a little motivation, the sky becomes their starting point. You see them going higher, you see them trying to work hard, knowing fully well that at the end of the tunnel, there is light, knowing quite well that I have a foundation that is here to support me. What I need to do is just to sit down and read. There are people that are suffering. There are people that find it difficult to feed their children, not to talk about going to school. So, to such people, giving them that little motivation makes them to be able to go further in life. Because you might have a child who is very intelligent. Very, very intelligent. But the problem becomes; how do I pay

my fees? Who will train me in the university? Who will do this? Who will do that for me, in order to make me pass? With this motivation from . . . [the] Foundation becomes a welcomed development. Becomes like a messiah. A saviour to such students from such homes."

5B-C, a community leader, expressed this view:

". . . if someone hears or gets an information that he will get an award if he does this or does that, I think that one alone is a motivation. Because right back in the schools, the teachers will tell them, 'Look, you people should sit up. There's an exam that is going on, that will go on. If you win, if you pass it and pass very well, you'll be given an award . . . . I think it is motivation because they are always looking forward to it. They know that by this time, they will have an exam by next year. They will always be looking forward to it. That's a motivation."

5B-C also provided insights on the additional motivations provided by other scholarships on offer by the same Foundation sponsoring the IFOMSSA Senior Scheme. Those additional schemes include the "JAMB Awards" (which covers the registration fees of recipients planning to undertake the Unified Tertiary Matriculations Examination, UTME) and the "Cyfed Undergraduate Scholarships" that are available to beneficiaries already in tertiary institutions. The UTME is administered yearly by the Joint Admissions and Matriculations Board (JAMB), and, just like the WASSCE is sometimes addressed by the name of its organising body, WAEC, the UTME is also occasionally referred to as JAMB. According to 5B-C, these additional scholarships that are potentially available beyond the IFOMSSA Senior award strengthens the motivations. She had this to say:

"Then . . . after the exam, if they go in for their JAMB, and …pass … JAMB, they should get their result and submit . . . for Cyfed scholarship. That one is another motivation because the child will be, "Oh, if I get this, I will get further than maybe my parents wouldn't have supported me."

The insight from 5A-C, another community leader, was concise, and captured as follows:

"Motivation is a part of life because, like every one of us, if you are motivated in what you are doing, it will ginger you to do more".

On his own specific role in providing the motivations, 5A-C added that:

> *". . . within the period we were there, we always encouraged the students, by teaching them the right thing . . . Using those people that are successful, to give them as an example. We always cite the doctor [OCI Foundation's Founder] as an example that, 'If you want to be like him, you must work hard'. You must do this. Not by cutting short tracks . . . but hard work, sincerity, and of course you have to go with your God".*

6.2.4. Impact of IFOMSSA Scheme on the Different Student Groups.

This section attempts to gauge any mass motivation associated with the IFOMSSA Senior Scholarship Scheme by exploring the participants' perceptions regarding the possible impact of the Scheme on all three different student groups, not just the winners. As would be recalled, the three groups of students involved in the IFOMSSA Senior Scheme were the low performers (also referred to, as the non-participant non-winners who did not qualify for the IFOMSSA Challenge Exam and, therefore, did not receive the scholarship), the moderate performers (known as the participant non-winners as they qualified for the IFOMSSA Challenge but failed to win the scholarship afterwards), and the high performers (participant winners who received the IFOMSSA Senior Scholarship after participating in the IFOMSSA Challenge).

On the potential impact of the scholarship scheme on these groups of students, 3A-T, a teacher, had this to say:

> *"It has a positive impact…everybody wants to participate in this particular program . . . . It is also positive because those who participated, right from their secondary school . . . can still, in the university, automatically qualify for the undergraduate award . . . last year, I have someone that did not even participate in the secondary school [IFOMSSA Senior] exam that I know that got [university] admission. He is one of those that is benefiting under the Foundation [Cyfed Undergraduate Scholarship]. And he didn't even participate in the secondary school [IFOMMSA] level . . . for those that want to find education, even they do not take the IFOMSSA secondary school award exams, while in the university, you can still apply and you will be given a fair*

challenge . . . also, even if you apply and you didn't get to the final stage, I think they have stipend they give them for not even reaching to the final stage."

3B-T, another teacher, added that:

"The people who got the award, we tell them that, 'You are not there permanently. The moment you stop learning, another person will take over.' And for the fact that nobody wants to lose, they continue to keep going."

On the motivations available for the participant non-winners, 3A-T provided insights with the following expression:

"*The preparation you made for this exam and . . . you didn't win, it's not a weakness, it's just that there are a little effort you must make. If you make that little effort . . . next time or in another opportunity . . . you will scale through . . . we also tell them that you are not losing all . . . that it is an opportunity for you to improve in the ones you don't know, improve yourself, and the next time you do better.*

". . . even those who are not involved . . . [are] asking questions, 'How do we get there?' Because they know they're coming back with something. It's not an empty promise. And the evidence are there . . . when we get this award, we call the whole students, we call on assembly and tell them, "Look, we have gone for…IFOMMSA program, and . . . this . . . student, who won, this is what he or she's going home with.. So that another person who is interested will keep on asking questions and doing the correct thing so that he will get there. So it's a general motivation for schools around Anambra State here".

4A-S, a government staff, added these on the possible motivations for all three groups, adding a story that provided deep insights on the impact on the non-participant non-winners:

"Those that have participated, and they won, already, many of them are in the university. Many of them are there. My colleague has the list of some of them who are now in the university.

“Then those that came for the exam, but they did not pass . . . we keep on encouraging them to read more. That it's survival of the fittest.

“So then for those ones that did not go for the exam . . . I went to a school one day. Because when you come for the exam, [the Foundation] will give you a writing pad and a Bic. So when I came to that school, . . . it was their break time. And I saw some students under the cashew tree there. They greeted. Immediately, we stopped. But they didn't know I was the one. So I now saw what they were doing. It was that . . . writing pad and bic. They were struggling for it. And then I now intervened. I say, "Why?" They said that this person went for the exam. They ask him to give them one sheet of the writing pad so that they will keep it. Even if they did not go, their junior one will go for the exam. If they don't go for it, that their junior ones will go for that exam. You can see. I called the boy that went for that exam. He did not pass. In the class, they were asking him to give them one leaf of the writing pad. You know the writing pad now? So he said that it will finish. I said, ‘Please’. It's a writing pad that it's up to 50 in number with a cover that carries IFOMSSA something on it. So that they will keep it for their younger one. That the younger one will use it, and take the exam when it’s another time for that exam. It's motivating them. It's making them to read”.

Another government staff, 4B-S, provided additional details on all three groups:

“Let me start with those that were not selected. Those that were not selected, you find out that yes, they won't be happy . . . whenever somebody fails to get something, there will be the natural feeling of unhappiness, sadness and so on . . . . Those students that at the end of the day they were not selected, they would be sad. They wouldn't be happy. But they will now know that because they saw that it was an exam that was based on justice, it was an exam that there was transparency in the exam, they now go home at the end of the day, knowing quite well that they were not selected because they did not do or did not do very, very well. They did not meet up with the criteria for the selection.

“Going further to those that participated, that did not win. Okay, I think what I said applies to those that participated but did not win. But those that were not

selected, yes, I know they have the feeling. The feeling they must have is the feeling that I wish I were selected. I wish I were, because those that were not selected, you know that you don't get to know them. Because I told you initially, that we select them through the schools. The schools giving us their best two. So those that were not selected actually, we don't get to know them. We only see those that participated, but did not win. So I think what I said earlier was applicable to those that participated but did not win. So those that participated but did not win, they will know that when you go to an exam that is transparent and you do not win, you just go home and say, "Okay, I need to work hard. Maybe my best wasn't good enough, so I need to work hard to improve and have the opportunity of going for such an exam next time.

"Then coming to those that participated and won. Overjoyed. Very happy. In fact, they continue looking up to the day that they will be called upon to come and take what the foundation is giving to them. There was one we held. I wouldn't remember the year now. The traditional rulers were there. You know that normally, they have to come with either of the parents. Whenever you see their parents or whenever you see these children, those children that at the end of the day that won, they have the feeling of happiness. They have the feeling of being satisfied that, "Yes, I have come. Yes, I have seen. Yes, I have conquered."

And also, I will add that the Foundation is also happy, because if you're a parent and you see that your child is happy, you're happy. So whenever these children are happy, whenever we organize something like this program, and we see that our children are happy, it gives us joy. There was an adage in my place that states that "anwuli na efe efe", that is, happiness is something that goes from one person to another. So when they're happy, we're happy, and the foundation is happy, because we . . . we, I mean represents the IFOMSSA foundation."

From a community leader, 5B-C, while also agreeing that the IFOMSSA Senior Scheme had positive motivational effects on all three student categories, stated the following:

“It's positive. It's positive irrespective of the category. It's positive, because if you come to a school and am not chosen as the best to go for an exam, me in particularly, I will not feel so good . . . . I think it will make them to sit up…. Especially those of them that participated and did not win, they will sit up and get ready for any other exam in the future. Then those of them that were not chosen, I think they will also sit up. That's the effect, they should sit up. So, it is positive.

“Those of them that participated and won, it gives them a leverage over others because right from the school they were picked as the best. Coming to IFOMSSA, they won. That one is a leverage above others. So, I think that one makes them to be so excited and happy about everything, that they have made it. They came, they saw, and they conquered".

5A-C, another community leader, explained his own view as follows:

“Well, first of all, the winners, we term them the lucky ones. Life is not only by force of hand. There is always element of luck in what we do in life.

“Two, not win group . . . we used to tell them, this thing is not stagnant, that if you don't win this year, you'll . . . win next year. All you need to do is to work harder this year. So that by next year, you'll be a beneficiary . . . . So it encourages you to work hard to get to that scholarship.

“Those that did not participate, there's nothing precluding them from participating, other than, for one reason or the other, . . . they didn't have the information before the program. Because, . . . you cannot imagine the environment from where some of these people I'm talking about come from…some …don't have access to this phone. Or even if he has the phone, he may not have access to light to charge it for some days . . . . So, that you did not participate this year, does not mean you have been permanently excluded. So my advice to those that have not won, or those that didn't participate, is to make effort, and be part of what is going on. It may be their luck tomorrow, and they'll benefit”.

6.3. Community Involvement/Influences on the IFOMSSA Senior Scheme.

This research also tried to establish whether there were deliberate, concerted efforts at the community level aimed at ensuring that the goals of the IFOMSSA Senior Scheme were met. The awareness and engagements in place by those community groups towards actualising these goals were also explored. As already stated, "community" in this context include family, friends, teachers, government staff, community leaders, and the media. Views expressed on the potential impact by each group of interviewees, will now be presented.

6.3.1. Reactions from Students and their Families on the IFOMSSA Scheme.

Here, the question being responded to, was: "*How did your family take (react to) your eligibility for the IFOMSSA Scholarship award*?" Another question was, "*What do you know about adjustments, if any, made by your family regarding your eligibility for the scholarship Scheme*?"

All the six students interviewed unanimously stated that their parents or guardians were pleased with the opportunity offered by the IFOMMSA Senior scheme. This opportunity relates to the "eligibility" to receive the scholarship (i.e., being students in the schools where the IFOMSSA Senior Scheme is on offer), even if the students were not subsequently able to participate in the selection Challenge or to eventually win the scholarship.

There were interesting differences in the reported levels of support and adjustments provided by the families, though. All four moderate-to-high performers (IFOMMSA Challenge participant) who were interviewed acknowledged that there were family adjustments that favoured their preparations for the exams. 1A-1 (a Participant Winner) for instance, had this to say:

> *"Yeah, …that time, my dad would say I should just go and read so that I would be able to pass the exam…. They helped me to prepare for the IFOMSSA challenge".*

1A-2, another Participant Winner, shared the same view:

> *"The adjustment was that I did less chores then. And my parents would do everything to allow me focus on reading. My mom also helped me. She helped me a lot,… finding out things that I don't know, and also for more lesson".*

Both 1B-1 and 1B-2, the Participant Non-Winners, also agreed that their parents supported them, gave them time to rehearse for the exams, and excluded them from house chores to "*pay more attention"* and prepare for the competition. 1B-1 added that her parents did a bit more to boost her confidence. She had this to say:

> *"Well, to be honest, I tell them that I'm not sure if this is going to work and they were like, 'Baby girl, any opportunity, even if it's not going to work that you have in this life, first of all, grab it, forget about it is going to work or not, just go for it and then see what the end or the outcome of the whole thing, that in this life you always take risks. So, if you want to succeed in life you have to take risks'. That was the exact word they told me. My mom and dad".*

Interestingly, the non-participants in the IFOMSSA Challenge, who also did not receive the scholarships (i.e., the Non-Participant Non-Winners), both stated that their families made no adjustments for them, even though those parents knew about their eligibility for the scholarship, and were happy about it. One of them, 1C-1, said:

> *"Well, personally, my siblings are not the type that put…follow up in my school. Because I could remember, even PTA [Parents Teachers Association] Meetings, . . . if I tell them, they always tell me they don't have time to go . . . . I end up paying because they'll tell us that if your guardians or parents didn't came for the meeting, you will pay so so amount of money. I can remember paying for their absence for some series of time. They don't give me [a] listening ear when it comes to the happening in my school. But all I know is that they put eye on my results to make sure. I can remember every term they ask me to show my results, and after showing, they do make a lot of comments on it . . . . But they don't follow up to know everything that goes on in my school".*

On her part, 1C-2, the other Non-Participant Non-Winners stated that:

> *"They were so happy, . . . they were very excited . . . when I told them. And all their prayer was for me to pass the exam and go for it, so that, at least, in one way or the other, I can help them. But unfortunately, I did not go for the exam".*

On if any family adjustments were made, 1C-2 said:

> *"I don't think so . . . you have to schedule your own time, so if you know what to do, do it on time and go for your book".*

On if more time would have been helpful, 1C-1 said:

> *"Yes, I think so. It would have helped me if I do have some time, like, more time attached to the one I did".*

Additional insights into the possible adjustments came from the non-students. On how she felt about her child's chance to participate in the IFOMSSA Scheme, 2A-P, a parent, had this to say:

> *"I felt so happy. It's like dream come true because I was praying for that. I pray[ed] earnestly for that because I know I don't have money . . . and . . . my child…after secondary school, she will not be able to go for her higher institution. So, I prayed earnestly for that, and when she passed the exam, I was very happy. I really thank God for that".*

On how his ward felt about winning the scholarship, 2B-P, a Guardian, had this to say:

> *"That day, she was overwhelmed with joy, because before somebody will . . . make any position in an exam, the person [would] have . . . suffer[red] for it by burning candle[s], reading till night. So, after she made all those things, after scaling through all those things, she made that third position. She was very, very overwhelmed with joy. You know, when you have a competition with many persons, and after all and all, you become among those persons that you people are struggling for, . . . you will be happy. So, she was very happy that day. Up till now, up till today, she is very, very happy".*

The teachers also expressed their opinions on how their perceptions of the families' acceptance of the IFOMSSA Senior Scheme and their reactions to it. One, 3A-T, held this view:

> "*Actually, they feel very happy, . . . if you come to my SS2 class, they drag for position, because I pick based on your class performance, from first to eighth positions. So everybody want[s] to partake in the exams".*

3A-T, another teacher, broadened the views on this by saying that:

> *". . . the families . . . are usually very happy. Normally, on the day of the award, they come with their child . . . they are very happy, even though they just know*

about the founder, they've not seen the founder. So they are usually happy about winning the scholarship. And taken away burden from paying for the WAEC and NECO fees".

The government staff also added their voices. 4A-S had this to say:

"Oh. You need to come [on] the day we are giving them the scholarship. So much excitement. So much excitement. The principal of the school with the parents of the child, they will come. Even the principal will be so happy that, 'look at my own child in my school, which means that the teachers are trying'. They are so excited over the whole thing."

4B-S, another government staff, explained more:

"When you tell them that the examination is coming up, normally there'll be a feeling of enthusiasm mixed with suspense, mixed with what will the future hold for me? Something like that. Then, eventually, when they're selected, usually there is joy. You need to watch the video of one of those days that we do hand out the WAEC, NECO fees for them. You need to see them, you need to see the faces of their parents. You need to see how these children are overjoyed… You'd think that God has sent manna from heaven. Relief has come for us. You need to see them, especially those ones that you know that are from a very indigent, you know, indigent has another way of adding "very" to that. So you need to see some of them that are from very indigent homes. You see something like this is a messiah. This is a dream come true. So it's awesome".

4A-S continued:

". . . they normally come with their parents, and they will be rejoicing. And some of them will be voicing out, saying a lot of things like, 'My husband will no more disturb me, let this girl get married on time.' You know that area, once you are in secondary school, you are just marking off time to get married . . . . But the women, I think they are more enlightened than the men who are typical farmers . . . . So they will just be rejoicing, 'Hey, my daughter will now go to university, my daughter will now enter this, my daughter will be this and that'."

She added more:

> *"The family, it depends on the father and the mother. It depends on what they want in life. There are some parents that when they were told that their child would participate in the program, they were overjoyed. They gave their support. They now tried to support their children in the best way they can. Then at the same time, there are some parents that even if you take food, put food in a plate, have spoon there, give them, they still don't give their support. But I wouldn't look at those ones. Let us look at those ones that know the importance of education. They're overjoyed. Some of them even try that day to bring their children to the school, just to ensure that this my child really reaches the school for that competition. They try to help them as much as they can. That is it."*

The community leaders also made contributions on this subject. They first talked about the reactions from the students themselves before also delving into how their families and their parents reacted. For the students' reactions, 5B-C said that:

> *"They were picked from the school and the school that picked them, ... picked the best and sent for the exam. The best coming from the schools, all the people that are there are the best from the different schools . . . . When the exam finishes and . . . they are giving the award . . . they will know that they have passed. They are always very, very happy and excited, even the parents. They are always excited, ... One of them was even shedding tears that she couldn't afford to pay for the fees. They are always excited when the results are out".*

5A-C, on his part, stated that:

> *"Students are equally happy. Because, on the day of giving out prizes, they come around with their parents who witness what we do. So there is no grumbling. The students are happy".*

On how the parents and families reacted, 5B-C added that:

> *". . . the parents are always excited. At least for your child in a school, that has a population, your child is picked as the best to sit for another exam that he or she will get award. They feel so excited and happy. They even raise their*

shoulders high, 'Ah, I didn't know my child is so intelligent that he can be picked in his school to go and face another exam'."

While 5A-C's response regarding family reactions was that it was usually a *"jubilation galore".* He went on to add that:

"On the day of giving out the cash award for [a] bursary award, what have you, we always allow the students to come with their parents, . . . and their teachers who make it possible for them to be there . . . taking of photographs [AND] what have you. All these things, make the family feel on top of the world . . .".

6.3.2. Family Adjustments to Support IFOMSSA Senior Scholars.

The question here was similar to that in the sub-section above: "*What do you know about adjustments, if any, made by your family regarding your eligibility for the scholarship Scheme*?"

Responses to a similar question by the students were contained in the early part of the preceding section (*6.3.1*). On whether the families and siblings of the students involved in the IFOMSSA Scheme made adjustments to assist or help the students in any way, 2A-P, a parent, had this to say:

"They help[ed] her . . . because I shifted the house chores to some of them. So, she's not doing anything. She will always . . . read, read, read, read, read. Even she read and read and read and she became thin as if she's a dry fish. Yes, I encouraged her to read because I know God will bless us through that her effort. Among all . . . my children, she's highly intelligent. The rest are intelligent, but she…is more intelligent . . . the way I persuade her to read is how I also persuade others to read. But she's more intelligent than them. She learn fast, she's a fast learner. Once you teach her, she will learn".

2B-P, the guardian of another student, added that:

"*During the time she's preparing for the exam, . . . all of us were praying for her and giving her an advice that, 'When you get there, behave well' . . . . So, she got there and made us proud as usual . . . . Before she left that day, we gave her some advice . . . we give her transportation fare in order for her to get there.*

I myself, personally, guided her . . . to the educational zone . . . they boarded a car . . . a government car . . . to that place."

The teachers also held similar views. One of them, 3A-T stated that:

"I think there will be adjustments. One of the students . . . the mother is a teacher. On one particular day, those that wrote in 2021, the mother called me that, he no longer reads, that although that he was among those that obtained this IFOMSSA Challenge. So when he came to the school, I was like, 'What happened? Your mom said that you have not been reading'. So I had to tell him the importance of the exams . . . you are not writing it for your mom, but you will benefit from it. So, he later got the scholarship. He was among those that got it in 2022. We have parents who have concerns about their child having that particular scholarship.

"The scholarship created a lot of awareness in the part of the parents…when we come to the PTA meeting now, . . . you see that . . . the parents will rise up and ask about the scholarship, will they still pay for the junior category? Will the senior category still hold?'"

The other teacher, 3B-T, provided more insights:

"I know of a neighbour . . . one of the children got an IFOMMSA award, that was, I think 2019. So when the second child came . . . you know what the woman did? She said that this one will not be given any job until that exam is over. So that that opportunity that the other child enjoyed will continue in the family. So they gave him full time to study . . . saying, 'make sure you get this award, if it will take us giving you another extra hours to make sure you eat your food, read your books'. You see, . . . I know if that woman can do that after benefiting for the first time, somebody who have not benefited will be making [an] effort.

"Parents who know that that award is true and real and no partiality, nobody's looking at, 'this one is my friend, this one is a neighbour, this one is this . . .".

That [the] person who gets the first position will be the first position . . . . They will make effort".

The response from 4A-S, a government staff, on whether adjustments were made at the government level was:

"One thing is that we normally accommodate IFOMSSA with our standardised school timetable in this [Anambra] State. So we know when we are free to bring in IFOMSSA so that students will not complain. They have time they go to farm…. Immediately, the school reopen, any student you are taking to the farm, you are wasting your time. They will not even have value in the farm. That's one thing in that area. So they will be in school. It's after school, maybe on the closure of that session, all of them will start going to look for money in the farm to pay for their school fees for the next session. So they don't have that type of distraction of, 'I'm going to the farm so I won't read up for my IFOMSSA exam.' "No. The principals and the teachers are on them in the school, telling them the importance of the exam. And remember, on promotion of teachers and principals, you present your record, you have evidence to show your work. The performance of the student, the performance of the teachers and the school environment, we add the three of them together before you are being promoted as a principal. And as a classroom teacher, you will show us your WAEC result, show us the classroom result which already we have. All those things are the things that determine how you are being promoted. Promotion now is based on your students' performance. So there is no teacher that will not like to be promoted".

On her part, another Government staff, 4B-S, had this to say on whether families made adjustments to support their children who were eligible for the IFOMSSA Senior Scholarship:

"Unless those ones that I tell you that really want their child to go to school . . . really want their child to benefit from what is going on in the school, yes. But others, no, because there are, some schools, because you know sometimes based on the reports we get from the principal. Sometimes we visit the school to monitor what is going on in the schools. There are some schools that when you go there, you, like now that we have this flood problem, they wall moved

out of their area, for their lives to be secured, abandoning everything. So at the end, it takes a little while for them to try to go back and to adjust. So the parents now, when they get back, they have to adjust to what is going on in their life, because most of them have lost valuable things. It takes a little while for them to adjust. These parents now, some of them, they don't really feel something like that; because we're going for a competition, let me continue with this. No. Only those ones that really want their children to be educated that will say, 'Yes, go'. Naturally, it's like that because of what they believe in".

The views expressed by the community leaders were similar. 5B-C, one of them, stated that:

"It's a relief for the parents. Anything he can or she can do for the child to sit for the exam and pass the exam, really the parent will do it. So, I think they will relieve the child from so many house chores so that he can pass".

5A-C, another community leader, explained further by saying that:

". . . if you want your child to move ahead of others, depending on the enlightenment of the parents, you'll see that such parents will continue encouraging the child. Depends on your family background. There are some, whose parents will buy all the books they need. There are some, whose parents will only buy, what they call the most basic ones, and say, 'Go.' As the demand comes, they will try. So the treatment or reactions will not be a uniform practice. But definitely, anybody who appreciates the success of the child from such a competitive program, will like to encourage the child to do more, . . .".

6.3.3. Reactions and Support from Friends of IFOMSSA Scholars.

The question that explored this was, "*How do your friends/peers view the IFOMSSA Scholarship Scheme*?"

All four students who participated in the IFOMSSA Challenge (i.e., the moderate-to-high performers, which included the eventual winners and non-winners) indicated that their friends were either happy for them regarding the opportunity presented by the IFOMSSA scheme or outrightly encouraged them to take it seriously.

1A-1 (a Participant Winner) and 1B-1 (a Participant Non-Winner) had friends that reacted positively and motivated them. 1A-1, for instance, recalled that:

> *"They were very happy . . . the day I went for the exam, I was even somehow afraid. They said I should not be afraid that I will make [it]. And they were very happy with me when they heard that I won the award".*

On her own, 1B-1 felt inspired by her friends. In her words:

> *"Their reaction was positive. Should I say, there is a situation whereby, if they came in a class of 40-something and they picked out some numbers, mostly some of them will be angry, but in our case, they didn't get annoyed, they were like, 'if it's better for you, it's better for us as well. If it's good for you, it's good for us as well. So go ahead'. During the time of preparation for the exam, if they spot any of us that was playing or discussing irrelevant things, they will be like, 'I think you have exam, you will not go and prepare. You are here talking and playing.' Something like that".*

There appeared to be a healthy rivalry in cases where the friends were co-participants, as was made evident by comments from 1A-2 (another Participant Winner) and 1B-2 (the other Participant Non-Winner). 1A-2 stated that:

> *"My friends in school, all of us, we are to participate, so, . . . we were just preparing on our own. We were competing against each other now, so we are preparing for . . . we're fighting for the same thing".*

For 1B-2, it was that:

> *"I have a crew that I normally read with, and we prepare . . . we were the team that went for the examination, and when we heard about the examination, they were like, 'Let's prepare for this. Let's know whether there is something that's actually going to come out of this.' So we started reading. So they supported me, too".*

1C-2, a Non-Participant Non-Winner, also echoed some of the sentiments from the others, indicating that *". . . everybody was so happy".* However, 1C-1, another student in the same category, talked about himself and his close friends not being happy, as they felt marginalised. In his words:

"Just like I said before, back then, because this is a procedure they are using when it comes to the exam, I have . . . Should I call it group of people or friends? People that also have the same mentality that I have. We are not from Nsugbe. We're not from Anambra, so we used to team up like a group. And we always wish if we would be given the opportunity, especially some of us that we don't even know our fate after the secondary school. So we just wish if we had the opportunity to write the exam. In fact, we've always wished we have the opportunity to write the exam, just like them. Probably, you'll be given [a] scholarship to further our educational thing".

6.3.4. Teachers' Involvement and Roles in the IFOMSSA Senior Scheme.

This part captures the direct role of the teachers, as part of the community, in actualising the goals of the IFOMSSA Senior Scholarship Scheme. Among the key questions here was: "*How did your teachers/school principal explain the IFOMSSA Scholarship scheme to you*?".

Depending on the participant, examples of the questions used to probe further were, "*Did your teachers make announcements about the Scholarship*?" "*How often were the announcements made*?" and "*Where and when were the announcements made*?"

In his response, one of the teachers, 3A-T, stated that:

"The teachers, teachers are aware about this scheme, they have been talking good about the Foundation. Even so, many persons in the communities are aware of it because at least so many families have benefited from it. So many families since 2017 have benefited from it. So it's been positive to me and the path of the teachers, the parents and the community at large".

In a similar vein, the other teacher, 3B-T opined that:

"Yeah. There is something we call PTA. PTA is Parents Teachers Association. And, it is mandatory within the State, Anambra, here, that every public school will have at least that meeting, at least once a term. The parents are there, the teachers are there, . . . what concerns both the parents and the teachers… is

something that the children would benefit from, which IFOMMSA is one of it . . . . So we use that platform . . . we mentioned IFOMMSA. We told them that . . . that this person . . . is making this thing an annual program, where if you are able to be the best, . . . [you] should win the award.

"So, they started making inquiries . . . . As far as Anambra State is concerned, I am very sure the information is everywhere".

Regarding the teachers' roles and announcements on the IFOMSSA Senior Scholarship, and how frequently it was announced and where or when, all the interviewed students agreed that their teachers and/or school principals informed them of the IFOMSSA scheme, though to varying degrees and with different strategies. According to most of them, there were repeated efforts to remind them of the program. 1A-1, a Participant Winner, had this to say:

"They made the announcement about three months before the exam. They explained . . . that there was a non-government organisation that is organising an exam for . . . SS 3 students, that when you pass the exam, that they sponsor your WAEC fee.

"They made it during the morning assembly . . . . Even our principal used to call us to his office to make sure that we were preparing for the exams".

1A-2, another Participant Winner, gave additional perspectives:

"They explained it well to us . . . . We were told about the exam and the benefits we will have . . . if we were to read hard . . . they encouraged us. In fact, that was the main topic. They always encouraged us about those. Yes, they encouraged us and told us to read harder.

". . . they say it at the assembly. Also, at the classroom. Then most of my teachers, they tell me one-on-one speech. So, I'm used to hearing them saying I should keep reading because of the IFOMSSA Awards. Also, they told us at the assembly and any meeting point of the students and teachers. They used to tell us about IFOMSSA. Also, they told us about students that won the scholarship before us . . . told us the benefits and everything".

1B-1, a Participant Non-Winner, re-iterated the same sentiments expressed by the winners, saying that:

> *"I think it was during the morning assembly, they announced it . . . later they came into the class and did the selection of a thing. They announced it often. She even had to go to extra mile by giving one of our masters . . . feared the most the job to handle".*

On whether such talks influenced the way the students viewed the scheme, 1B-1 added:

> *"Yes, it did . . . because they believe for someone like him [the male teacher] to carry this type of thing on his head, like he made it as if it's his job. First of all, we don't want anything like flogging or punishment attached to it. So, we have to respect ourselves. It kind of made us to know that I think this foundation is real, unlike the others".*

The other participant non-winner, 1B-2, also had a similar view, saying:

> *"The announcement was made in our class. The Vice Principal came to our class, and also announced it. When they told us about the IFOMSSA scholarship, . . . they told us the benefits of participating in it. And they told us to try our possible best to know whether we are going to make…something come out of this. Even when I didn't win, they were bitterly angry with me, too. That shows they supported . . . . They were angry with me when I didn't win. I cried. I felt bad. I really cried because I wasn't expecting that.*

When asked if she did it to win, 1B-2' response was that:

> *"It was part of the plan, but I also did it to get more experience . . .".*

Both Non-Participant Non-Winners also agreed with the rest, even though 1C-1 felt that her school principal at the time did not do much. In his words:

> *"Well, the truth is that my principal then, as at when I left the school . . . never called . . . students to . . . do . . . explanation to them about the examination. It was my former principal . . . that always do more emphasis about the exam when it comes up. But the one that they brought to the school before I left, she has never made mention of the exam. It is the teacher, the classroom teachers*

. . . . The one that normally handles it…is the one that normally come[s] to emphasise and say a lot of things . . . . Yes, he's always in the classroom. He normally comes to our class. He normally comes during break time. So he will send information that all the SS3 students should come to the class, that he wants to see us. So, when we gather, he now starts talking about the exam".

1C-2, the other Non-Participant Non-Winner, gave a lot of credit to both the school principal and the teacher. She said:

". . . our principal then, she always talk about it, every day . . . then in school. She used to give us guidelines for the people that will go for exam, and the people that are back in school. She used to give us guidelines, and she used to say many things about IFOMSSA exam. So, for the people that went for the exams, she prepared them very very well. The teacher that was taking care of the students, that were taking the students for the exam, they also helped very well by advising us, and telling us to do read ahead, well, who knows the one that will go for the exam. So they do advise us . . .".

The non-students also expressed their views on the potential roles of the teachers. A teacher himself, 3A-T stated that:

"The teachers and principals . . . have a lot of influence . . . there was a year only one of our students was able to make it to the merit list, just one student. And the principal then reacted bitterly about it, . . . that we should be doing better, . . . she goes into the SS3 class . . . tries to encourage them about coming out best in the scholarship, that it will go a long way to help them".

4A-S, a government staff broadened the perspectives, stating that:

"The only thing I know with … our boss in the office then is that they are normally jealous. They say that IFOMSSA should use this thing and do to other places . . . So they are jealous because he's concentrating on his area. The population he's training in his area is too much. So everybody wants the national cake to be shared to his or her our own area".

4B-S, another staff, added that:

“Regarding IFOMSSA, no. I know that the discussions we have, or we've had in the past mainly centred between the zonal office, the principals and the students. It's then left for the principals. Some of the principals do at times say something like that when they have PTA meetings. So they do discuss with their parents during PTA meetings that this child is going for this competition. So the principal of schools, sometimes get in touch with the parents because you can't just pick a child to go for the competition without the knowledge of the parents. So the parents are involved in the competition, in the planning stage. So the community leaders, yes. I told you there was a time the community leaders, they came for the award. But to have discussions based on that, after that, no, none that I know of.”

5B-C was a community leader, and responded as follows:

“Yes. Yes. In terms of the communities where the school is located, they know such a thing is going on . . . when a child is picked from the community . . . comes back with the award, they know. Then for the government, they also know that something like that has been going on since 2017. They get feedback from the zone, the zone where the thing is going on . . . before the exam you get permission to take such an exam. The government is fully aware . . .”.

5A-C, another community leader, added the following:

“Well, number one is that from the government's angle, I remember when Anambra celebrated 30 years when the state was created under the former governor. The minister of basic education celebrated all the philanthropists that helped them through various areas to train the children”.

6.3.5. Role of Community Leaders and Government Staff.

Perspectives on this were captured with the question, “*What was the role of (or influence from) your community leaders?*”

The roles of community leaders in actualising the IFOMSSA Scheme’s goals were not always clear, as not all the student participants remembered their involvement. However, when acknowledged, it appeared that the community leaders

made some inspiring impressions on the students. This was well captured by 1B-1, a Participant Non-Winner, who said that:

> *"They were always present . . . wherever they want to give out the award. They are always present there to encourage the students more, give them words of advice and the rest of things . . . Most at times, most of them don't have time. For them to leave what they were doing and then come to the school to address students, automatically, is a different thing . . . . I see it as something important for them to leave something that they're doing and then take all stress of coming to the school to address the students . . . it is very important thing . . . . So that I should take serious[ly]".*

1A-1, a Participant Winner, also recalled that:

> *"The traditional ruler of Igbariam then, Igwe Dr N. N. Kelly, . . . before we participated in the exam we went to his palace and told him that we were embarking on such exams. He gave us his blessings that day. And he also gave us transport fare before we went for the exam".*

1A-2, the other a Participant Non-Winner, had this to say:

> *"They tried their best. In the way that I saw them, they tried, because it's not every day that those people come to the school. They visit occasionally. When they come, most of them, they used to tell us about the OCI Foundation. Yes, they used to tell us . . . like [during] graduations and so forth, and when they're invited to school. They just don't come to tell us . . . it's when they're in school . . . they will be telling us about these things".*

For 1C-2, a Non-Participant Non-Winner, the community leaders also helped publicise the program. In her words:

> *". . . they made it very much possible to make sure that our school…[was] among those school that will go for the exam. They always tried for us, because, I think…the information do come from them to our principal, they do bring letter for us, something like that, to our principal, because the news keeps spreading at school. So they did well. They had been the ones bringing information to our school then. They create[d] awareness for the school . . .".*

1B-2, a Participant Non-Winner, disclosed that she knew nothing about community involvement, while 1C-1, a Non-Winner Non-Participant, was sure that community leaders were not involved. His view was expressed as follows:

> *"I have not seen any . . . educational officers coming to the school, or PTA chairman or any traditional ruler come to the school to talk about that. No, I have not seen anybody. It's just Mr. Jude [a teacher] and my former principal . . . that I heard this scholarship exam from. I have not heard it from anybody, . . . neither did anybody come to the school to emphasise the exam to the student".*

Deeper and more informed insights came from the other non-student interviewees. For instance, 3A-T, a teacher, stated that:

> *". . . the traditional ruler[s] . . . do come for the final . . . the day of presentation, they do come for presentation of [the] registration fees [awards] and also appreciate the foundation itself . . . . They will give them . . . [the] opportunity to talk, and so they will talk about the foundation, [and] bless the foundation…for their efforts in the area of education."*

3B-T, another teacher, had this to say:

> *"At the senior level, we have the Zonal Director of Education for the zone. First of all, they gave the platform because such activity cannot take place without the permission of the zonal director. And I tell you it is because of that permission that allows the teachers to even leave their school for such outside work. If the zonal director had said no, I tell you it would die like that.*
>
> *"On the area of the State, I don't want to talk about the politicians. I talk about the people who are in education, like the Commission. So, in PPSSC, . . . they have done their part as well because if you . . . look at IFOMMSA in Anambra state, IFOMMSA has become part of it. And that's because the Commission in charge of education allowed it . . . It's not easy for something to just come in and is allowed, and I tell you, and it's creating waves.*

"Do you know that the principal, some of them who are not even wealthy, will transport their children to the venue of the exam? You know why? Because they know that this is working".

"Some of the parents under the PTA Chairmen, some of them are part of the leaders in the community".

Among the non-academic communities involved were the government staff themselves, and first-hand insights came from them. One, 4A-S, stated that:

"The role I played there was by calling the principals' meeting. You tell them what to do, tell them that this is very, very important because our students are indigents. And as you go around the schools at times, on occasional supervision . . . then gather all of them in assembly, and talk to them. Tell them about IFOMSSA, tell them to read hard. Many of them are doing it. Because if you corner any child and ask that child, 'What do you want to be?' He [would] say, 'I would like to be a doctor.'"

The government staff (4A-S and 4B-S) reports getting involved by enlightening the principals, schools, communities and the government. Through school visits and official supervision, they create opportunities to explain the IFOMSSA Scheme and its importance. The PTA meetings offer another platform for promoting the scholarship program and ensuring parental involvement on a wide scale.

An example of engagements with the traditional rulers (called the Igwe's) and their communities was captured by 4A-S when she recalled that:

". . . two of those Igwes [royal fathers] . . . invited me for the community meeting. Then they will now tell you, 'You just tell the indigenes about this IFOMSSA, tell them the beneficial aspect of it, tell them that its their children that will benefit, not the man. That the man is spending his resources on your children . . . some of the principals monitored other areas but, at least, I monitored two communities. I went there on the day they were having their meetings. And I talked to them openly about IFOMSSA, asked them that they should not hold their child from not coming out, even if it means that the exam is done on a Sunday".

4B-S, the other government staff, had this to say:

> *“Well, yes, our role, my role is enlightenment. My role is making the principals know that it is important that they don't deny any student the opportunity of going higher in life . . . my role is advising, mainly advisory and sensitization . . . my role is to make the principals know that it is imperative, it is very necessary, it is very important, and it is very fulfilling for them to send their kids, send their students for the competition.”*

4A-S went on to add that:

> *“Now, about the community leaders, we found out that some of them are now trying to . . . brag over their own . . . it's not their success. But they are bragging already on top of it”.*

4B-S also added this:

> *“Like I told you earlier, as a government official in my zone, our work is mainly supervising, monitoring, sensitisation and creating awareness. Yes, we do create awareness. Like reminding the principals on WhatsApp, because we have a WhatsApp group. Reminding them of the IFOMSSA scholarship exam. You see me now, discussing with them. We just concluded a supervision that is school evaluation programs which we normally do every term. At the evaluation, I do tell principals, I do tell teachers that are involved in the evaluation, because there are some teachers that are involved in the evaluation. I do announce and tell them that it's imperative, it's necessary for you to prepare your child”.*

The overall effect of community engagements is heightened awareness, and therefore support, across the Educational Zone. 4B-S, a government staff, summarised it as follows:

> *IFOMSSA scholarship award is not a name that you mention in Otuocha Zone, and one will tell you, "No, we have not heard of this before." No. It's a name that most of the schools are familiar with. It's an examination that students know that every year, they do take it. And those that really want to make it would try*

to work hard, in order to ensure that their name is among those that would be selected."

Government contribution is mainly based on the fact that they approved the IFOMSSA Scheme, and allowed their staff, including school principals and teachers, to participate in it without restrictions. As one of them, 5B-C, explained:

". . . the entire process. At least the government . . . . The school board, . . . they can stop any exam from going on in their schools because they own the schools, and the students are under their care. They encourage such things. That is their own contribution, allowing you to take their students away from the school to give them a set exam and to mark and give them award[s]. That one they allow because they can say, "No, we don't want such things to go on in our school," and there's nothing you can do about it. It's their school, the children are under their care. The government . . . is very, very happy about what's in IFOMSSA, what the [Foundation] is doing for their children in schools. They encourage IFOMSSA by encouraging the teachers, especially through the zone, encouraging the teachers to get their students ready.

"Then for the communities, the communities, they are always happy. They like such things. They even feel excited if everybody's taking, but it's not possible. The community where the school is located, they know such a thing goes on… such communities are always looking forward to when will the exam take place so that they know if their children can go there and get the award. They're always excited. They encourage the IFOMSSA. They encourage people. They encourage their children. They encourage IFOMSSA by bringing out their students. The government is encouraging IFOMSSA by leaving IFOMSSA to continue with the exam since 2017. We have never had a hitch at all, at all. Rather, they are praising him".

5B-C also added this:

". . . we always go there to encourage them. I think to me, I think I made an impact when I was there amongst the teachers and amongst the community

leaders,…sometimes the principals, they don't encourage them, the parents don't. But most times, the people that are in the office reach out to them. That is the only way they can get them. If they reach out very well . . . any year they reach out very well, you see all of them [schools and students] coming."

6.3.6. Role of the Media on the IFOMSSA Senior Scholarship Scheme.

The main question used to explore this was, "*What do you know about any television, radio or newspaper report of the IFOMSSA Scholarship Awards*?" To probe further, an example question was, "*Did the media coverage have any effect on your approach to the Scheme?"*

Of all the media outlets, social media appeared to be the avenue that the students engaged with the most, particularly in terms of publicity for the IFOMMSA Senior Scholarship Scheme. The potential impact from that appeared to be mixed. Apart from 1B-2 who had only heard about it at school and nowhere else, all the others admitted having information from the media, mainly social media.

1A-1, for instance, follows the Foundation and the IFOMMSA program on Facebook, while A1-2 has seen it in a magazine and also on the internet, but not on the radio or television. 1B-1 had come across it on both television and Facebook, while 1C-1 and 1C-2 have not seen it on any other media outlet but social media, specifically on the Facebook page of their school or that of the Foundation.

Interesting insights were obtained when the actual impact of the media publicity was explored. Apart from 1A-1, who stated that the media publicities did not influence his approach or views of the scheme, all the others admitted to various positive effects. 1A-2, for instance, acknowledged that such publicity inspired her *". . . to read, so that I'll be one of those people that my pictures will be in the magazine or posted on the internet",* while 1B-1 saw it as "*more proof that this is not a scam*" given that, for such to be announced and publicised, it cannot be a scam.

For 1C-1, seeing it on Facebook made him personally view the program *"as an opportunity"* to attend *"any school of my choice."* He admitted that it made him *"ready to work hard or do anything possible"* to merit the award, a dream that is no longer possible as he was no longer in school at the time of the interview for this research.

The impact on 1C-2 was equally positive but in a different way. She stated that such publicity leaves her glad and "*amazed*" to know that the initiator of the IFOMMSA

Scheme is still delivering on a project that was commenced before their time in school and thereafter.

Most of the eight non-students interviewed confirmed that the IFOMSSA Senior Scheme had media exposures in one form or the other. Just like the students, the non-students also admitted that the media exposure influenced them positively. 2B-P, a guardian, stated that, "*The way we heard about it on radio made us to have . . . motivation for us to enrol our child in it . . . . So, it affected [ed] us positively*."

4A-S, a government staff, noted that, with the media broadcasts,

> *"People are asking now what is IFOMSSA…people are asking a lot of questions. How will they get this IFOMSSA in their own area? You know, it's getting people to know what they're doing . . . . It has made the thing very, very... Everybody is aware of the whole thing in the state . . . already, it is in the PPSSC scheme of work. It is boldly written, pasted on the wall everywhere in that place. So they know everything".*

In addition to having heard about it on the internet, 2A-P explained how she got more information:

> *"We, the parents . . . they invited us some time ago . . . When we get there, they told us everything concerning this IFOMSSA Award. And we witnessed what happened that day, the junior award was given. They were paid for . . . their WAEC fee. Even us, they refund[ed] us our WAEC fee, which we have already paid, and we are very happy. Yes, they even told us that our children should go and write JAMB, and when they write JAMB, they should forward the JAMB result to them, that they should take off from where we stopped".*

2B-P also added:

> *". . . recently, I have been hearing about it . . . before 2018, I have not come across . . . it. But at a stage in 2021, I began to hear about IFOMSSA, to the extent that I heard about that on the radio".*

Most of the other non-student interviewees agreed to seeing the IFOMSSA Senior Scheme announced in the media. 3A-T, a teacher, said this:

> *"I've heard about it through, I think, the nation's newspaper, then through the radio, also ABS [Anambra State Broadcasting Service TV]."*

On her part, 4A-S, a government staff, added:

> "*I know there was a time I saw it somewhere. But in our local radio, ABS, IFOMSSA is everywhere. IFOMSSA is everywhere".*

4B-S was another government staff, and had this to say:

> *"Yes. There was once . . . I wouldn't be able to know the year now. We did it once. It was like, let's invite these television, radio station, to come and cover it . . . It was aired just once . . .".*

5B-C:

> *"Newspaper, yes. Newspaper, yes . . . and then . . . social media, yes. On Facebook, they're always there. In short, on Facebook, we thrive so much. Then newspaper, one or two occasions I have met . . . write-up about IFOMSSA."*

On the actual impact of the Media, most of the interviewees provided insights. 2B-P, a Guardian, for instance, had this to say:

> *"The way we heard about it on radio make[s] us to have . . . motivation for us to enrol our child in it . . . . So, it affect[ed] us positively".*

For 2A-P, a parent, publicity from the media made people see the Scheme as an opportunity that should not be missed. She had this to say:

> *"Yes, . . . because I saw it as a great opportunity. It's a great opportunity. Yes, great opportunity. Somebody like me don't need to lose such an opportunity. It's a great opportunity".*

3A-T was a teacher, and expressed this view:

“Even before seeing it, I've had an interest . . . because of the vision the founder had, so I've seen the direction it is going. And it has been of help to so many persons, not just even education, even health-wise. So even before seeing it, so for someone to be outside the country and be impacting life, even without seeing those people, without even knowing them, just through pictures. It's something commendable”.

5B-C, a community leader, stated that:

“I think for those of them that the newspaper and the social media is accessible to them, it made an impact on them”.

She then went on to provide an interesting perspective, noting that:

“There was a time they saw the vehicle for OCI. You know it has vehicles for running around? They saw it, and they were so excited, they continued to copy the website and everything about it. Seeing it there . . . it encourages them. It encourages them. It makes them to sit up and see if they can get in into the exam and get the award. It made an impact, a positive impact on them.”

6.4. Enrolment Patterns and the IFOMSSA Senior Scholarship Scheme.

A key goal of this study was to gain qualitative insights into the potential impact of the IFOMSSA Scheme on the WASSCE enrolments since it was introduced. The question used to assess this was, “*How have the enrolment patterns for the certificate examinations been before and after the scholarships were introduced?”* It was only posed to the two teachers involved in the interview, and not the others. This was so, because, questionnaire piloting revealed that, of all the interview groups, teachers were the only ones with enough information to provide insights into this.

Of the two teachers interviewed, only one, 3A-T, knew about the trend in enrolment patterns over the six years under consideration. According to him:

“I came to the school in 2014 and it took WAEC and NECO. In 2015, they registered around thirty something. 2016, the population dropped because, [at] the school in 2015, most of them didn't make their WAEC results. So, in 2016, the school registered just 18 students. Now since 2017 till date, we've been having increase in the number of students who register for WAEC,

mostly…indigenes of Nsugbe. In 2017, we had 34 students, in 2018, we had 43. In 2019, we had 53, in 2020, we have 63. In 2021, we have 68, in 2022, we had 77. So everybody wants to come back to the school. Even in our junior category of the scholarship, last year, we registered 121 candidates in the junior secondary, the highest we have registered so far".

3A-T stated that he had no doubt that the increased enrolments were attributable to the IFOMSSA Senior Scheme. He pointed out that two other private schools in the same Nsugbe town did not record such increases and that students from neighbouring towns began enrolling into their school soon after the IFOMSSA Senior Scheme was introduced so that they could also benefit. In his words:

"Yes, it has everything to do with IFOMMSA because we have 2 private schools in the same town with us. Now, since that program came up, every indigene of Nsugbe, Anam, Aguleri, that are close by, they want to come to Community High School, Nsugbe, so that they can benefit from the program".

The next part of this work, *Chapter 7*, discusses all the results from both the quantitative and qualitative arms. It will be followed by the concluding part, *Chapter 8*, which looks at the conclusions drawn from the study, the recommendations from it, and the implications of those recommendations for future research and policy.

CHAPTER 7 DISCUSSION

The strong possibility of an “en masse effect” from the principles underlying the IFOMSSA Scheme might be of huge importance to Nigeria and elsewhere, should they be replicated for other developing African countries and disadvantaged communities in other countries across the globe. This would be so, as it might dictate a new way of ensuring that a higher proportion of those facing educational inequalities are inspired to attain higher test scores using the same incentives that are already in existence.

As explained in *Section 1.5* of the Introduction, such increments in test scores and the higher quality of education associated with them are known to have positive associations with multiple positive indices that might be helpful to Nigeria and her disadvantaged communities. If properly harnessed, these benefits can bring progress in Nigeria and other developing countries to be at par with the rest of the world. In attempting to actualise these, this discussion attempts to explore the findings discussed in *chapters 5 and 6*, compare them with reports in the existing literature, and analyse how the proposed scholarship scheme of this work might help achieve the above possibilities.

This discussion will first explore the “Basic Demographic” findings identified in the Results (*Chapters 5 and 6*). Afterwards, it will briefly look at the “Gender” implications of the findings on the work before fully dissecting the study’s outcomes as they relate to the three major principles (*Section 1.9*) underlying the IFOMSSA Senior Scholarship Scheme and the research questions (*Section 1.11*) that emanate from those principles. The discussions will, therefore, be grouped under sections that align with those principles, which include the “Hybrid Selection Criteria” of the IFOMMSA Scholarship Scheme, the “Mass Motivation” components, and the “Community” involvements. Findings on the WASSCE “Enrolment” changes will then be discussed before the study’s “Strengths and Limitations” are analysed. Conclusions, Recommendations and Study Implications will be explored separately in *Chapter 8*.

7.1. General Discussion and Demographic Differences.

As explained in *Section 4.3.4* (under the Methods), this study could not collect information on age and a few other demographics as the official WASSCE report sheets do not include them. Apart from gender, which was available on those sheets,

this lack of details made it difficult to directly compare data on age with information from the existing literature. This notwithstanding, a lot was available for discussion on gender. The 1:1 ratio (as shown in *Section 5.1* and *Table 3*) between the proportion of male (50.8%) and female (49.2%) students that participated across the entire six-year population of this work was only slightly different from the ratio obtained in a previous study (Ifediora et al., 2022) that reported a 55.9% to 44.1% proportion of males to females across senior secondary school students (SSS 1 to SSS 3) in the same Anambra State where this current study was conducted. This comparison gives context to the quality of the overall data obtained in this work, confirming that students involved in the current work were not too different from those in similar settings from comparable studies.

Slight caution should be applied to the above comparison, though, as there were a few differences between the current work and the past publication cited. One was that the older study looked at all public senior secondary schools in the State (which covers SSS 1 to SSS 3, as explained in *Section 1.2*), not just the SSS 3 students (as was the case in this current study). Another difference was that the current work was limited to the Otuocha Educational Zone, not the entire Anambra State, as was the case in that 2022 study. A final difference is that, even if only SSS 3 students were involved across the two studies, this current work focused only on those who enrolled for the WASSCE, not the entire SSS 3 class cohort as part of the 2022 study. This is important, as it is known that a good number of students in SSS 3 drop out from schools before the WASSCE exams are undertaken, particularly in the Otuocha Educational Zone, which reportedly has the highest dropout rate (5.05%) compared to the other educational zones in Anambra State (Amaonye & Anaekee, 2020). This last difference may have significant gender implications, as females are generally affected more by these dropouts due to the prevalent early girl-child marriages in the Otuocha Zone (Anambra Broadcasting Service, 2022; FRCN HQ, 2022).

This last difference may also be why the gender proportions from the Otuocha Educational Zone observed in this study differed from two official reports. Firstly, data on enrolments and completion for SSS 3 classes across public schools in Anambra State from Nigeria's National Bureau of Statistics for 2016 and 2017 revealed a consistently slight preponderance of females (National Bureau of Statistics, 2021). There were 5,691 males to 7,095 females in SSS 3 in 2016, giving a 0.80 to 1.0 ratio.

In 2017, it was 6,209 males and 8,510 females (0.73 to 1.0). As shown in Table 3, these differ from the proportions in the three pre-intervention years of 2014 to 2016 of this work, which was before the IFOMSSA Senior scholarship scheme came on board. In those years, males had consistently higher numbers than females (1.1 to 1.0). A second official source revealed that, even if students in all public senior secondary school classes in Anambra State are explored (not just SSS3 as in the first source, but all of SSS 1 to 3), the slight female dominance remained. It showed that 29,590 males and 33,552 females were enrolled in these three classes over the 2018/19 session (46.9% to 53.1%), 30,764 and 34,492 respectively in 2019/20 (47.1% to 52.9%) and 35,994 and 44,796 or 44.6% to 55.4% respectively in 2020/21 (Federal Ministry of Education, 2021).

Interestingly, although the proportions from the two official sources cited above differ from those from this work's pre-intervention findings, they do mirror the 0.90 to 1.0 male-to-female ratio observed across the three post-intervention years of 2017 to 2019, which are the years following the introduction of the IFOMMSA Senior Scholarship award. This means that the only period when males had more numbers than females (be it from official sources or from the findings of this work) was before the introduction of the IFOMSSA Senior scholarship scheme at the Otuocha Educational Zone of Anambra State. Over that time, as shown in Table 3 and Section 5.1.1, males were slightly less than females (51.8% to 48.2%).

The foregoing observations may be related to the afore-stated facts that females in the Otuocha Educational Zone dropped out from senior secondary schools a lot more due to early marriages and other factors (Anambra Broadcasting Service, 2022; FRCN HQ, 2022). Interestingly, these, as noted, appeared to revert back to proportions similar to statewide numbers in the three years after the IFOMSSA Senior scholarship scheme came on board (2017 to 2019). While more studies may be needed to clarify how much of this reversal to statewide patterns in female enrolments in the Zone was attributable to the IFOMSSA Scheme, the current evidence from this work appears to suggest that incentive schemes designed along the principles embodied by the IFOMSSA Scheme may be helpful in bridging gender gaps in educational outcomes communities where females lag behind. Future studies may be helpful in exploring this further, and this work recommends this. The cited reports above also revealed that measures to address the gender inequity in school dropouts within the Otuocha Educational Zone are important issues for the government and

policymakers in Anambra State. It is hoped that findings from this work may also assist with these.

It is worth pointing out that the increased dropout by students in senior secondary schools of the Otuocha Zone as reported by independent sources (Anambra Broadcasting Service, 2022; FRCN HQ, 2022) was partly confirmed through the qualitative arm of this work, with the IFOMSSA Senior Scheme being touted as a potential solution. One of the government staff interviewed, 4A-S, revealed that a good number of students entering SSS 2 and SSS 3 opt not to continue with their education, but rather prefer to engage in trades in the neighbouring commercial city of Onitsha. In her words, "*for a child that have already come onto SS-2, SS-3, what . . . is normally on their heads is to go down to Onitsha. Onitsha is very close to that area. They just ferry across from the sea. They just ferry across and enter Onitsha. So they want to go hustle there and make money."* She believes that the IFOMSSA Senior Scheme offers the school administrators a tool that is helping reduce this mentality. According to her, *"we keep on telling them [the students] that hustling is not the only way to life. So with this IFOMSSA introduction, they have now seen . . . some of those people who got the award. They want to be like them. It changes a lot of things. When you enter university, at least you can bet me, your life will change . . . if you sit down and concentrate and read, sky is your limit. You can pick that money without that hustling which you feel you should be doing at Onitsha."*

7.2. Discussion on Gender Demographics and their Implications.

Apart from helping with this study's gender demographics, the discourse above sets the stage for understanding the potential impact of the IFOMSSA Senior Scholarship Scheme on bridging any gender divides that may exist based on the test scores achieved by males and females in the schools involved in this work.

Interestingly, the aforementioned 1:1 male-to-female ratio in the study was also observed across the pre-intervention (51.8% to 48.2%) and post-intervention (49.7 to 50.3%) years of the study. These were all captured in *Table 3* and are considered a welcome finding, particularly for those who enrolled for the WASSCE in the three "post-intervention" years. This is so, given the concerns about gender inequality against females in education across Nigeria (Baten et al., 2021), not just in Anambra State as discussed in the preceding Section.

Interestingly, notwithstanding the nearly equal gender enrolment numbers into WASSCE described above, slightly more females appeared to feature in both the IFOMSSA Challenge scholarship examination (61.3% to 38.7%) and the actual scholarship recipient list (52.9% to 47.1%) across the three years (2017 to 2019) under review in this work. These are captured in both *Table 4* and in *Section 5.1.4*. Despite this relative dominance of females in the IFOMMSA Senior scheme, this study also observed that males in the intervention arm of the three post-intervention years were statistically more likely to attain pass scores than females in three of the four subjects of interest in the IFOMSSA Senior scheme (*Table 5* and *Section 5.1.5)*. While the reason for this disparity in the overall WASSCE performances is unclear, it does appear to be in contrast with the national trend across Nigeria from 2021 and 2022 (outcomes for the same three years of concern in this work were not obtained) when females had a slightly higher proportion among those who passed WASSCE (i.e., those who made acceptable scores in a minimum of five subjects that include English Language and Mathematics). In 2021, for instance, out of 1,222,507 that achieved the pass criteria described, 624,694 or 51.1% were females, while 597,811 (48.9%) were males (Emergent News, 2023). In 2022, 51.3% or 622,973 of the 1,214,191 pass scores attained came from females, while males made up the remaining 48.7% or 591,218 (Lawan, 2024). The higher male performances in WASSCE observed in the Otuocha Zone also contrasted with reports that girls generally have lower failure rates than males (Anlimachie et al., 2022; De Brauw et al., 2015; Ikegulu, 2004; Rose et al., 2018; Uyeno et al., 2006b; Veloski et al., 2000).

While the reasons for the above observations are not entirely clear, early marriages for the girls in the Otuocha Zone, which has already been discussed, might be contributory, as it might create unwanted distractions that affect performances in WASSCE. This practice of early marriage, sometimes described as a “way of life” in the Zone, is reportedly being tackled by the Anambra State Government of Nigeria (FRCN HQ, 2022). As earlier suggested, they, along with other parts of Nigeria where females generally face fewer education opportunities, may need to pay a bit more attention to the principles of the IFOMSSA Scheme and consider adopting relevant aspects that may complement their current efforts. This is so given that, as mentioned in the preceding paragraphs, the IFOMMSA Senior Scheme itself appears to inspire females to, not just enrol as much as the males for the WASSCE, but even do better

than them with respect to qualification for the IFOMSSA Challenge selection exam and the ultimate receipt of the scholarship award.

While further studies may be needed to unravel the real reasons behind the slight gender variations, maintaining gender balance in enrolments and performances is also crucial for the actualisation of the 2030 SDG-4 (Ilie & Rose, 2016), and findings from this work regarding WASSCE enrolments and wins of the IFOMSSA Senior awards might provide some welcome reassurances in that regard. Some credence to this latest assertion comes from comments from 4A-S, one of the government staff interviewed as part of the qualitative part of this work. Quoting a woman who accompanied her daughter to receive her award during an IFOMSSA Award Ceremony, she said that, "*My husband will no more disturb me [to] let this girl get married on time . . . my daughter will now go to university."* She went on to add that, in the Otuocha Educational Zone, "*once you are in secondary school, you are just marking off time to get married"* According to her, the women are more enlightened and value education more than the men, who are typically farmers.

Obtaining male-to-female ratios similar to the above across Nigeria will be very important for education advocates. Available reports (Sasu, 2022) indicate high school completion rates for girls across Nigeria range from 43.1% to 53.0% between 2013 and 2020. This compares poorly to males, whose completion rates over the same period were 57.4% to 66.8%. The situation is more prevalent in Northern Nigeria, where the most recent report from UNICEF revealed very poor female school attendance rates, with up to 47.7% of female non-education in the northeast and 47.3% in the northwest (UNESCO, 2020; UNICEF Nigeria, 2013). This school attendance rate in Northern Nigeria is likely to be accompanied by an even lower completion rate, though these numbers were not available. Introducing a scholarship scheme that incentivises everyone (all genders and academic abilities) equally, as is the case with the IFOMSSA Senior scheme, might be one option that can assist with this quest for inspiring higher female education rates in Nigeria. This could be one contribution of this work to education in Nigeria and other communities worldwide with similar gender disparity issues.

7.3. Comparing Other Basic Demographics in the Various Groups.

One interesting observation was that, over the six years of the study, the ratio between the number of students who enrolled for WASSCE in the intervention arm (2,303) of the study compared to the Control arm (3,424) was approximately 1:1.5 (*Table 3*). This same ratio was roughly maintained even when only the pre-intervention years (2014 to 2016) and the post-intervention years (2017 to 2019) were considered in isolation. It should be recalled that, as explained in the Methods (*Section 4.3.1*), such a ratio increases efficiency in intervention studies (Rose & Van der Laan, 2009), and was deemed to be one of the strengths of this project. Even though the original design of the study towards realising this ratio was targeted at the LGA cluster of schools (which, at ten schools in the intervention cluster and 16 in the control cluster, came at the same ratio between the intervention and control clusters, *Section 4.3.1*), having the same proportion for the number of students in the two groups will, hopefully, further strengthen the overall findings from the study.

Apart from the intervention and control comparisons, it was also reassuring to observe that there was little difference in the number of students involved over the three years before the intervention (48.4%), compared to those in the three after the intervention (51.6%). This allows for a balanced longitudinal comparison.

Now that the basic demographic similarities and differences between the current work and data in the published literature have been analysed, the study's findings relating to its stated goals can be discussed.

7.4. Hybrid Selection: IFOMSSA Senior Scheme's Merits and Needs Criteria.

One of the three key principles underlying the IFOMSSA Senior Scholarship Scheme was entrenching a hybrid (mixed needs and merits-based system) scholarship selection criteria for determining its recipients. A major research goal of this study was to independently and scientifically verify that the deliberate design of this work to achieve this was indeed in place. The qualitative arm addressed this. *Section 6.1* captured the interviews from all 14 participants involved. All 14 agreed that students from the schools that benefitted from the IFOMSSA Senior Scholarship Scheme were all of poor socioeconomic status. Thirteen of the 14 also opined that a transparent merit system existed. A detailed review of these findings will now be undertaken.

7.4.1. Discussions on the Needs-Based Criteria.

All seven participating students confirmed that they and their classmates were from families of low economic status and faced significant financial constraints, admissions that are in line with independent information that is widely available (Daily Independent, 2015). 1A-1, one of the students who received the scholarship after participating in the IFOMSSA Senior Challenge (Participant Winner), explained that some of his peers were at constant risk of dropping out of school due to finances and that, even though some brought their parents to help negotiate the tuition payments, a good number eventually missed the WASSCE completely for this same reason. Further insight came from 1C-2, who, even though she was motivated towards winning the IFOMSSA Senior Award but did not qualify for the IFOMSSA Challenge and did not eventually win the scholarship (i.e., a Non-Participant Non-Winner), provided a deeper insight. According to her, *"The truth is that . . . almost 90% of us struggled to pay our school fees."* She went on to add that *" . . . when the WAEC [WASSCE] fee was announced, a lot of people, in fact, half of the class, stopped coming to school because they start[ed] going about trying to . . . help them pay their WAEC fee . . . ".*

These views indicate that the students targeted were those in need, which was a key criterion for this work. It also appeared to justify the focus on public schools, as the students that attend are usually of low socioeconomic backgrounds, while the relatively rich homes have better opportunities and can afford good schools (Pickering & Byrne, 2014; Spaull, 2015, p. 38). The views from 1A-2, another Participant Winner, support this assertion. According to her, *"Anybody who goes to a public school is not rich . . . . they. . . need financial support."*

Not surprisingly, the non-student interviewees (parents and guardians, the teachers, the government staff, and the community leaders) all expressed opinions that aligned with the students' views. With first-hand accounts, their insights deepened the discussions and added independent perspectives into the students' financial difficulties. 3A-T, a teacher, acknowledged that some students resort to menial jobs to cope financially with their education and that "*…payment of school fees is a very big issue in my school. . to the extent that, even during the exam time, students are being . . . asked to pay for school fees . . . ".* Speeches from other speakers pointed out how the region is popular for farming, earning them the nickname of the "food basket of Anambra State", which corroborates reports in the literature (Enibe et al., 2019). A

standout feature of the interviews was that the students and their families acknowledged the limitations posed by their financial struggles and tended to appreciate the support provided by the Foundation and the opportunities these bring. As 4A-S, a government staff who described the financial situation of students of most students in the area as "*worse than average*" would put it, these indigent students with no one to train them now "*have high ambitions like going to university*". The IFOMSSA Senior Scheme was reportedly seen as a welcome measure in an educationally backward area, which, as 5A-C, a community leader would put it, came "*to the rescue of. . . intelligent students that had no sponsors*."

Self-awareness of financial limitations and the belief that the opportunities presented by the IFOMSSA Senior Scheme would lead to higher educational attainment are crucial to the program's overall success. This is so because such expectations tend to spur students to higher achievements. The idea that "schooling is based on expected gains" aligns with this (Carneiro & Lee, 2011; Heckman et al., 2006). It argues that students who expect higher returns expect to attend and learn more at school. Given this, the awareness of the opportunities presented by the IFOMSSA Scheme, including the high expectations of attending universities by taking maximum advantage of such opportunities, provides a fertile ground for the motivational drive behind the scholarship to thrive and succeed. This goal, planted among these students by those who would have viewed university attendance as an impossible feat given their very humble backgrounds, is welcoming.

7.4.2. Discussions on the Merits-Based Criteria and Transparency.

Transparency in the identification and selection of incentive beneficiaries has been linked to a higher impact of incentives (De Janvry et al., 2006; Glewwe & Kassouf, 2012). This makes it imperative to empirically confirm its entrenchment in the IFOMSSA Senior Scholarship, and not just rely on its mere inclusion as a principle into the Scheme. As stated already, 13 of the 14 interviewed participants of the qualitative arm of the study strongly agreed to a merit and transparent system within the IFOMSSA Scheme. But one dissenting view was expressed. A discussion of this best section will start with a full evaluation of that dissenting view, expressed by 1C-1, a non-participant non-winner.

That singular and minority opinion is considered important and crucial to the entire work, partly because it might also reflect the views of several other students

who were not interviewed. The possibility of other students holding that same view is considered a possibility, given that 1C-1 personally said that much. According to him, "*It's not only me. Believe me, we had a group in school that, anytime they started doing that kind of selection, we separated ourselves from them."* The standout questions from this statement were: *Who were these 'we' being referred to? How entrenched was the supposed discrimination? And why did these students form this opinion*?"

Another reason why this minority view needed to be understood was because, as a case study qualitative research, this work needs to gain an in-depth understanding of all the participants and the phenomenon being explored. Dismissing his view would defeat that aim. A third reason for delving into this was that a thorough evaluation and understanding of the IFOMSSA Senior Scheme requires all aspects of its current design to be taken on board, not just the seemingly good components. Should the need arise, this is the only way for the scheme to become optimised and ready for adoption and application to a wider population.

As stated, 1C-1 was a student "non-participant non-winner", meaning that, even though he was enrolled in a school where he was eligible for the IFOMSSA Senior Scholarship, he neither qualified for the IFOMSSA Challenge nor won the IFOMSSA Senior Scholarship. His expressed view of bias was strong, as reflected in the comment that:

> *"…I had a lot of people that went to participate the exam,… our performance in the class, when you check, I'm far more above them. But then, when it came to the exam, they were picked. Personally, I was not pleased by that….It's not based on our results. It was more based on human selection. They select. Yes, that's what it was. They select, they pick. And most of them were indigenes. They are people from Nsugbe if you check very well".*

A review of the IFOMSSA Senior records was carried out in an attempt to understand these comments. It was found that these views might have been influenced by a couple of things. The first was underscored by a comment he made originally when the question was put to him, which revealed that he might be inadvertently referring to the IFOMMSA Junior (not Senior). According to him,

> "*…it has been happening from my JSS III. That was when I started hearing about the…scholarship….They will just come to class, pick this, go to another*

class, pick this person, go to another class, pick this person. When you check all these students they picked, all of them are from Nsugbe. Believe me, the majority of them are from Nsugbe."

As explained in *Section 1.10*, the IFOMSSA Junior Award (which exists alongside the IFOMSSA Senior one that is the subject of this work) is an annual, exclusively needs-based scheme available only to Nsugbe indigenes. Selections for its winners are not based on merit, and it does not depend on students' academic performances. 1C-1, as a non-indigene of Nsugbe, would not have been eligible for that IFOMSSA Junior Award. His comments suggest that he was not just referring to this award but might not have been aware of this distinction in winning criteria between it and the IFOMSSA Senior Awards.

The second possibility that explains his views was based on his other comment, which was quoted earlier, where he expressed his conviction that his academic performances were "*above*" some "*selected*" for the IFOMSSA Challenge from his class. The key to explaining this perception from 1C-1 might lie in *Section 1.10.3,* which explains the merit selection processes, particularly concerning the Community High School (CHS), Nsugbe, where the student attended. As was made evident in that *Section*, this school was allowed to nominate five additional participants (other schools nominated three each), making a total of eight. Of these eight, a minimum of three must be Nsugbe indigenes, a measure entrenched to inspire and maintain a sense of inclusiveness and fairness in the home community. It was envisioned that this would help increase community acceptance and involvement in the hometown of the Foundation's founder. Further justifications for this measure are explained in *Section 1.10.3*.

It would appear that 1C-1 might have missed out on one of the five merit slots reserved for the non-indigenes. This possibility of missing out is supported by available facts from the records of the winning lists and names of the IFOMSSA Senior winners over the post-intervention years of 2017 to 2021. These reveal the details of all IFOMSSA Challenge participants and where they hail from, and are contained in *Appendix N* (2017), *Appendix O* (2018), *Appendix P* (2019), *Appendix Q* (2020) and *Appendix R* (2021). As is evident from the tables in these *Appendices*, 1C-1's assertions that representatives of his school (CHS, Nsugbe) almost exclusively favoured indigenes appear largely incorrect. Of the eight yearly representatives from

his school, indigenes of the hometown were four out of the selected eight in 2017 (50.0%), five out of eight in 2018 (62.5%), four out of eight in 2019 (50.0%, with a Ghanaian, even included), five out of eight in 2020 (62.5%), and three out of eight in 2021 (37.5%). Going by these, the Nsugbe indigenes made up 21 of the 40 participants (52.5%) from his school over the five years reviewed, which roughly mirrors the proportions in the school's overall student populations at this time. Independent sources support merit in choosing the eight students representing the school yearly. 3A-T, who was a teacher in the same school, reported that students started vying for the slots from SSS 2 (the class before the exam class) because, according to him, they are picked *"based on . . . class performance, from first to eighth positions. So everybody want[s] to partake in the [IFOMSSA] exams".*

Despite the foregoing, it must be noted that 1C-1 acknowledged the role of the IFOMSSA Scheme in his eventual preparation and performance in the WASSCE. He indicated that, even though he did not receive the scholarship, its existence propelled him to achieve a better result in the WASSCE. In his words:

> *". . . at the time, . . . they started telling us that . . . we should go ahead and study well in order to make it. So, some of us didn't have any choice but to grab our notes and textbooks and start studying ahead of the WAEC . . . when our results came out, it was quite surprising. We made it. We did well in our results".*

He also added that on his mind at the beginning were these thoughts:

> *"Wow, if you pass this exam now, your WAEC fee will be paid by them . . . . So even though . . . we did not even go for the exam [IFOMSSA Challenge], . . . it helped us in [our WASSCE] exam, for [our] own benefit also. So it's really helpful".*

It should be re-emphasised that 1C-1's concerns about merit and transparency stand in isolation from the views expressed by the remaining 13 participants involved in the qualitative study. Multiple respondents advised that the intra-school selection exercises used to pick representatives of the 10 participating schools were based on merit, as was the IFOMSSA Challenge that followed. Expressing her views on the intra-school selection exam, 1C-2, who, like 1C-1, was a Non-Participant Non-Winner, stated that, *"…in our school, before we moved for the exam, they gave us something*

like an exam in the school first, to test the students." A Participant Winner, 1A-2 concurred. Speaking on the IFOMSSA Challenge itself, she explained that:

> *"We have to write…100 questions . . . from five different subjects. So, we were told to read our books and prepare for the exam . . . . Even our teachers weren't allowed to enter the exam hall that day. We wrote on our own. It's only the OCI organisers that were there. So, I think it's by merit. Those that made it. . . deserved it".*

The same sentiments from 1A-2 were echoed by the other remaining students, with 1A-1 (another Participant Winner) emphatically saying that "*the exam is based on merit.... I guess the people that were selected as the merit were those that passed the exam*," while 1B-2 (a Participant Non-Winner) adding that "Everything is *fair. There was no partiality, everything went well . . . the selection is okay, everything they did is okay."* Even a community leader, 5A-C, supported these views by explaining that the top three from each school are selected ahead of the IFOMSSA Challenge.

The parents and other non-students interviewed also agreed to the transparency and merit. One parent, 2A-P, reported that *"…it is based on merit*," while a guardian, 2B-P, added that "*there's no partiality in IFOMSSA…my sister has been a part of this program…they take a kind of exam. In that exam, she took third position…if you score what IFOMSSA needs, they will give you your scholarship."* 4A-S, a government staff, concurred with those views. According to her, *"Yes, it's on merit . . . It's just on merit. . . and those people that are involved,… we are all open and sincere to it . . . the whole thing is just clean and clear to everybody." The* community leaders also agreed, with 5B-C, saying that "*It's based on merit . . . purely on merit. The exams are done there. The exams are marked there….nobody takes the exam home . . . Everybody sees their result before going home, so there's no way it will be falsified. So, it's purely on merit".* This view was supported by 3A-T, who had this to say regarding the marking of the papers after the IFOMSSA Challenge: "*…at the … spot, they mark the exam script….from there, they will pick merit . . . . They will pick you based on your score . . . . There is no issue of being biased*." The other teacher, 3B-T, further highlighted how merit is entrenched in the selection exam by explaining that they sought to ensure that whoever was declared a winner merits that. According to him, *". . . We have people who set the questions and people who vet them. They are*

not the same . . . at the end of it, you find out that whoever can pass these papers must be the best. Since this program started, we've not had things like manipulation." 4B-S, a government staff, summarised it all by saying that:

> *"The exams and the questions are normally set by experts and specialists in those areas . . . at the end of the questions, we normally invite, not just one expert to set, but two people,…then we collate . . . through an expert . . . in the field. We have an examination committee that takes care of the exams . . . the committee comes up with these questions on Biology, Chemistry, English and Mathematics."*

Further insights from 3B-T revealed that cameras are randomly used during the IFOMSSA Challenge exercises, a measure that further boosts transparency as the videos provide verifiable visuals on the exam conduct, which can be available to anyone. He added that the IFOMSSA Senior Scheme is now considered *". . . the best in Anambra state, in terms of standard, in terms of being able to present everything the way they should be as an international thing."*

The preceding confirmations and insights are very important for this work, not just because they addressed a key component of the study's principles but also because they helped reduce one of the five knowledge gaps noted after the Literature Review. That gap was that mixed needs and merit-based scholarship schemes were not very common globally and that no study evaluating such has been conducted in a Nigeria (*Section 2.4*). This study appears to be the first in Nigeria and one of the few in developing Africa.

Apart from the earlier-cited work that transparency in educational incentive schemes is linked to a higher impact of incentives (De Janvry et al., 2006), the published literature on the role of merit and transparency in the efficacy of educational incentive schemes did not provide much else. This raises the importance of this study's contribution to the body of knowledge in this regard. Its importance also lies in the fact that, while the preceding discussion provided deep insights from students and non-students alike into the fact that the IFOMSSA Senior Scholarship was deeply rooted in needs and merit, it does not reveal if the scheme itself was effective at inspiring higher test scores. The coming sections explore that aspect of this work.

7.5. Mass Motivation

"Mass Motivation" is the second principle underpinning the IFOMSSA Senior Scholarship Scheme that was evaluated in this study. The need to achieve an en masse outcome is crucial to the Scheme, as one key question this study addressed was whether the scholarship initiative was able to motivate its non-recipients to attain higher-than-expected test scores. Merely designing the IFOMSSA Senior Scheme to inspire motivation is not enough unless empirical proof exists to confirm efficacy in that regard. The discussions here evaluate the results garnered from this study's quantitative and qualitative arms to see if this goal was achieved.

7.5.1. Mass Motivation: Quantitative Insights.

The findings here provide interesting insights. Firstly, as shown in *Table 3*, only 2.8% (34 of 1,215) of the scholarship-eligible participants ultimately received the IFOMSSA Senior Scholarship award. They are considered the high performers in this work. While this appears to be a small fraction, it is worth noting that, without the deliberate attempt to achieve en masse motivation by the IFOMSSA Senior Scheme, this 2.8% would have been all that benefitted as they would have been inspired in isolation, not the entire 1,215 targeted by the program. Even if the numbers that attended the IFOMSSA Challenge (which includes all the moderate-to-high performers) were taken on board, the fraction would still be low, at 8.7% (also *Table 3*). These low proportions represent the realities limiting most existing scholarship schemes worldwide. They are part of the perceived anomalies that the new scholarship designs being promoted in this work, represented by the IFOMSSA Senior Scheme, seek to address. Using this work as an example, the idea is to inspire increased test scores from the 2.8% (or 8.7%) of the population that would have benefited to as close to 100% of the 1,215 in the eligible group as possible without expanding the existing funds available for educational incentives. As previously explained and again summarised in the next paragraph, the need for this can never be overestimated. This work acknowledges that, even though the IFOMSSA Scheme was designed to achieve the above outcome, some other factors beyond the scope of the work might still influence the overall findings. These include the dropout of potential failures before the WASSCE is written, changes in the migration of low and high socioeconomic families in and out of the study area, supporting interventions and other

possible incentives community-based strategies available to the students among others. By including a control group and allowing pre- and post-intervention data to be collected, the use of CBA methodology for the quantitative aspect of this study is expected to minimise any impact from these potential confounders and offers strength to the study in this regard.

UNESCO has already advised that unless education funding increases by sixfold (an extremely unlikely occurrence given that there has been stagnation since 2010), current funding shortfalls, which also affect educational incentive programs, are likely to persist (UNESCO Institute of Statistics, 2019). Even though an incentive program like the IFOMSSA Senior scheme only addresses a small proportion of overall educational funding programs, mass motivation (as integrated into the IFOMSSA initiative) is expected to optimise existing resources and increase the number of students who can attain higher test scores, with little need to expand existing financial resources.

Having acknowledged the low number of beneficiaries, this discussion will now attempt to analyse whether test score improvements were limited to these beneficiaries or whether the non-beneficiaries achieved any improvements. Even if such improvements are found quantitatively, this study must also establish that they had direct linkages to the IFOMSSA Senior Scheme, as they could have been by chance. Insights from the qualitative arm of this work, also discussed below, provide these linkages.

Some answers to the preceding paragraphs become clearer when one considers that the intervention arm of the three “after-intervention” years (which also includes the “low performers” that did not even participate in the IFOMSSA Challenge), recorded statistically significant higher scores in all four WASSCE subjects relative to students in the control cluster of those same post-intervention years (*Table 6* and *Section 5.2.1*). This implies that the presence of the low-performing students did not prevent an overall higher performance of the intervention group over the control. This strengthens the possibility of a mass effect. Beyond that, the findings summarised in *Table 9*, which directly compared the test score performances of low performers to those of moderate to high performers, appear to support this. It revealed that, even though the performances among the moderate-to-high students (those who participated in the IFOMSSA Challenge and/or eventually won the scholarship) were

higher in all four subjects relative to the non-participants in the IFOMSSA Challenge (low performers), the observed differences were not statistically significant in a majority (three) of the four subjects. This further confirms that the benefits of the improved test scores were not exclusive to the high-to-moderate ability students but benefitted the low-ability ones to a reasonable extent. With this, one can reasonably assume that the student population was motivated masse to some extent.

Insights obtained from delving into student performances within the three pre-intervention years further reduced the slim possibility of the forgoing being a result of chance. Tellingly, comparing the intervention and control clusters in those three years before the intervention did not reveal raised scores in the intervention-equivalent cluster relative to the controls-equivalent (*Table 7* and *Section 5.2.2*). This means that, in the three years before the IFOMSSA Senior Scheme was introduced, students who sat for WASSCE in the 10 public senior secondary schools within the Anambra East LGA (the intervention-equivalent arm of this work, as they were the ones that later benefitted from the scholarship scheme in the post-intervention years), did not achieve reasonably higher scores than those in the 16 schools of the control-equivalent arm (Anambra West LGA and Ayamelum LGA) over the same pre-intervention years. This contrasts with the significant improvements observed between the two arms in the post-intervention years, as explained in the preceding paragraph. This extra information, garnered from the lateral comparisons of this work, rationalises the extra quality offered by the “before and after” component of this CBA quantitative study.

In addition to the foregoing, further evidence of a positive mass effect was provided by the longitudinal analysis of this work, which compared test scores from students in the three years before the IFOMSSA Senior scholarship was introduced (pre-intervention), to the three years of its existence (post-intervention). This comparison revealed that, in the six-year intervention-only arm of the study (*Table 8* and *Section 5.3.1*), students in the three “before-intervention” years scored statistically lower in three of the four subjects of interest. Biology, the only non-compulsory subject among the four, was the only exception. It is possible that the non-compulsory nature of Biology may be responsible for its isolation on this, as students may not have the need to take it seriously, given that they do not need it to progress in their academic pursuits. While future research may be needed to clarify this observation, the IFOMSSA Senior Scheme will, from its 2025 edition, only focus on the three subjects compulsory for all WASSCE students subjects in Nigeria. These subjects include

English Language, Mathematics and Civic Education. Biology will no longer be part of the IFOMSSA Challenge, as it is not compulsory for all students. As will be made clear in *Section 8.3*, this recommendation for only compulsory subjects to be used for selection exams of any scholarship scheme, is among the key conclusions from this study.

It is worth pointing out, though, that in the control-only arm over the same six-year period, these lower scores between the “before-intervention” cluster relative to the “after-intervention” cluster observed in the intervention-only arm just discussed, were not found. These are detailed in *Table 8* and *Section 5.3.2* and adds additional credence to the fact that the IFOMSSA Senior scheme was effective at improving test scores, not just laterally (intervention and controls) but also longitudinally (before and after the intervention).

These increased test scores, arguably orchestrated by the IFOMSSA Senior Scheme and its three underlying principles, are very important, given that, before now, multiple publications have shown that financial incentives have no proven consistently positive impact on the “Academic Performance or Test Scores” (Bettinger, 2004; Castleman & Long, 2016; Cornwell et al., 2006; Dynarski, 2003; Filmer & Schady, 2014; Gibbs et al., 2009; Kane, 2003; Kremer et al., 2013; Kremer & Holla, 2009; Mendez et al., 2011; Scott-Clayton, 2011; Slavin, 2010). As already noted in the introduction, test scores were the only one of all the five educational outcomes that lacked that positive relationship with financial incentives outcome and stands alone from the other four outcomes like school enrolments, school attendance, school retention, and school graduation (Gibbs et al., 2009; Heyneman, 2009; Kremer et al., 2013). The finding reported in this current work might have now addressed this knowledge gap to some extent,

As was made obvious after the Literature Review of this paper (Section 2.4), establishing a consistently positive relationship between test scores and scholarship incentive schemes was a knowledge gap that this study needed to address. With the observations above, this goal appears to have been met to some extent, implying that, with measures in place to ensure mass motivation and the other principles of this study, there is a good chance that financial incentives can improve test scores. Caution is necessary when drawing final conclusions from these observations, though, as other confounding factors might still be at play. Some of these confounders might be related to the possibility of the exams being relatively easy over the years of

interest, the possibility of more teachers being recruited in the years of interest, or other issues. Fortunately, these possibilities are considered unlikely in this work, given that the CBA study method, by its very design, minimises these possibilities, a reality that adds to the overall strength of this study. To further reduce this possibility, though, the qualitative component of this mixed methods study, which has since been published in a per-reviewed journal (Ifediora et al., 2024), becomes very important. Insights garnered from it, along with how the above discussions of the quantitative findings compare to information in the existing literature, will now be discussed.

7.5.2. Mass Motivation: Qualitative Insights.

Results from this qualitative component, which involved in-depth interviews of the students and communities involved in the IFOMSSA Senior Scheme (parents, teachers, traditional and government leaders), helped unravel underlying influencers and were covered extensively in *Chapter 6*. Transcripts (Ifediora et al., 2023a) and full recordings (Ifediora et al., 2023b) of all 14 interviews are also available online. As these made clear, the qualitative results provided additional proof that the above observations from the quantitative work have a causal relationship with the IFOMSSA Scheme.

As was the case with the hybrid selection principle (*Section 7.3*), a large majority of the 14 respondents (which included high, moderate and low-performing students) in that paper held the view that the IFOMSSA Senior Scheme motivated and inspired the recipients. In fact, all the non-student interviewees, along with five of the seven students (mostly the low and moderate performers), acknowledged that the scheme's positive impact on the preparations and the performances at the WASSCE played vital roles for all students. Worth pointing out is that, among the views expressed by the students, which support the mass motivation among all the low performers and most of the moderate to high performers, somewhat disagree in part with the viewpoints espoused by the "Spencer's Phenomenological Variant of Ecological Systems Theory, PVEST" (Spencer et al., 2005). The PVEST, which was one of the two theoretical frameworks underlying this study *(Section 3.2.1)*, argues that financial incentives can only promote academic achievements among students of low socioeconomic backgrounds who are already high-achieving students, given that, in most cases, they already function at high levels (Spencer et al., 2005). It asserts

that these high-performing students generally perceive incentives from scholarship schemes as validation of their chosen identities as they already see themselves as accomplished scholars, ultimately motivating them to maintain the hard work and high grades expected.

In addition to the PVEST, these findings also disagreed with the arguments advocated by both Bourguignon et al. (2003) and Slavin (2010), which, as explained in *Section 3.2.1* of the Theoretical Framework, argued that expecting significantly higher test scores for an entire student cohort due to an educational, financial incentive program may be unrealistic, given that any student cohort would generally have a mix of low-performing, hard-to-motivate students alongside their high-performing, easy-to-motivate counterparts.

Upholding the PVEST and its related theories in this work would have resulted in only the moderate to high performers attaining higher test scores from the IFOMSSA Senior Scheme, while the low performers would not. Rather, the findings showed that the low performers were inspired by higher test scores alongside most moderate to high performers and that some of the high performers were not inspired. Two of the four moderate to high performers reported that they were not completely inspired towards better test scores by the IFOMSSA Senior Scheme, and these were the ones that provided the partial disagreements to the PVEST. One of these students was a high-performing one (participant winner) who stated that, although the financial support was a big relief for his family, neither his preparation nor his ultimate performance in WASSCE was influenced, as he was already putting his best into them before the Scheme came about. The other exception was a moderate performing student (participant non-winner), who, even though she admitted that the IFOMSSA Challenge helped her ultimate performance in WASSCE as it exposed her to questions similar to the ones she eventually faced, did not think that her preparation for the certificate exam was influenced, as she was already giving her best.

These disagreements observed between the mass motivation findings of this work and the PVEST and its associated theories are welcomed in this study, as disproving them was important if the overall goals of the study, which is to inspire all students (low, moderate and high performers) towards higher test scores. This observation aligns with the well-established notion propagated by the “Falsification or Rival Logic”, which advocates that studies should seek to disprove, not uphold, existing theories (Teegavarapu et al., 2008; Yin, 2014). Challenging the principles of

the PVEST, even though not in totality (as two to three of the four moderate-to-high performers agreed that the IFOMSSA Senior Scheme positively affected their performances), is considered a strength for this paper, as the falsification logic is known to help minimise subjectivity.

Even though unclear, the reason for these disagreements with established theories needs to be unravelled to determine if the principles behind the IFOMSSA Senior Scheme can be integrated into future scholarship policies. One possible explanation may be related to the fact that the IFOMSSA Senior scheme had two key components for which proponents of the PVEST and its related theories did not make allowances. These components were the deliberate and repeated efforts to motivate all students en masse (not just the high-ability students) and also that communities (teachers, parents, community leaders and media) were actively involved in inspiring all participants (not just the high-ability ones). The realities of these measures might have allowed for the promotion of academic achievements among low-performing students, not just high performers, as envisaged by the PVEST. The community impact, itself discussed in *Section 7.6*, agrees with another paper's recommendations, which opined that community participation is essential for scholarship schemes to be effective at promoting test scores (Masino & Niño-Zarazúa, 2016). This further highlights the need to entrench community participation if mass motivation towards improved test scores is to be achieved.

Interestingly, some of the mass motivations related to the IFOMSSA Senior Scheme may also be attributable to the simple existence of other scholarships available to all the students eligible for the IFOMSSA Senior Scheme (including its recipients and non-recipients). These extra scholarships were first mentioned in *Section 1.10* and are based on that the Foundation behind the IFOMSSA Senior Scheme also has additional yearly scholarships available to those aspiring to advance their education into tertiary institutions in Nigeria. All the students eligible for the IFOMSSA Senior Scheme, including the low, moderate, and high performers, are eligible for these other scholarships should they decide to progress with their educational pursuits. These additional scholarships were the “JAMB Awards” (which covers the registration fees of recipients planning to undertake the Unified Tertiary Matriculations Examination, UTME) and the “Cyfed Undergraduate Scholarships” that are available to beneficiaries already in tertiary institutions.

Insights from two interviewees revealed that these awards provided further inspiration to all the students (including the low, moderate and high performers). Explaining this, 5B-C (a community leader) stated that once the WASSCE was completed, students knew the need to submit their results to the Foundation when they became available. After that, they become eligible for the Foundation's JAMB Award and could be considered for the Cyfed Undergraduate Scholarship. She asserted that these opportunities provided extra motivation, as the students believed that *"if I get this [extra award], I will get further"* in their education than their parents might have ever supported them.

3A-T, a teacher, added a more concrete example of how students actually benefitted from these extra scholarships. According to him:

> *"those who participated, right from their secondary school . . . can still, in the university, automatically qualify for the undergraduate award . . . . Last year, I have someone that did not even participate in the secondary school [IFOMSSA Senior] exam that I know that got [a university] admission. He is one of those that is benefiting under the Foundation [Cyfed Undergraduate Scholarship]. And he didn't even participate in the secondary school [IFOMMSA] level."*

The teacher capped it up by saying:

> *" . . . for those that want to find education, even [if] they do not take the IFOMSSA secondary school award exams, while in the university, you can still apply, and you will be given a fair challenge."*

These observations imply that scholarship administrators aiming to inspire whole student populations might do well to publicise future or delayed benefits associated with such schemes. These benefits do not need to be additional scholarships, as is the case with the IFOMSSA Senior Scheme. It might just be the opportunities for better jobs, overseas travels, a better life, and so on. The evidence from this work appears to suggest that if students targeted in scholarship incentive schemes are made aware of these potential delayed benefits, there is a good chance that mass motivation may be achieved. Interestingly, this possibility, where the existence of future benefits can stimulate current hard work and inspire better educational outcomes, is supported by reports in the existing literature. Barrera-Osorio

et al. (2008), cited earlier in the literature review, noted that, in Bogota, Colombia, a simple delay in implementing parts of a CCT incentive scheme and making it available in the future resulted in improved school enrolments. In view of these, actively publicising future benefits of incentive schemes that may not be immediately available is a recommendation of this work and is captured in *Section 8.3*.

Overall, the preceding discussions appear to heavily indicate that the "mass motivation" principle of this work was upheld, as all the low-performers (non-award recipients) along with most of the moderate-to-high achievers were inspired to work towards a better exam in terms of preparation and performance. As one of them, 1A-2 put it:

> *"It helped because IFOMSSA came first before WAEC . . . I used to read my book always. I like reading. I love reading. So even before IFOMSSA, I have been preparing for my WAEC. I have been reading. I have been preparing for this. So, when the IFOMSSA came, I just had to double my reading. With the IFOMSSA date approaching fast, I had to double everything that I am doing to meet up. When I won, I continued reading for my WAEC too, . . . so I continued reading".*

This qualitative input has now corroborated the findings from the quantitative arm of this work, which largely found statistically significant increases in test scores among students in the intervention group (relative to the controls) and in the post-intervention years (relative to the pre-intervention ones).

Previous studies have not deliberately explored mass motivation with incentive schemes, and very little exists in the literature regarding it, making comparisons a bit difficult. The findings of this work, however, appear to broadly agree with that from a Colombian study, which made an incidental observation that a "mass effect" was noted among friends and associates of those who received incentives, as they appeared inspired to attend schools at rates seen among the primary beneficiaries themselves (Attanasio et al., 2005; Barrera-Osorio et al., 2008). That work suggested that the "spillover" effect from such strategies might help amplify the number of beneficiaries in environments where local, national or international donors were financially constrained (Barrera-Osorio et al., 2008). The IFOMSSA Senior Scholarship Scheme can be considered a direct response to this suggestion, with its combined principles

seemingly effective at “mass motivating” students in the targeted schools. The implication in real life can be huge, as it makes a strong case for providers of educational incentives to inspire entire cohorts, not just those likely to obtain the scholarships.

The above observations also indicate that, even though the actual amounts involved in the IFOMSSA Senior financial incentive were not huge and that only a small fraction of students received these cash awards, the impact appeared to have been felt en mass across the targeted population. This lends some support to the assertion by a previous report that the amounts involved in incentive schemes are not as important as the fact that the incentives exist (Arends-Kuenning & Amin, 2004). That report, which was focused on a Food-for-Education (FFE) program that offered wheat to poor families on the condition that these children must maintain school attendance in Bangladesh, argued that the benefits from these incentive schemes remain even if incomes are lost by families if they had to adjust for their children to sacrifice paid employment in lace of academic pursuits inspired by those incentives.

A reasonable spread of the incentives to reach and motivate more people, rather than giving out large amounts to a smaller number, may have the same level of outcome as the latter.

One incidental observation worth highlighting is the potential role of souvenirs in achieving mass motivation in educational incentive schemes. Even though it was not factored into this study’s original design, it has turned out to be an interesting finding. A narrative expressed during the interview by one of the two government staff members who participated in the study, 4A-S, revealed how a souvenir issued to an IFOMSSA Challenge participant turned out to be inspirational, not just to the participant himself, but to the other students that did not participate, and even to those yet to get into the exam class. According to 4A-S, on making an unannounced visit to a school, she witnessed an incident where some non-participant non-winners (i.e., students who neither attended the IFOMSSA Challenge nor received the IFOMSSA Senior Scholarship) were involved in an intense struggle to get leaves from the 50-paged writing pad given as a souvenir to their classmate who took part in that year’s IFOMSSA Challenge. According to 4A-S, the boys’ reasonings for going the paper leaves, not the whole pad, was *“so that they will keep it for their younger ones . . .[so] that the younger one[s] will use it, and take the exam when it’s another time for that exam.”* Adding more light on the souvenirs, 4A-S added that *“it's motivating them. It's*

making them to read." Surprisingly, no published data was found in the literature regarding the efficacy (or otherwise) of souvenirs and educational incentive schemes, meaning that comparisons of this finding to existing work were not feasible. This notwithstanding, the authors of this work believe it is worth exploring further in future studies. In addition, where scholarship administrators find it affordable, souvenirs may also be considered key components of educational incentive schemes aiming to motivate beneficiaries en masse (that is, to inspire many more beneficiaries to the same goals beyond the primary recipients of that incentive scheme). As evidenced by the report in this work, such souvenirs are usually taken home or to places where potential beneficiaries may get motivated by merely interacting with them. The cost of acquiring such souvenirs may be a limiting factor, and this work only recommends it where it is affordable or, as is the case with the Foundation behind the IFOMSSA Senior Scheme (See *Section 1.10.4*), where it is already part of the tools at the disposition of the organisations behind such schemes.

7.6. Community Participation

Findings on the third principle underlying the IFOMSSA Scheme, "community participation", were equally interesting and insightful. As already stated, "communities" in the context of this work include the families and friends of the students, as well as their teachers, government staff, and community leaders involved in their studies. The media is also part of the community. Views expressed by the various groups of interviewees on the roles played by these various communities on the IFOMSSA Senior Scholarship Scheme would help determine if community inclusion as one of the three principles underlying the Scheme was necessary and if that played any actual role in the increased test scores observed from the quantitative arm of this study. Should this be the case, deliberate and concerted efforts at integrating the community into scholarship schemes would be advised as part of the final recommendations from this study in *Chapter 8*.

The general finding from the interviews (detailed in *Section 6.3*) was that of positive, widespread support and influence from families, friends, teachers, government staff and community leaders, as well as the media. Before details and findings on the actual community inputs are discussed, however, it is worth pointing

out that any positive impacts from the community are supported by the “Theory of Change Typology (TCT)”, one of the two theories (along with the PVEST) that informed this study’s qualitative component.

The TCT, explained fully in *Section 3.2.2*, posits that, for interventions to be effective at improving learning and education quality, they must, among other things, combine at least two of three determinants (Masino & Niño-Zarazúa, 2016). Those determinants were the “supply-side interventions” (provision of learning materials, physical resources and human resources), the use of incentives to influence the behaviour of teachers, families and students, and the “bottom-up and top-down” approach (which encourages community participation). The proponents argued that isolated interventions (exemplified by the provision of physical resources or financial incentives) would not be very effective unless complemented by incentives that shift preferences and behaviours or those that allow community participation. Independent studies have backed this theory in showing that in situations where the demand for educational services is constrained by societal and economic factors (a situation prevalent in most developing African countries), the supply of physical and human resources (the first determinant) alone can often result in a waste of limited resources (Glewwe et al., 2009; Kremer & Vermeersch, 2005; Muralidharan & Sundararaman, 2010).

This TCT was informative in the design of the IFOMSSA Senior Scheme, which included two of its three determinants (financial incentives and community participation). It was also part of why the study explored additional ways to improve test scores rather than rely solely on the power of those incentives. It will be interesting to see if community influences played any role in explaining the Scheme’s success at improving test scores as observed from the quantitative study. As noted in *Section 3.2.2*, several other studies had arguments that were similar to the TCT, and these all align well with this study (Glewwe et al., 2009; Kremer & Vermeersch, 2005; Muralidharan & Sundararaman, 2010). References to them will be made as the needs arise. Slavin (2010), in a viewpoint that is aligned with the TCT, also opined that families (and communities) can encourage their already-motivated wards to make the best of any offered incentives, particularly if the families see the financial incentives as honours. The potential role of each community in actualising the goals of the IFOMSSA Senior Scheme will now be evaluated.

7.6.1. Families' Roles and Support for the IFOMSSA Senior Scheme

The evaluation of families was done in two respects. One was whether they were pleased with the opportunities offered by the IFOMSSA Senior Scheme. The other was the exact roles the families might have played in propelling their wards to attain the desired educational outcome.

With the first aspect, there was unanimous admission by all the 14 participants interviewed that the families of the students eligible for the IFOMSSA Senior Awards were usually pleased with the opportunity offered by the IFOMMSA scheme. One parent, 2A-P, captured it well when she talked about her daughter's potential benefits from the program:

> *"It's like a dream come true because I was praying for that. I pray[ed] earnestly for that because I know I don't have money…and…my child…, after secondary school, she will not be able to go for her higher institution. So, I prayed earnestly for that, and when she passed the exam, I was very happy.* 3A-T, a teacher, added that *"…the families…are usually very happy . . . [and], even though they just know about the founder, they've not seen the founder."*

Views from other interviewees aligned with the above, with a teacher, 3A-T, opining that the IFOMSSA Senior Scheme raised a lot of awareness and enthusiasm among the parents. In his words:

> *"…when we come to the PTA meeting now,…you see that…the parents will rise up and ask about the [IFOMSSA] scholarship . . . . Will they still pay for the junior category? Will the senior category still hold?"*

It should be noted that some of the parents participating in the PTA activities were also community leaders. This reality further strengthens the synergy between the IFOMSSA program and community participation and information dissemination.

Despite the widely acknowledged enthusiasm from the families regarding the IFOMSSA Scheme, the level of eventual support provided by these parents varied. For the two Non-Participant Non-Winners (i.e., the students who failed to qualify for the IFOMSSA Challenge and who also did not win the scholarships), their respective

families made no adjustments that might have propelled them to academic excellence, even though they were reportedly happy like the other parents. For 1C-1, for instance, his guardian, with whom she lived, does not "*follow up to know everything that goes on in my school",* while IC-2, after narrating how happy her parents were about her being eligible for the scholarship, added that it was her sole responsibility to balance the time available between her chores and academic studies. In her words, you have to *"schedule your own time, . . . know what to do, do it on time and go for your book."* When asked if more time would have been helpful for his pursuit of the scholarship, 1C-1, on his part, was emphatic in adding, *"Yes, I think so. It would have helped me if I do have . . . some more time attached to the one I did."*

It is interesting to note that the acceptance by parents, triggered by just the mere fact that the students were eligible for the award and not necessarily by guarantees of the scholarship being received, is considered a good omen for the kind of scholarship schemes represented the IFOMSSA Senior award, which partly depend on the support from homes and families to thrive. Such, it is hoped, might translate into eventual support for the programs and the ultimate motivation of the students towards higher educational outcomes.

The family support was not experienced by the none of the two low-performing students interviewed, as discussed earlier. The experience seemed exclusive to the remainder of the six students interviewed, which were the moderate-to-high performers, i.e., all those who qualified for the IFOMMSA Challenge. The family supports were experienced in various forms. The most common manifestation was in the form of family adjustments that allowed the students a favourable time to prepare for the WASSCE. As 1A-1 (a Participant Winner) put it:

> *". . . that time, my dad would say I should just go and read so that I would be able to pass the exam…. They helped me to prepare for the IFOMSSA challenge".*

1A-2 shared a similar narrative to the one expressed by 1A-1 above, stating that she "*did less chores",* with her parents allowing her to do anything necessary to focus on her studying. According to her, her parents even went as far as identifying answers to things she did not know about and enrolling her into an extramural lesson for better preparation ahead of the exams, an approach that is similar to the measures

reported from a recent South African study (Ngozwana et al., 2024). One of the interviewed parents, 2A-P, confirmed a similar role with her daughter, which she did despite the financial difficulty she faced and revealing how much families might be willing to go to assist their wards win financial incentives. Her daughter eventually won that years IFOMSSA Senior Scholarship. In her words, this parent stated that:

> *"I register[ed] her to attend [extra-curricular] lesson . . . . Even though I pay too much for the lesson, . . . I don't care. All I know is that I want my child to pass."*

The extra-curricular lessons mentioned by the parent and student above were also independently confirmed by a teacher, 3A-T, who appeared to be involved in delivering such lessons after school hours. In his words, the students:

> *". . . go for extra lessons, apart from school . . . there is a lesson centre. I run part of it . . . to get grounded in the subject[s] they want to take . . .".*

On occasions where the students themselves developed doubts, the parents also appeared to have played additional roles by stepping in to provide needed inspiration. This aligns with the findings from a South African study, which reported that parental contributions to the academic successes of their children include the modelling of positive behaviours and the provision of emotional support, among others (Ngozwana et al., 2024). The narrative from 1B-1 captured this succinctly when she recalled this piece of advice from her parents at the height of self-doubt:

"*Baby girl, any opportunity, even if it's not going to work, that you have in this life, first of all, grab it, forget about it is going to work or not, just go for it and then see what the end or the outcome of the whole thing . . . . In this life, you always take risks. So, if you want to succeed in life, you have to take risks."*

The above differences in family support between the low and moderate-to-high performers are very important, as they appeared to indicate that family involvements were associated with some degree of success with the IFOMSSA Senior Scheme, given that those who achieved success (by at least qualifying for the IFOMSSA Challenge selection exam) all had family support. These observations, which were also independently corroborated by the parents of the actual award recipients, align well with the findings from a randomised controlled experiment that explored aspects of Colombia's "Conditional Subsidies for School Attendance" program (Barrera-Osorio et al., 2008). That evaluation concluded that family dynamics and peer influences can

affect decisions on education by parents and their children, and that financial incentives can trigger a reallocation of household responsibilities to support the academic interests of those children. The findings also appeared to agree with the conclusions from the study of a financial incentive program in Bangladesh, which found that parents do respond positively to incentives and that such responses remain, even if the amounts involved were small or not large enough to eliminate poverty (Arends-Kuenning & Amin, 2004).

More examples of the support received by the students from their families came directly from the non-student participants. One parent, 2A-P, confirmed the reallocation of house chores with this statement:

> "*. . . I shifted the house chores to some of them [the siblings]. So, she's not doing anything. She will always…read . . . . Even she read and read and read, and she became thin . . . . Yes, I encouraged her to read because I know God will bless us through her effort."*

Other examples included pastoral, psychological, financial and logistics supports, as 2B-P, a guardian, revealed with this comment:

> "*During the time she's preparing for the exam, …all of us were praying for her and giving her advice. . . So, she got there and made us proud as usual….Before she left that day, we gave her some advice…we gave her transportation fare in order for her to get there. I myself, personally, guided her … to the educational zone…they boarded a car…a government car…to that place."*

Some family support was in the form of getting help from respected teachers to engage those students and get them focused on the need to excel. A statement from one of the teachers himself, 3A-T, revealed this:

> *"One of the students. . . on one particular day, those that wrote in 2021, the mother called me that, he [the student] no longer reads . . . although . . . he was among those that obtained this IFOMSSA Challenge. So when he came to the school, I was like, 'What happened? Your mom said that you have not been*

reading'. So I had to tell him the importance of the exams…you are not writing it for your mom, but you will benefit from it. So, he later got the scholarship. He was among those that got it in 2022."

There were also indications that families with winners in the past took measures to inspire other siblings from the same family to excel. 3B-T, a teacher, captured this with this statement:

"I know of a neighbour…one of the children got an IFOMMSA [Senior] award, that was, I think 2019. So when the second child came…you know what the woman did? She said that this one will not be given any job [chores] until that exam is over. So that that opportunity that the other child enjoyed will continue in the family. So they gave him full time to study…saying, 'make sure you get this award, if it will take us giving you another extra hour to make sure you eat your food, read your books'."

7.6.2. Friend's Role and Support for the IFOMSSA Senior Scheme.

Impacts from financial incentives on educational attainments can complemented by peer effects (Allen IV et al., 2021), and the findings from this work appear to align with this, as it was observed that there was support from friends of the IFOMSSA Challenge participants. These support came, not just from their non-participating classmates, but also occasionally from their rivals to the scholarship itself. Speaking of his friend's reactions, 1A-1, a Participant Winner, asserted that:

". . . they were very happy . . . the day I went for the exam, I was even somehow afraid. They said I should not be afraid that I will make [it]. And they were very happy with me when they heard that I won the award."

Even though she did not eventually get the scholarship after participating in the IFOMSSA Challenge, 1B-1 felt inspired by her friends, stating that their reaction to her selection was *"positive." According to her;*

"They didn't get annoyed. They were like, 'if it's better for you, it's better for us as well. If it's good for you, it is good for us as well. So go ahead' . . . . During the time

of preparation for the exam, if they spot any of us that was playing or discussing irrelevant things, they will be like, 'I think you have exam, will you not go and prepare?"

As expected, there was rivalry among the participants. 1A-2, a Participant Winner, acknowledged this with the statement:

> *"My friends in school, all of us, we are to participate, so, …we were just preparing on our own. We were competing against each other now, so we are preparing for… we're fighting for the same thing".*

Such rivalries were not always unhealthy, as 1B-2, a Participant Non-Winner, explained:

> *"I have a crew that I normally read with, and we prepare...we were the team that went for the examination, and when we heard about the examination, they were like, 'Let's prepare for this. Let's know whether there is something that's actually going to come out of this.' So we started reading. So they supported me, too."*

Despite the positive views from the moderate-to-high-performing students regarding the support from their friends, those from the low-performing ones were mixed and provided further insights. While one, 1C-2, echoed some of the positive sentiments already expressed by the others when she said that *"…everybody was so happy"*, 1C-1, who was the same student who questioned the merit of the entire scheme, had a different view. According to him, he and his friends felt unhappy, marginalised and unsupported. In his words:

> *"Just like I said before, . . . I have ... Should I call it a group of people or friends . . . People that also have the same mentality that I have. We are not from Nsugbe. We're not from Anambra, so we used to team up like a group. We always wish we would be given the opportunity, especially since some of us don't even know our fate after secondary school. So we just wish we had the*

opportunity to write the exam. In fact, we've always wished we had the opportunity to write the exam, just like them."

As is the case with previous dissenting views, this expression from 1C-1 could not be dismissed, as understanding it, just like was the case with his view on the merit component, would help deepen the quality of the scholarship scheme. Even though the context of his views on merit was exhaustively discussed earlier in *Section 7.3.2* and found to be unsupported by available evidence, such sentiments reveal that a measure of support needs to be provided for the Non-Participant Non-Winners, classified as low-performers in this work. These supposed low-performing students must be carried along as much as their moderate-to-high-performing counterparts if the overall target of mass-inspiring whole student populations can be actualised. Given that this group are at risk on several fronts (they are more likely to perceive being unfairly treated and now also believe that they have little support from their families and friends), this work recommends that administrators of scholarship schemes designed as advocated in this work should make deliberate attempts to engage all the student groups, particularly the low performers. Deliberate efforts to educate them on the selection criteria should be made, along with ensuring that they feel supported, even if they do not progress in the scholarship selection rounds. This way, a positive psychological feeling will help avert the views expressed in this work and, hopefully, translate to an increased positive focus on the examinations and test scores.

7.6.3. Teachers' Roles and Support on the IFOMSSA Senior Scheme.

As with the other groups explored, the views on how the teachers supported the IFOMSSA Senior Scheme came from all interviewees, not just the teachers themselves. The general perception was that the teachers played positive roles.

One major role was that of publicity to the families and the communities. 4B-S, a government staff explained that the Parents Teachers Association (PTA) meetings offer opportunities for school principals and teachers to directly discuss scholarship opportunities, among other things. 3B-T, one of the teachers, explained this further, stating that they repeatedly talked about the IFOMSSA Scheme at these PTA

meetings, which are generally held once a term. There are three terms in an academic year. In his words, at those PTA meetings:

> *"The parents are there, the teachers are there . . . what concerns both the parents and the teachers… is something that the children would benefit from, which IFOMMSA is one of it . . . . So we use that platform . . . we mention IFOMMSA . . . an annual program, where if you are able to be the best,…[you] should win the award . . . . As far as Anambra State is concerned, I am very sure the information is everywhere."*

The other roles of the teachers relate to the engagement of the students, which includes informing them of the exam dates and constantly reminding them of the benefits of the IFOMSSA Scholarship Scheme and the need to work hard. This is part of the Mass Motivation design of the study, explained in *Section 1.10.3*. Even though the teachers were mandated to ensure that these engagements were held, as part of the methodological design of the IFOMSSA Senior Scheme, independent verification came from other groups that participated in this study. All six students agreed that their teachers and/or school principals played the expected roles, though to varying degrees and with different strategies. According to 1A-1, the teachers in his school:

> *"made the announcement about three months before the exam. They explained…that a non-government organisation is organising an exam for…SS 3 students, that when you pass the exam, they sponsor your WAEC fee."*

1A-1 went on to say that the talks from the teachers were given almost daily in the morning assemblies (where the whole school gathered daily for prayers, announcements and instructions), and that *"even our principal used to call us to his office to make sure that we were preparing for the exams."*

Another student, 1A-2, expressed a near-identical view but in much more detail. According to her:

> *". . . they explained it well to us….we were told about the exam and the benefits we will have…if we were to read hard…they encouraged us. In fact, that was*

the main topic. They always encouraged us about those. Yes, they encouraged us and told us to read harder."

She also added insights on how these were done, explaining that:

"They say it at the assembly. Also, at the classroom. Then, most of my teachers . . . tell me one-on-one speech. So, I'm used to hearing them saying I should keep reading because of the IFOMSSA Awards. Also, they told us at the assembly and any meeting point of the students and teachers. They used to tell us about IFOMSSA. Also, they told us about students that won the scholarship before us…told us the benefits and everything."

Additional strategies deployed by the teachers and the schools were also brought to the fore during the interviews. 1B-1, a Participant Non-Winner, after confirming the repeated announcements at her own schools' assemblies and classrooms, added that her school principal *"even had to go to [the] extra mile by giving one of our masters…feared the most, the job to handle",* and that the move worked, as it positively influenced the way the students viewed the scheme because they were convinced that, for a such a serious-minded teacher to champion such a course, there must be some merit and genuineness to the program. She added, "*it kind of made us know that . . . this Foundation is real, unlike the others."*

3B-T, himself a teacher, provided another example when he explained that, despite not being wealthy, some school principals even cover the transport fares of some of their students to the IFOMSSA Challenge examination venue *"because they know that this [IFOMSSA Program] is working."* This latest comment reveals what may happen when the teaching community, whose students benefit directly from a scholarship scheme, trusts and believes in the entire system. It also highlights the need for transparency. These justify the need for merit and transparency in the IFOMSSA Senior Scholarship Scheme.

Interestingly, even within the same school, the level of motivation from the teachers and school authorities appeared to vary over time or with personnel changes. An awareness of this is important, as proponents of schemes modelled like the IFOMSSA Senior Scheme will need to consistently ensure that new teachers and staff

are appropriately oriented into the program. This formed part of the final recommendations of this work and was revealed by this example. While 1C-1 and 1C-2 attended the same school but participated in different years (2021 and 2018, respectively, as shown in Table 11), their views on how their school teaching authorities contributed differed. Records showed that they attended the same school under different school principals. Even though he gave credit to the teachers, 1C-1, a 2021 participant, felt that his school principal at the time did not do much, explaining that:

"The truth is that my principal then . . . never called . . . students to . . . do . . . explanation to them about the examination. It was my former principal . . . that always do more emphasis about the exam when it comes up. But the one that they brought to the school before I left, she has never made mention of the exam. It is the teacher, the classroom teachers . . . the one that normally handles it…is the one that normally comes to emphasise and say a lot of things. … he's always in the classroom."

On her part, 1C-2, a 2018 participant in the same school as 1C-1, gave a lot of credit to both the school principal and the teacher. In her words:

"…our principal then, she always talks about it, every day…then in school. She used to give us guidelines for the people that will go for [the] exam, and the people that are back in school. She used to give us guidelines, and she used to say many things about the IFOMSSA exam. So, for the people that went for the exams, she prepared them very well. The teacher that was taking care of the students . . . for the exam, they also helped very well by advising us, and telling us to do read ahead, well, who knows the one that will go for the exam."

The interviews further revealed that the roles of the teachers went beyond the inspiration and information provided by them to motivate the students towards the IFOMSSA Challenge and higher test scores in WASSCE. 1B-2, a Participant Non-Winner who also confirmed multiple announcements by her own school's Vice Principal, stated that:

"When they told us about the IFOMSSA scholarship, …they told us the benefits of participating in it. And they told us to try our best to know whether we are going to make…something come out of this. Even when I didn't win, they were bitterly angry

with me, too. That shows they supported. They were angry with me when I didn't win. I cried. I felt bad. I really cried . . . .”

A teacher also corroborated the notion that schools have a measure of reviews that allowed them to reflect on the program after the yearly scholarship rounds are completed. According to 3A-T, who acknowledged that the teachers and principals had a lot of influence:

“….there was a year only one of our students was able to make it to the merit list, just one student. And the principal then reacted bitterly about it,…that we should be doing better,…she goes into the SS3 class…tries to encourage them about coming out best in the scholarship, that it will go a long way to help them.”

7.6.4. Role of Community Leaders on the IFOMSSA Senior Scheme.

Even though the roles of community leaders in actualising the IFOMSSA Scheme’s goals were not always clear to the student participants as many did not recollect their involvements, when acknowledged, there were multiple admissions of some inspiring impressions made by these leaders on the students. Most of the recollections can be conveniently grouped into two. One was the role of the community leaders during the IFOMSSA Awards ceremonies (as explained in *Section 1.10.5,* these were annual ceremonies designed to maintain community awareness by celebrating and honouring the IFOMSSA Awards winners). The second set of roles relates to those inspirational activities carried out outside of these ceremonies. Discussions of these roles will now be along these two lines:

The interviewees captured the roles during the IFOMSSA Awards Ceremonies very well. 1B-1, a student participant non-winner, stated that:

> *“Whenever they want to give out the award . . . they [the community leaders] are always present there to encourage the students more, give them words of advice . . . .”.*

The mere presence of these traditional rulers at such ceremonies was also inspirational. Given how busy these leaders were generally supposed to be with their multiple engagements, the students believed that finding time to attend such events

was a testament to how seriously they took the IFOMSSA project and helped heighten their trust and belief in the Scheme. Insights from the non-students also agreed with these roles of the traditional rulers (also called the Igwes or royal fathers). 3A-T, a teacher, stated that:

> *". . . the traditional ruler[s] . . . do come for the final . . . the day of presentation, they do come . . . and also appreciate the Foundation itself . . . they will talk about the Foundation, [and] bless the Foundation…for their efforts in the area of education."*

Outside of the award ceremonies, there was also evidence that the community leaders played inspirational roles. An insight came from one of the participant winners, 1A-1. He had this to say of the traditional ruler of his hometown, Igbariam:

> "*Before we participated in the exam, we went to his palace and told him that we were embarking on such exams. He gave us his blessings that day. And he also gave us transport fare before we went for the exam."*

In a similar vein, 1A-2, also a participant winner, reported that these leaders "*tried their best",* adding that, while not always done, they do visit the schools occasionally and that they used to *"tell us about the . . . Foundation."*

1C-2, a non-participant non-winner that attended the same school as 1A-2, gave more insights by saying that the community leaders:

". . . made it very much possible to make sure that our school . . . [was] among those school that will go for the exam. They always tried for us, because . . . the information does come from them to our principal, they do bring letters . . . to our principal, because the news keeps spreading at school. So they did well . . . They create[d] awareness for the school . . .".

5B-C, a community leader herself, provided additional insight that revealed that they, the community leaders, directly encouraged the school principals and parents to inspire the students, noting that:

". . . sometimes the principals . . . don't encourage them, [and] the parents don't. But most times, the people that are in the office reach out to them. That is the only way they can get them. If they reach out very well...any year they reach out very well, you see all of them [schools and students] coming.'

There was also evidence that the Igwes even arranged meetings between the relevant staff and the communities to ensure proper information dissemination on the IFOMSSA Senior Scheme. In revealing this, a government staff, 4A-S, noted that she was invited by two of those Igwes, where she was urged to:

". . . tell the indigenes about this IFOMSSA, tell them the beneficial aspect[s] of it . . . tell them that it is their children that will benefit, not the man [Foundation]."

She added that she went there on the day and:

". . . talked to them openly about IFOMSSA, asked them that they should not hold their child[ren] from coming out, even if . . . that the exam is done on a Sunday."

The foregoing positives notwithstanding, not everyone believed that the community roles did much. This was mentioned in the earlier part of this section. 1B-2, a participant non-winner, stated that she knew nothing about the involvement of community leaders, while 1C-1, a non-participant non-winner, was sure that community leaders were not involved. According to the latter:

"I have not seen any . . . any traditional ruler come to the school to talk about that. No, I have not seen anybody. It's just Mr. Jude [a teacher] and my former principal…that I heard about this scholarship exam [from]."

Further exploration of these two views from the students revealed that 1B-2, also unaware of any role from her own traditional ruler, attended a school in a town different from those of the other four students who admitted to the traditional rulers'

involvement. This might indicate that the traditional ruler of her town might not have been involved in the visits. Independent checks revealed that her town did not have a government-appointed traditional ruler when her cohort experienced the IFOMSSA Senior Scheme. The case of 1C-1 was different, though, as he attended the same school as two other interviewees who gave credit to the traditional rulers, albeit at different times. While 1C-1 was with the 2021 cohort, 1A-2 and 1C-2 were with the 2022 and 2018 sets, respectively (*Table 11*). The explanations for the different views are unclear. However, it might be the case that any visit from the town's traditional ruler either did not happen during the cohort that involved 1C-1 or happened at a time or day when he was away from school. As was the case with the discussions on school teachers, the possibility that community leaders may not sustain the motivational expectations from them further justifies this work's recommendation (Section 8.3.1) that ongoing engagement with the communities (teachers, principals, community leaders and government) should be a key part of the duties of administrators of scholarship schemes designed to trigger mass motivations. Once-a-year meetings, perhaps during the awards ceremony, to which they should all be invited, is the recommended way forward.

7.6.5. Role of Government Staff on the IFOMSSA Senior Scheme.

Even though the input from the government and their staff into the IFOMSSA Senior Scheme came in various forms, the most common theme was related to their willingness to accommodate the various aspects of the scholarship project into the academic curriculum of public senior secondary schools in the Otuocha Educational Zone. Those aspects of the scholarship programs included the IFOMSSA Challenge, the IFOMSSA Awards Ceremony, the PTA meetings and the announcements/discussions about the program during school activities. According to the insights from those interviewed in this work, the government gave official approval for the IFOMSSA Scheme and allowed their staff, including school principals and teachers, to participate in it without restrictions. As 3B-T, a teacher, put it, *". . . they gave the platform because such activity cannot take place without the permission."* She added that this permission allowed *"the teachers to . . . leave their school[s] for such outside work."*

In giving credit to the State Government, 3B-T noted that the body in charge of post-primary education in the State (known as the Anambra State Post Primary Service Commission, PPSSC), plays its part very well because:

> *". . . in Anambra State, IFOMMSA has become part of it . . . , and that's because the Commission in charge of education allowed it . . . . It's not easy for something to just come in, and [it] is allowed."*

5B-C, a community leader, further buttressed the importance of the government in the scheme when she iterated that governments "*can stop any exam from going on in their schools because they own the schools, and the students are under their care." She added that* "*. . . the government is encouraging IFOMSSA by [allowing] IFOMSSA to continue with the exam since 2017,"* and that the government:

> *" . . . is . . . very happy about what's in IFOMSSA [and] what the [Foundation] is doing for their children in schools. They encourage IFOMSSA by encouraging the teachers, especially through the Zone, . . to get their students ready."*

4A-S, a government staff, revealed that necessary adjustments were made at the government level. According to her:

> *". . . we normally accommodate IFOMSSA with our standardised school timetable in this [Anambra] State. So we know when we are free to bring in IFOMSSA so that students will not complain."*

Self-accounts by the two government staff interviewed revealed their direct involvement on behalf of the Government with the principals, schools and communities, as well as how they interfaced between the IFOMSSA program and the government themselves. School visits and official supervision created opportunities for them to explain the IFOMSSA Senior Scheme and its importance. The PTA meetings offered an additional platform for promoting the scholarship program and ensuring parental involvement on a wide scale. One of the government staff, 4A-S, recalled engaging school principals during official meetings and telling them that the IFOMSSA Scheme was *"very . . . important because our students are indigents*." She

also talks to the students directly when she goes on school supervision, reminding *"them about IFOMSSA"* and telling *"them to read hard."* On her part, 4B-S, the other government staff, explained that her role was:

> " *. . . making the principals know that it is important that they don't deny any student the opportunity of going higher in life . . . . My role is . . . mainly advisory and sensitisation . . . . My role is to make the principals know that it is imperative, it is very necessary, it is very important, and it is very fulfilling for them to send . . . their students for the competition*."

4B-S also added that, apart from supervision visits, she sends regular reminders about the scholarship program to a WhatsApp social media group where the school principals all belong.

Worth mentioning is a government policy that has offered a strategy that might favoured the IFOMSSA Senior scheme's quest at constantly inspiring teachers towards ongoing commitment to the attainment of academic excellence by the students. According to 4A-S (an interviewed government staff), school teachers and principals would normally have their records reviewed before getting official promotions. Such reviews usually focus on their school environments and the performances of students they taught, with particular weighing given to the academic performances of their students in WASSCE. Since the IFOMSSA Senior Scheme offers an extra motivational tool to achieve this academic excellence among students, the teachers and principals have personal reasons to take the scheme seriously. According to 4A-S,

> "*. . .all those . . . are the things that determine how you are being promoted . . . Promotion now is based on your student's performance. So there is no teacher that would not like to be promoted."*

5A-C, a community leader, revealed a final contribution by the Government. He explained that the State Government. According to him, the Government occasionally celebrates events like the IFOMSSA Scheme as part of its own achievements.

"I remember when Anambra celebrated 30 years [of] when the State was created under the former Governor. The Minister [Commissioner] of Basic Education celebrated all the philanthropists that helped them through various areas to train the children".

5A-C went on to explain that such government recognitions of sponsors of scholarship schemes provide additional validation and inspiration to the efforts of the schools and their principals, teachers, and students. This inevitably strengthens commitments to the IFOMSSA Senior Scholarship Scheme and is an important government role that can easily be missed if not highlighted. This study recommends (Section 8.3.1) that regular recognition of government institutions to organisations playing roles in educational incentive programs should be entrenched in official government programs.

7.6.6. Role of the Media on the IFOMSSA Senior Scholarship Scheme.

As was made evident in the Qualitative Results (*Chapter 6*), social media, not traditional media outlets, was the avenue through which students engaged the most with respect to the publicity of the IFOMMSA Senior Scheme. Most of the student participants admitted having information from the media, particularly Facebook and other social media outlets. The interviewees also mentioned that traditional print (Magazines and newspapers) and electronic (radio and television) media outlets played roles, but not the extent of the credit given to social media. Such publicity reportedly boosted the credibility and trust of the IFOMSSA scholarship program.

As 4A-S, a government staff, would put it, this publicity meant that "*IFOMSSA is everywhere".* The participants generally revealed that the publicity given to the IFOMSSA Senior Scheme inspired students to work harder, while parents were motivated to enrol their students for the WASSCE. Such revelations would support any deliberate effort by promoters of scholarship schemes to engage social media outlets, particularly in light of the positives reported on these outlets, as most students admitted to being positively influenced by these outlets. This also formed the basis for one of the recommendations listed in *Section 8.3.1*.

Apart from 1A-1, who stated that the media publicity did not influence his approach or views of the IFOMSSA Senior Scheme, all the others admitted to various

positive effects. 1A-2, for instance, acknowledged that such publicity inspired her *"…to read"* so that she would be among those whose *"pictures will be in the magazine[s] or posted on the internet".*

1B-1, on her part, sees the media publicity as "*proof that the IFOMSSA Scheme was "not a scam.*" For 1C-1, seeing it on Facebook made him *"ready to work hard or do anything possible"* to merit the award.

The publicity also assured past beneficiaries of the Scheme that the program remained alive, even after their time in the schools. 1C-2, a 2018 participant, for instance, reported that such publicity made her realise the IFOMMSA Scheme was still being delivered long after her cohort passed through the school.

Like the students, the non-student participants also admitted to the positive impacts of media exposure. A guardian, 2B-P, reported that hearing about the Scheme on the radio provided more m*otivation "to enrol our child in it.*" For 2A-P, another parent, the media publicity made her see the scheme as "*a great opportunity*" that somebody like her should not lose.

A very important insight came from one of the community leaders, 5B-C, who drew attention to the media publicity created by merely branding the information on official vehicles in use by the Foundation. According to her, such a move also offered free, mobile and effective publicity. In her words:

> *"There was a time they saw the vehicle for [the Foundation]. You know it has vehicles for running around? They saw it, and they were so excited . . . they continued to copy the website and everything about it. Seeing it there . . . encourages them. It encourages them. It makes them sit up and see if they can get into the exam and get the award. It made an impact, a positive impact on them."*

The overall effect of community involvement in the IFOMSSA Senior Scheme seems to be heightened awareness and support for the scholarship program across the Otuocha Educational Zone. Speaking on the level of awareness generated from these among the communities, 5B-C, a community leader, captured it well with this comment:

"In terms of the communities where the school is located, they know such a thing is going on…when a child is picked from the community…comes back with the award, they know."

She added that:

"*. . . the community where the school is located, they know such a thing goes on… such communities are always looking forward to when the exam will take place so that they know if their children can go there and get the award. They're always excited. They encourage the IFOMSSA. They encourage people. They encourage their children. They encourage IFOMSSA by bringing out their students."*

4B-S, a government staff, summarised it all by saying that the:

"*IFOMSSA scholarship award is not a name that you mention in Otuocha Zone, and one will tell you, 'No, we have not heard of this before.' It's a name that most of the schools are familiar with. It's an examination that students know that every year, they . . . take it. And those that really want to make it would try to work hard, in order to ensure that their name is among those that would be selected."*

The entire discourse under *Section 7.6*, which has comprehensively explored "Community Participation" in the IFOMSSA Senior Scholarship Scheme, has provided a causal link between the role of specific communities and the test score outcomes of the IFOMSSA Senior Scholarship initiative. The observations reveal that there were obvious, deliberate and widespread efforts from those community groups engaged by the Foundation to assist in motivating students towards the ultimate goals of the Scholarship Program Scheme, which is to increase test scores en masse.

As indicated in the early part of Section 7.6, these observations align with the Theory of Change Typology (TCT), one of the two major theories underlying this work, which was used to analyse the role of communities in scholarship schemes. Given the revelations from the 14 participants interviewed in this work, it is easy to argue that the success of the IFOMSSA Senior Scheme in improving test scores for whole student

populations that included low and high performers alike can be attributed to the role of these various community groups.

The TCT, it should be recalled (details in *Section 3.2.2*) posits that, for interventions to be effective at improving learning and education quality, they must, among other things, combine at least two of three determinants that include (a) the "supply-side interventions" (provision of learning materials, physical resources and human resources) (b) the use of incentives to influence the behaviour of teachers, families and students, and (c) the "bottom-up and top-down" approach that encourages community participation (Masino & Niño-Zarazúa, 2016). The proponents of TCT argued that community participation would help shift preferences and behaviours that would allow the educational goals to be met, and including it in this work would have played a key role in all the findings discussed above.

As the advocates of the TCT also acknowledged, interventions that promote only one of the three determinants listed would most likely fail. This work is convinced that failures at improving educational quality associated with the traditional educational policies in developing African countries of the years gone by, discussed in *Section 1.4* and including multiple examples (like the Jomtien Conference, the Dakar Conference, the Fast-Track Initiative, the UNESCO Global Initiative for Education, and the Global Action Plan), might, to some extent at least, be associated with non-compliance of those policies to this TCT principle *(Section 3.2.2).* Those interventions, published by Gakusi (2010), relied heavily on the supply side of education intervention without involving her other two determinants. In contrast, the IFOMSSA Senior Scheme incorporated the TCTs "b" and "c" as stated above. These were incentives and community participation, respectively. That is probably part of why it achieved improved test scores while the older policies did not, a possibility that is also consistent with the views expressed by Hass et al. (2022) when they argued that interventions that include student performance-based (demand-side) incentives alongside other supply-side ones (like teaching aids and school or electricity infrastructures) are generally successful since they influence student's daily experiences directly and are more resistant to the impact of exogenous factors.

7.7. Enrolment Patterns and the IFOMMSA Senior Scholarship Scheme.

A final part of this work is related to the changes in the enrolment patterns for the WASSCE. As revealed in *Table 8* and explained in *Section 5.5,* there were increased enrolments for three of the four subjects in the "after-intervention" years (2017 to 2019) of the intervention arm compared to the "before-intervention" years (2014 to 2016), a pattern that was not the case in the control arm over the same period. This trend, however, was not a universal finding, as the numbers in Biology (the only non-compulsory subject) dropped slightly. The non-compulsory nature of Biology has already been linked to other observations in this study that have warranted recommendations to avoid non-compulsory subjects in the selection exams used to determine scholarship recipients, and this recommendation is among those contained in *Section 8.3.1*.

The improved enrolments reported in Section 5.5 of the Quantitative Results were found to have causal linkages to the IFOMSSA Senior Scholarship Scheme, and this section discusses this further. Insights from the interviews confirmed that, since the IFOMSSA Senior Scheme was introduced in 2017, there had been increased enrolments in the WASSCE exams. This reportedly followed a decline in the two pre-intervention years of 2015 and 2016. Data for 2014 was not available. According to 3A-T, a teacher who turned out to be the only interviewee (out of the entire 14) with detailed information to speak on enrolment changes, this success is attributable to the IFOMMSA Scheme. He explained that he joined his current school in 2014, and witnessed the WASSCE in 2015, when just over 30 students enrolled. He added that the numbers in 2016 dropped to 18. He attributed this to the disappointing performances of the students who sat for the exam in 2015, which ultimately discouraged students who were already dissuaded from school by poor finances and had little hope of educational pursuit as a result. Spending scarce resources on an exam their predecessors did not do well in, and with little guarantee of progressing in education, was a contributory reason to the decline in numbers between 2015 and 2016.

3A-T then explained that, since 2017 (the first year of the IFOMSSA Senior Scheme), the enrolments into WASSCE in his school have steadily increased. In his words: ". . . *we've been having an increase in the number of students who register for WAEC, mostly…indigenes of Nsugbe".* According to him:

"In 2017, we had 34 students, in 2018, we had 43. In 2019, we had 53; in 2020, we had 63. In 2021, we have 68, in 2022, we had 77."

He added that it now appeared that *"everybody wants to come back to the school."* He explained that these increases had been noticed even in the junior secondary school, when for the last exam before the interview, the school *"registered 121 candidates . . . the highest we have registered so far"* for the Junior Secondary School Certificate Examination in the school's history. That increase in JSSCE was, according to him, related to the IFOMSSA Junior Scholarship Scheme, which, as explained in *Section 1.10*, was not covered in this work.

Interestingly, the control arm of the entire six-year study revealed that the increments in the three post-intervention years (relative to the pre-intervention ones) noted above were not replicated, evidence that suggests the finding was unlikely to have been due to chance. As shown in *Section 5.4.2* and the right half of *Table 8*, WASSCE enrolments decreased for all four subjects in the control arm, as against increments in three of the four observed in the intervention arm.

In addition to the preceding quantitative insights, the qualitative viewpoints provided by 3A-T further reduce the possibility of this impact from the IFOMSSA Senior Scheme being by chance. When quizzed if one can confidently attribute the WASSCE enrolment changes to the Scheme, the teacher expressed no doubt regarding the association. He pointed out that that the IFOMSSA-ineligible schools in the neighbouring communities to his school did not witness such increases, including two other private schools in the same town. In the teacher's words:

> ". . . *it has everything to do with IFOMMSA because we have 2 private schools in the same town with us. Now, since that program came up, every indigene of Nsugbe, Anam [and] Aguleri, that are close by, they want to come to Community High School, Nsugbe, so that they can benefit from the program."*

The above observations are not entirely surprising, as past studies aligned well with them. They are consistent with arguments that beneficiaries who receive

incentives for specified behaviours would be very likely to engage in such behaviours (Bettinger, 2012). This implies that the potential beneficiaries who need to be enroled in eligible schools to benefit from the IFOMSSA Senior Scholarship, are likely to enrol and stay enrolled in a quest to benefit from the initiative.

Other studies that align with them include the Bolsa Escola Conditional Cash Transfer (CCT), which found a 7.8% improvement in completed-year attendance, resulting in reduced dropout rates (De Janvry et al., 2006). Cambodia's Education Sector Support Project (CESSP), which observed that scholarship recipients stayed longer in school, offered another example (Filmer & Schady, 2014). Studies by Barrera-Osorio et al. (2008), Gibbs et al. (2009), Attanasio et al. (2012) and Dubois et al. (2012) all found increased enrolments with incentives as well.

All the above would imply that, be it due to reduced dropouts before the WASSCE or the result of increased enrolments, the IFOMSSA Senior Scheme boosted participation for the WASSCE. This interesting fact, supported by both the quantitative and qualitative components of this research, contributed to one of the ultimate recommendations of this work, all listed in *Section 8.3.1*. The related recommendation is for policymakers to use scholarship schemes modelled like the IFOMSSA Senior Scheme to enhance exam enrolments (and possibly school enrolments) in places or communities at risk. Most places in Nigeria and other developing countries (explained earlier) fall into this category, and their recommendations are detailed in *Section 8.3*. For Nigeria, schemes like the IFOMSSA initiative will be very important for complementing other measures that are already on the ground for improving school or exam enrolments. If well implemented, as suggested in *Section 8.3.1*, this may help move the country away from holding the unenviable record as Africa's number-one country with the highest out-of-school youths and children (The Cable, 2023). In addition to the focus on Nigeria and developing countries, communities in some developed countries facing educational inequalities may also benefit from this, and recommendations and examples of them are contained in *Section 8.4*.

In summarising this work, one concern that needs to be highlighted is whether the benefits of this scholarship scheme as it relates to its primary (increased WASSCE test scores) and secondary (increased WASSCE enrolments) outcome measures of the work can remain if, for any reason, the IFOMMSA Senior Scheme ceases. The Food For Education (FFE) program in Bangladesh provides insight into what might

happen (Arends-Kuenning & Amin, 2004). A report from the evaluation of that study revealed that benefits from incentive schemes may remain even after the actual incentives have ceased. For that study, the finding was that the positive impact of the FFE on parents' attitudes towards education outlasted income losses orchestrated by the adoption of school attendance in place of employment from previously employed students. Even though those benefits differ from this work's stated primary and secondary outcome measures, it augurs well for the long-term sustainability of the IFOMSSA Senior Scholarship program. Future studies may also need to explore the potential of the long-term impact of scholarship schemes, particularly when the actual programs cease, and if there are measures that can be put in place to ensure that such impacts are sustained beyond the life of the actual programs.

7.8. Study Strengths and Limitations

Several measures were implemented to ensure that this study comprehensively addressed the main Research Question and its sub-questions in scientifically sound ways. These measures are considered the strengths of this work. It is acknowledged, however, that, despite the best measures, some weaknesses still exist, and these are considered study limitations. Both the strengths and limitations will now be discussed.

7.8.1. Strengths of the Study.

Multiple strengths are attributable to this work, but only ten will be highlighted here. Three of these ten identified strengths relate to the work's mixed-methods nature, while others were inherently unique to its quantitative (three) or qualitative (four) modalities.

The first strength is the study's adoption of a mixed methods approach, with details explained in *Section 4.1.1*. The research question and its five sub-questions (detailed in *Section 1.11*) had components that could only be resolved through a combination of quantitative (the first four sub-questions) and/or qualitative (the fifth) research methods. Using one approach or the other would have left key questions of the work unaddressed, and the ability of this work to combine both and produce comprehensive answers needed for the entire study is considered a major strength.

A second strength, also related to the mixed methods nature, was that the study took extra measures to ensure that its findings could be generalisable. These steps are explained in *Section 4.1.2*. An inability to satisfy the criteria needed for generalisation would have severely limited the potential for the findings to be applied

on a wide scope or even be fully adopted locally. With these generalisable measures in place, a decent argument can be made for policymakers to take a serious look at the findings and recommendations of this work, and adopt relevant versions of it across local, national, continental or global levels.

A third strength, also attributable to the mixed methods methodology, was the multidimensional set of measures implemented to mitigate the potential for bias. As explained in the section on Ethics and Reflexivity (*Section 4.6.1*), these are crucial to the overall study, given that the researcher has ties to the Foundation that administered the evaluated IFOMSSA Senior Scholarship Scheme.

The next three strengths are linked to the quantitative component of this work. The fourth relates to satisfaction of the two key requirements of a Controlled Before-and-After (CBA) Study on handling potential confounders. These were discussed in *Section 4.3*. Using “Controls” and “Pre-tests” to respectively analyse the numbers from the “Intervention” and “Post-Test” findings helped address this. The implication was that contemporaneous data were collected, not just between the intervention and control groups, but also for the pre-intervention (pre-test) and post-intervention (post-test) years. With the demographics in the intervention and control groups being identical (as discussed in *Section 7.1*), this study is generally confident that all improvements in academic performances observed between the intervention and control groups could safely be attributed to a causal impact from the IFOMSSA Senior Scholarship Scheme. This significantly minimises the potential for the reported outcomes to be by chance.

The fifth strength lies in the fact that an internationally acceptable, standardised examination system was used to generate the test scores, which is the main outcome of interest. As explained in *Section 4.3.3*, the WASSCE, available to all schools in West Africa (not just Nigeria), is at par with equivalents that meet global standards. It also satisfies the main characteristics of objectivity, reliability, validity, norms, and practicability that are required of psychometric tests (Aborisade & Fajobi, 2020; Bandele & Adewale, 2013; Olakunori, 2019; World Education News and Reviews, 2017). This strength is crucial for the overall study.

A sixth strength, which is the last one linked to the quantitative arm, lies in the use of a 1:1.5 ratio between the intervention and control clusters. As explained in the early part of the Discussion (*Chapter7*), this applies not just to the ratio of school clusters that make up the intervention and control groups (10 to 16, respectively) but

also to the actual numbers of students in those groups. As also explained in Section *4.3.1*, this kind of ratio are known to increase efficiency in intervention studies (Rose & Van der Laan, 2009), and its applicability to this work helps in this regard.

The next four strengths are all linked to the qualitative arm of this study. The seventh relates to the Falsification (Rival) Logic. This logic sets out to disprove existing theories, not validate them (Teegavarapu et al., 2008; Yin, 2014). As explained in *Section 7.4*, this logic was upheld in this work, with part of the findings not completely aligning with the PVEST, one of the viewpoints that provided the Theoretical Framework of the entire study. This observation, which helped minimise the potential for subjectivity in the entire work, is another major strength of this paper.

The eighth strength relies on the study's ability to obtain insights into the IFOMSSA Senior Scholarship Scheme from different groups or categories of participants. This measure broadened the viewpoints factored into the qualitative analyses, allowing a deeper understanding of the findings from the quantitative study that preceded it. Among the students, views were obtained from all groups of students based on their academic abilities (low, moderate and high performers), while the inclusion of four non-student categories helped provide perspectives that might have otherwise been missed. These all helped enrich the study and entrench a comprehensive dimension to the entire work.

Another (ninth) strength was using strategies that enhanced rigour in qualitative studies (*Section 4.4.7*). A couple of these are worth mentioning here. One was "piloting" the qualitative interview questions and updating them before final use. Another measure was the "respondent validation", which allowed the interviewees to clarify that the transcribed information reflected their views. These, alongside others not mentioned here, helped ensure that potential errors were minimised, if not eliminated, from the obtained qualitative data. As such, they significantly add to the overall strength of the study.

The final qualitative strength (and tenth for the overall study) is related to the inherent advantages of case studies. *Section 4.4.1* discusses justifications for using the case study for this work and lists several advantages. It also provided a detailed evaluation of the pros and cons associated with its alternatives. One of the advantages was the case study's ability to allow for in-depth explorations, a much-needed requirement for the study if the insights that shaped the IFOMSSA Senior SCHOLARSHIP Scheme were to be understood. Another one was that case studies

are better suited for exploring prototypes, as with the IFOMSSA Senior Scholarship Scheme. A final advantage to be mentioned here is that case studies can be flexible. This flexibility was important for this work as it helped accommodate the different views from the multiple interview categories involved in the qualitative study. The flexibility also allowed emergent themes that were planned for, at the beginning of the work, and this was responsible for the numerous recommendations (*Section 8.3*) that arose from this work.

7.8.2. Weaknesses and Limitations of the Study.

Despite this work's foregoing strengths, several limitations were dealt with in this study, and these will now be acknowledged. Alongside identifying them, this section also attempts to point out measures to counter these limitations.

One limitation came about because the study covered a small part of Nigeria. A larger, wider range of locations across Nigeria might have provided more information that can be more easily generalisable to the entire country and possibly beyond. This limitation was anticipated, and several measures were factored into the Methods (discussed in *Section 4.1.*2) to counter it. Those measures were largely satisfied, implying that this potential limitation may have minimal practical implications. It should also be noted that since the educational system is the same across Nigeria (Section 1.2), generalising the findings from this work is largely justifiable. While the preceding argument makes a reasonable case for a widescale application of the principles of this work across the Nigerian nation, caution may need to be applied for potential applications across the rest of the developing world (and beyond), given that the education structure and funding would be largely different in these areas. These notwithstanding, the principles underlying the IFOMSSA Senior Scholarship Scheme, which has been proven effective in this work, can be adapted to suit various other countries and communities facing educational inequalities worldwide (*Sections 8.3.2 and 8.4*).

A second limitation came from the potential for extra costs. One such cost might be incurred from the organisation of the “IFOMSSA Challenge’ or other selection examinations associated with scholarship schemes designed with the principles promoted by the IFOMSSA Senior Scheme. A second avenue for potentially increased costs may come from the publicity promoted as a tool to stimulate and sustain community participation. On the surface, these realities have the potential to undermine the argument that the scholarship scheme designs promoted in this work

can be sustainably cost-effective. This cost-efficacy argument is key to the IFOMSSA Senior Scheme, which promotes using existing funds to promote desired educational outcomes without expanding such funds. However, the potential for extra costs related to these two components mentioned above may be minimal in reality. For instance, the IFOMSSA Challenge selection exam does not need to cost much, as the teachers involved are already employed in the schools that benefit from the program, and no external teaching force or payments may be needed. Similarly, most existing scholarship initiatives already have publicity as key components of their schemes, and existing funds are already allocated. All that is needed is a re-jig in the content, focus and target of those publicity materials, and extra costs need not be incurred. In addition, it should also be remembered that the use of social media for publicity is largely free, wide-reaching, and available to all and sundry. The optimisation of this publicity mode by administrators of scholarship schemes, as was done effectively by the Foundation behind the IFOMMSA Senior Scholarship Scheme, will help minimise potential costs due to publicity. Leveraging the suggestions above and other existing resources will help circumvent the potential for extra costs.

A third potential limitation may be linked to the problem of generalisability. This is not limited to this work, as it is an inherent problem with case studies, given that they generally rely on evaluating single cases (Cohen et al., 2018; Teegavarapu et al., 2008). In addition to the measures discussed in *Section 4.1.2*, which were largely adopted in this study to help overcome this potential limitation, a few other measures that helped minimise this potential in this work are worth mentioning (Flyvbjerg, 2006; Teegavarapu et al., 2008). One of these relates to the principle of “Wise Selection”, which allows the selection of a case with all the principles needed for evaluation. Credence to this wise selection principle arises from the ground-breaking works of Galileo (as evidenced in his gravity experiment) and Newton. Both scientists championed works that were products of generalised theories developed from replications of a few experiments. The second measure used to minimise the concern with generalisation was the prior use of a quantitative study ahead of the qualitative component. This allowed the latter only to provide in-depth insights to the already-generalisable findings from the former.

A fourth limitation was that the age of the students, alongside other demographics needed for the quantitative work, could not be obtained. As explained in *Sections 4.3.4 and 7.1*, this limitation arose because the WASSCE report sheets

relied on for the data collection did not contain these demographics. Ultimately, the impact of this limitation is considered minimal, as it was only needed for comparisons to similar details in the existing literature and allows the current data to be assessed in comparison to these. Details on gender were available on the WASSCE sheets. This allowed the necessary comparisons to existing literature to be made, nevertheless (*Section 7.2*).

A fifth limitation was that an "evaluation study" of the IFOMSSA Senior scholarship scheme would have been considered instead of a "research". With an evaluation, several factors that might have influenced the program outcome would have been explored. These include issues related to equity and justice, pedagogy, curriculum and access, among other things, along with a deeper exploration of the actual causes underlying the observed changes. A future study designed more like an evaluation might be useful in addressing this limitation. It should be noted, though, that the research approach used in this work is better suited for an academic discourse (as is the case here, given that the work is a PhD program) and helps generate new knowledge (as is desired given the need to find ways of optimising the impact of educational incentive schemes).

The final potential limitation faced by this work came from the inherent bias associated with case studies (Teegavarapu et al., 2008). Adddressing this is particularly important in this work, given that the researcher is also the founder of the Foundation behind the IFOMSSA Senior Scholarship Scheme. The principle of "reflexivity", an important tool for tackling potential observer bias in case studies, was adopted (and discussed fully in *Section 4.6.1*). In addition to what was discussed there, it is worth re-emphasising that, to minimise the undue influence of the participants, the researcher recused himself from the interviews used in this work. The two interviewers engaged were also carefully selected. They were unknown to the participants interviewed, having never been involved with the IFOMSSA Scheme before this study. The final bias-reducing measure was the use of "falsification logic", which has already been explained in the main text and under the strengths.

CHAPTER 8 CONCLUSIONS AND RECOMMENDATIONS

8.1. Conclusions

The conclusions of this study are best discussed with the "Research Question" (*Section 1.11*) and identified "knowledge gaps" (*Section 3.4*) kept in view. Both parameters will be used to summarise the conclusions of this work.

8.1.1. Conclusions based on the Research Question (RQ).

As shown in *Section 1.11*, the RQ was:

"What are the effects of a scholarship scheme that integrates communities in its design and selects recipients through a hybrid (mixed need- and merits-based) criteria in an attempt to motivate students en masse towards improved test scores?"

Evidence from this work, presented in *Chapters 5 and 6* and discussed in *Chapter 7*, leads to the conclusion that within the limitations of the study, the IFOMSSA Senior Scheme, which selected its recipients through hybrid criteria and integrated communities in its design, was likely effective at inspiring many students to attain high test scores. This is the main conclusion of this work.

More insights into the conclusions of this work become clear with further focus on its five specific sub-questions, also listed *in Section 1.11*. The individual takeaways from this exercise are as follows:

a) Within the three post-intervention years (2017 to 2019), the WASSCE test scores of students enrolled in schools eligible for the IFOMSSA Senior Scholarship Scheme (i.e., the scholarship-eligible students or the intervention group) were significantly raised relative to those of students that were not (the scholarship-ineligible ones or control group).

b) Within the same set of schools, the WASSCE test scores achieved by students in the three years before the IFOMSSA Senior Scholarship intervention was introduced (2014 to 2016) were significantly lower in the compulsory subjects compared to levels observed among students facing the same exam in the three years after the intervention (2017 to 2019).

c) Within the same schools where the IFOMSSA Senior Scholarship Scheme was introduced, there were no significant differences in test scores achieved in WASSCE by the "low achieving" students relative to the scores by the

"moderate-to-high achievers" in three of the four subjects of interest. This supports the possibility that the impact of the IFOMSSA Senior Scholarship award on the WASSCE likely affected all student categories, not just the high-performing ones (i.e., en mass positive impact).

d) Compared to the scholarship-ineligible schools, the number of students who enrolled for the WASSCE within the scholarship-eligible schools increased for all the compulsory subjects following the introduction of the IFOMSSA Senior Scholarship Scheme.

e) The views expressed by participants involved in the IFOMSSA Senior Scholarship Scheme revealed a causal association between all of the above observations and the three advocated principles underlying the Scheme. Those three principles include the hybrid selection criteria for choosing the recipients, mass motivation, and widescale community involvement in the program. The communities in question include families, friends, teachers, school principals, the media, community leaders, and government staff.

8.1.2. Conclusions based on the Knowledge Gaps Addressed.

In addition to the resolved research question and research sub-questions, this work has, arguably, reduced the knowledge gaps identified from the Literature Review and itemised in *Section 2.4*. These knowledge gaps and their resolutions are as follows:

a) Before this study, little existed in the literature as evidence that a positive and consistent relationship between financial incentives and increased test scores can be guaranteed. As suggested after that Literature Review, this study was designed to resolve that knowledge gap as much as possible. It was hoped that changing the approach to administering scholarship schemes in Nigeria and other developing African countries may help ensure that financial scholarship incentives can help stimulate positive test scores in the targeted countries consistently and sustainably. With the findings and conclusions drawn from this work (*Section 8.1.1*), a strong case has been made that the principles espoused in this work might have offered the way

to go, as a positive relationship was established between the IFOMSSA Senior Scholarship Scheme and WASSCE test scores.

b) Another gap identified from the Literature Review was that "mass motivation" from educational scholarship schemes was not an intentional component of any past scholarship designs or studies. By addressing this issue, this work reduced this knowledge gap, providing empirical insights into how to achieve improved outcomes for large numbers of beneficiaries without necessarily increasing existing funds.

c) The third knowledge gap listed in *Section 3.4* was that there was a paucity of work on the role of communities in enhancing the desired outcomes of scholarship schemes. This work set out to address this gap, and, given the conclusions above, has contributed to reducing it. A good grasp of, not just what communities can bring to the table in support of scholarship schemes, but also how they can achieve those, were identified in this work.

d) At the time of the Literature Review, no identified Nigerian study had ever evaluated a scholarship incentive scheme and its impact on test scores. Within the limits of available information, this work now appears to be the first to do so.

e) The final point from *Section 3.4* was the need to enrich research knowledge in ways that will provide fresh ideas to policymakers for advancing educational scholarships in Nigeria and other developing African countries. There were also concerns that progress towards realising the fourth item of the Sustainable Development Goal (SDG-4) was stalling

f) and that new directions were needed if the aspirations underlying that goal were to be met. By identifying and validating new principles (mass motivation of recipients, hybrid selection of scholarship recipients, and integrating communities in scholarship schemes) that can help inspire higher education quality, this work has also helped address these.

8.2. Recommendations and Implications for Policy and Practice.

The originator of this work believes that if the findings and underlying principles are appropriately managed, multiple benefits can be harnessed for long-term, cost-effective and sustainable benefits of education across the globe, not just in Nigeria. Arguably, these may hold crucial keys to ensure that inequalities in education outcomes,

mainly affecting students in Nigeria and other developing countries in Africa and beyond, as well as the at-risk communities in some developed countries like Australia and Canada, are bridged. For these reasons, the author sees opportunities for students in every part of the globe, not just those in Nigeria and other developing African countries.

Three sets of recommendations have been identified to highlight these benefits properly, and the implications for policy and practice from this work will be discussed along these lines. The first set of recommendations relates to those "specific to Nigeria", where the study occurred. The second set of recommendations is more "broad and general". It focuses on how the recommendations might become helpful to policymakers anywhere in the developing world (within Africa and beyond), even where the education system may not be identical to that found in Nigeria. The final set of recommendations focuses on developed countries with communities historically at risk of inequalities in educational outcomes. It relates to the potential adaptability of this study's recommendations to suit these disadvantaged communities where the need to bridge educational inequalities exists. Indigenous communities in Australia and Canada will be used to buttress this third set of recommendations.

8.2.1. Nigeria - Specific Recommendations and Policy Implications.

Before now, experts have warned that the existing system of education in Nigeria lacks measures for transforming valuable research into practice (Egugbo & Salami, 2021). *Section 1.2* describes this Education System. The findings from this work debunk this assertion to some extent, as they are considered suitable for Nigerian communities and can be adopted without much adaptation by stakeholders. Such stakeholders in Nigeria include governments at the national and state levels, public and private institutions tasked with promoting education, large and small national and international non-governmental and charity organisations operating in Nigeria, education-minded individuals, and others. The recommendations from this work for them are as follows:

i. Education stakeholders in Nigeria may consider prioritising scholarship schemes (existing or new) that inculcate the three principles advocated in this thesis. One of those principles is adopting hybrid (mixed needs and merit-based) selection criteria for deciding the recipients of its scholarships, with transparency and merit being keywords here. The second principle is to

simultaneously target and inspire whole student populations, not just the known academically brilliant ones. The last principle is the involvement of various community groups in these scholarship schemes and includes measures like the annual award ceremonies. The practical steps for integrating all three principles into particular schemes are detailed in this work and the concerned policymakers can modify these to suit their localities. Most existing scholarship schemes are expected to have some components of these advocated principles as part of their programs. The idea is to incorporate the rest as a strategy to ensure higher outcomes in cost-effective ways, as discussed in this work. As this work has shown, this strategy inspires more beneficiaries towards desired outcomes without expanding current financial budgets.

ii. This work recommends that administrators of educational scholarships in Nigeria should consider engaging relevant governments in Nigeria (including those in ministries and parastatals) in charge of education at the national and/or state levels. As was shown in this work, government support in adjusting scholarship programs in ways that will accommodate the principles of this study ensures integration into the academic curriculum. This guarantees higher cooperation from teachers and other school leaders. The experience from the Foundation behind the current Scheme indicates that these government institutions are willing to work on these.

iii. It is also recommended that Nigerian government institutions in charge of education take the lead towards integrating the principles of this work into scholarship schemes. This means they do not need to wait for the scholarship bodies to make the initial contact. Most of these organisations are registered with Nigeria's Corporate Affairs Commission (CAC), and the government bodies can easily identify and reach them, aiming to adjust their programs to accommodate all or part of the measures being promoted in this work. Government institutions can call stakeholders' meetings at the state and national levels, where all the concerned scholarship administering bodies can be invited to brief them on the new way forward.

iv. Stakeholders should also consider using the advocated measures to boost general enrolments into schooling and examinations in areas where existing religious and socio-cultural practices limit these. This can apply to any part of

Nigeria. Given the now-established efficacy of the IFOMSSA Senior Scheme in inspiring students of both genders, publicising the availability of such incentive schemes in such localities may help overcome the hesitation and reluctance from parents and community leaders in such places.

v. Measures embedded in the IFOMSSA Senior Scheme can also be used to optimise female participation in education nationwide in relevant communities. As *Section 7.2* made clear, female school participation in most parts of Northern Nigeria can be as low as 50% (UNICEF Nigeria, 2013). Communities like the Otuocha Educational Zone (where this current study was focused) and other similarly gender-disadvantaged regions should also consider this. With proper planning, incentive schemes designed with the principles advocated in this work might help improve this statistic.

vi. This work also recommends that publicity should be a core component of scholarship schemes in Nigeria. The findings suggest that publicity helps brand the schemes in ways that inspire trust, credibility and transparency. It also creates a sense of seriousness in the entire program. As was also discussed in this work, publicity need not attract additional costs, as most social media outlets offer free platforms, and existing company vehicles can be designed to carry the messages of the schemes. Traditional print and electronic media outlets can be used if affordable, but they need not be compulsory.

vii. Besides the publicity explained above, which promotes the immediate benefits of scholarships, this work also recommends that scholarship administrators aiming to inspire whole student populations might do well to publicise future benefits associated with the scheme. Such benefits may include additional scholarships for which students become eligible by making the best of the current ones. Other possible future benefits may include improved opportunities for jobs, overseas travel, a better life, and so on. Findings from this work indicated that such publicity helps create mass motivation, as potential beneficiaries who may not benefit from the immediate schemes end up working as hard as the others in the belief of taking advantage of expected future gains.

viii. Where affordable, policymakers may also consider including simple and inexpensive souvenirs as aids that will help achieve mass motivation in educational incentive schemes. This work revealed that such souvenirs can

inspire interest and commitment to the program beyond the directly involved groups. By taking these souvenirs home, the participants in the scholarship scheme help publicise the messages within their communities. As stated, this souvenir recommendation is not compulsory. It should only be adopted if the bodies responsible for the scholarships have already allocated the relevant funds.

ix. This work also recommends that selection exams used to determine scholarship recipients should include only subjects that are compulsory to all the targeted students. This, as revealed in the study, is particularly important where mass motivation of students is the goal. Optional subjects are best excluded, as the students may not need to take them seriously. That potential for unseriousness waters down the overall focus and mass motivation outcomes, as was seen with some of the findings in this work. The IFOMSSA Senior Scheme, which was evaluated in this work, has already implemented this recommendation.

x. Policymakers should also ensure that measures are in place to allow ongoing and repeated engagements with the community involved in the scheme. As found in this work, this is extremely important if long-term sustainability and efficacy are guaranteed. This work revealed a propensity for the commitments from school and community leaders to wane over time or not to be at the same level for all the schools. For these reasons, proponents of schemes modelled like the IFOMSSA Senior Scheme will need to consistently ensure that new community members (traditional leaders, community leaders, school principals, teachers, and so on) and staff are appropriately oriented into the program. Measures should also be in place to ensure ongoing re-engagement of these groups. Annual engagements, possibly during the awards ceremony, might offer an easy way to achieve this. This work recommends inviting all community groups to such annual ceremonies.

xi. Another recommendation for policy changes in Nigeria is that relevant government institutions should entrench measures that recognise and celebrate organisations that promote education within the country. This will include those involved in scholarship schemes. As was revealed in this work, such government recognitions of sponsors of scholarship schemes provide additional validation and inspiration to the efforts of the schools and their

principals, teachers, and students. This inevitably strengthens commitments to scholarship schemes from its sponsors and the beneficiaries.

xii. A final recommendation is that a future study may also need to explore the potential of the long-term impact of scholarship schemes, particularly when the actual programs cease, and if there are measures that can be put in place to ensure that such impacts are sustained beyond the life of the actual programs.

8.2.2. Developing Countries in Africa and Beyond: Recommendations.

While the author of this work believes that the findings may be useful for other developing countries in Africa and beyond, it is acknowledged that the education systems in these areas may not be identical to the one in Nigeria, where this study took place. As such, the commendations for adaption of this work's findings to suit these areas are more broad. It should be noted that, as discussed in *Sections 1.4* and *1.5*, Nigeria's educational challenges also exist in these other developing countries.

For the recommendations below to be considered, a new study that allows the findings to be tested in new locations may be necessary, with a focus on evaluation (rather than research), and with a deeper qualitative component designed to better understand the causal dynamics. Depending on the findings of that work, potential recommendations include:

i. Policymakers in developing parts of the world, particularly those in African countries, should consider adopting scholarship schemes that have a proven impact on test scores and outcomes. As shown in *Section 1.6*, this might have the overall impact of stimulating long-term economic growth and minimising these countries' lag in education. In this regard, adjusting existing schemes and ensuring that new ones incorporate community participation as a key component, motivating eligible students and genders concurrently (not just the high-ability ones) and selecting its recipients through the hybrid selection criteria discussed in this work might help.

ii. The affected countries, especially those with gender disparities in educational outcomes, may also wish to adopt suitable versions of the proposed scholarship scheme evaluated in this work to help them motivate all genders equally.

iii. This work can also improve examination enrolments, and concerned countries may wish to consider its recommendations and strategies.

iv. As was the case with Nigeria, the quest to attain the SDG-4 can be facilitated by adopting the principles of this work. Most developing countries are lagging on this front, and a mass evaluation of existing incentive schemes in these parts of the world might embrace some or all of the principles of this work in an attempt to make progress.

v. Future research could replicate this study in countries with different educational systems or where the current strategies are harder to adapt. This way, more appropriate versions can be adopted where and when needed, and this paper recommends that researchers look into this.

vi. Finally, it should be noted that all the recommendations made for Nigeria in *Section 8.2.1* may also be applicable to other developing African countries and beyond. This work recommends that policymakers look through all and adopt as deemed suitable to their localities.

8.3. At-Risk Communities in Developed Countries: Recommendations.

This section examines facts and data from disadvantaged communities in the developed world (represented by Indigenous communities in Australia and Canada). It highlights how, if a scheme integrating the three principles discussed in this work can be developed for those communities or adapted from ones already in place for them, findings from this work might nay become relevant across other parts of the globe. Indigenous communities in Australia and Canada are known to face educational inequalities, and the next few sections explore how the current work might relate to them.

8.3.1. Application to Australian Indigenous Communities.

In Australia, it is widely acknowledged that despite decades of education policy formulations for Indigenous Australians that span back to the 1960s, equity in educational outcomes has barely been achieved (Moodie et al., 2023; Trimmer et al., 2021). Several scholarship schemes designed to bridge these educational inequalities are in place. Some of these schemes include the Australian Indigenous Education

Foundation (AIEF), the Youth off the Streets National Scholarship, the Yalari Scholarships for Indigenous Children (exemplified by the Rosemary Bishop Indigenous Education Scholarship), and the Harding Miller Education Foundation Scholarship Program, among others (Aurora Education Foundation, 2023).

The schemes mentioned above and several other government policies, like those arising from the Gonski Report, have all failed to address educational inequalities across Australia (Kenway, 2013). Even the introduction of the National Australian Program in Literacy and Numeracy (NAPLAN) in 2008 has not helped, as results regularly reveal poor educational outcomes for Indigenous students (Ford, 2013). Similarly, Australia's "Closing the Gap" policy, despite leading to significant funding and strategic actions designed to improve social and academic outcomes (like numeracy, literacy, attendance, graduation, and enrolment rates), has thrown up little evidence of demonstrable improvements with Indigenous Australians who consistently score below the national average on the stated indicators (Gutierrez et al., 2021; Trimmer et al., 2021).

Some observers of the above trend have literarily admitted that ameliorating the inequalities in Australian schools is the country's greatest educational challenge (Smith et al., 2019). Others have also suggested that efforts at resolving this challenge may need to involve not just the students, but also their parents and communities (Guenther et al., 2019).

The findings from this paper can be considered a response to some of the concerns expressed above, and the recommendations in *Section 8.2* may find relevance in this context. It may, hopefully, provide a new direction for policymakers in Australia, given that a 2019 systematic review of the country's Indigenous education found no impact from the current practices on learning outcomes (Guenther et al., 2019).

8.3.2. Application to Canadian Indigenous Communities.

Canada provides another example of a developed country with an Indigenous community facing educational inequalities. This happens even though the country consistently ranks among those with the highest achieving education systems in the 38-member Organisation for Economic Co-operation and Development (OECD)

countries through a ranking system that is based on the Programme for International Student Assessment, PISA (Rogova et al., 2016).

Even though, as of 2016, the schism in secondary education between Canada's Indigenous (First Nations, Inuit, and Métis) and non-Indigenous groups has narrowed significantly, the gap has persisted in post-secondary education (Assembly of First Nations, 2016; Deonandan et al., 2019; Genge & Day, 2021). While statistics on the actual numbers vary, all available data capture this gap. One has it that, as of 2011, the post-secondary education graduation rate was only 35.3% for First Nations people, while that of their non-Indigenous counterparts was as high as 78% (Rogova et al., 2016). On its part, a 2020 publication revealed that, while 53% of Indigenous Canadians aged 25 to 64 years have a college diploma or university degree, 65% of the non-Indigenous ones do so at the same age (CFS-FCÉÉ, 2021).

The referenced inequalities lead to uncomfortable realities. Available data from 2011 show that, for instance, the median income for Canada's Indigenous communities aged 25 to 54 years was about CA$11,000 lower than that for the non-Indigenous groups (Rogova et al., 2016). The same source revealed that the employment ratio was 14.3 percentage points lower for First Nations individuals than for the others. Reports have it that only 1.4% of Canadian professors are Indigenous (Genge & Day, 2021). Experts have, for these reasons, stressed the need for more Indigenous Canadians to access better quality, public-funded education, with access to support that should address historical and contemporary barriers (CFS-FCÉÉ, 2021).

It has also been acknowledged that if high school graduation rates are to be at par for the Indigenous and non-indigenous groups, about 400,000 more Indigenous Canadians aged 25 to 64 need to be absorbed into post-secondary education, while an additional 292,000 would be needed if the gap in secondary education is to be bridged (Assembly of First Nations, 2016).

To address these inequalities, some attempts have been made by the Canadian Government in the past. One was the 2010 adoption of the United Nations Declaration on Human Rights of Indigenous People, while the other, in 2011, was the effort to bring First Nation Canadians living in reserves into the sphere of the Human Rights Act (Carr-Stewart et al., 2013). A third, designed not just to minimise education inequality, but also increase Indigenous employability, was the Post-Secondary Student Support Program, PSSSP (Genge & Day, 2021). Like many financial incentive

programs, the PSSSP has limited funding. In 2021, for instance, policymakers acknowledged that the CA$150.6 million budgeted for the PSSSP was grossly inadequate for the roughly 32,000 Indigenous students that needed it at the time (CFS-FCÉÉ, 2021).

The reality from the preceding paragraphs is that Indigenous Canadian communities face significant financial barriers (CFS-FCÉÉ, 2021; Genge & Day, 2021). If the gaps between them and their non-Indigenous counterparts are to be closed, the way forward is to optimise existing funds, not expand them.

It should be noted that all the issues above have persisted over the years and, as is obvious, current strategies have proven to be ineffective at addressing the educational inequalities facing these Canadian Indigenous communities. A rethink is needed to boost the strategies currently in place for addressing these. Just as is the case with the Australian Indigenous communities, the author of this work believes that modifications of its findings and the attendant recommendations contained in *Section 8.2,* might offer some help (Uyeno et al., 2006a; Veloski et al., 2000).

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APPENDIX A

Description: Anecdotal Impacts of the IFOMSSA Senior Scholarship Scheme 1

Community Secondary School, Umuoba Anam (a benefiting school in the Otuocha Educational Zone of Anambra State, Nigeria) finishes 3rd place over 2 consecutive years in State-wide quizzes.

APPENDIX B

Description: Anecdotal Impacts of the IFOMSSA Senior Scholarship Scheme 2
Some past IFOMSSA Senior recipients who gained tertiary admissions

A. Matriculation picture of Prosper MMADUBUKO (2017)

B. Matriculation picture of Anthonia UDENZE (2017)

C. Matriculation picture of Blessing NWACHUKWU (2018)

D. Matriculation picture of Lynda Ifunanya OBIOZOR (2018)

APPENDIX C

Description: Anecdotal Impacts of the IFOMSSA Senior Scholarship Scheme 3

Images 1 and 2 are the respective lists of IFOMSSA Senior Scholarship recipients in 2017 and 1028. Those confirmed to have gained admissions into tertiary institutions are highlighted in red.

1) **2017 Recipients of the IFOMSSA Senior Scholarship** (https://ocifoundation.org/press-release-the-winners-list-2017-ifomssa-awards-senior-and-junior/)

2017 "SENIOR IFOMSSA AWARDS" WINNERS

(Winners emerged from the IFOMMSA Challenge test held on January 25th 2017)

MERIT LIST

S/N	Name of Student	Sex	Student's Town of Origin & LGA	Name of School (All in Anambra East LGA, Anambra State, Nigeria)
1	ADIKE, Goodness	F	UMUERI, Anambra East LGA, Anambra State, Nigeria	Community Secondary School, Ifite-Umuleri.
2	OBIOZOR, Ifunanya	F	NKPOR, Idemmili North LGA, Anambra State, Nigeria	Community Secondary School, Umuoba-Anam.
3	DOMINIC, Chidimma	F	UMUERI, Anambra East LGA, Anambra State, Nigeria	Community Secondary School, Ifite-Umuleri.
4	UDENZE, Anthonia	F	UMUEZE-ANAM, Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe.
5	EZEH, Obinna	M	NSUKKA, Nsukka LGA, Enugu State, Nigeria	Father Joseph Memorial High School, Aguleri.
6	NWADIOGBU, Gloria	F	NANDO, Anambra East LGA, Anambra State, Nigeria	Community Secondary School, Nando.
7	OFORKA, Victor	M	AGULERI, Anambra East LGA, Anambra State, Nigeria	Father Joseph Memorial High School, Aguleri.

CATCHMENT LIST

S/N	Name of Student	Sex	Student's Town of Origin & LGA	Name of School (All in Anambra East LGA, Anambra State, Nigeria)
8	OKAFOR, Oluchukwu	F	NSUGBE, Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe.
9	ANIEROBI, Rhoda	F	NSUGBE, Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe.
10	MADUBUKO, Prosper	M	NSUGBE, Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe.

***IFOMSSA (Ifedioramma Okafor Memorial Secondary School Academic) Awards (http://www.ocifoundationng.org/ifomssaawards/)*

Established in loving memory of Obi Ifedioramma Isaac Okafor (1939 to 2016), father of the OCI Foundation Founder, Dr. Chris Ifediora

2. **2018 Recipients of the IFOMSSA Senior Scholarship** (https://ocifoundation.org/press-release-the-winners-list-2017-ifomssa-awards-senior-and-junior/)

OCI FOUNDATION'S "2018 IFOMSSA AWARDS" WINNERS' LIST (SENIOR AND JUNIOR)

IFOMSSA SENIOR: MERIT LIST

S/N	Name of Student	Sex/Age	Student's Town of Origin & LGA	Name of School (All in Anambra East LGA, Nigeria)
1.	**ODEH,** Vivian C.	F/18	**EZZAA,** Ebonyi South LGA, Ebonyi State, Nigeria	Community High School, Nsugbe.
2.	**ENEMUO,** Chidera V.	M/16	**AGULERI,** Anambra East LGA, Anambra State, Nigeria	Father Joseph Memorial High School, Aguleri.
3.	**AKPEH,** Stella C.	F/16	**NSUGBE,** Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe.
4.	**AMUA,** Chidimma C.	F/14	**AWKUZU,** Oyi LGA, Anambra State, Nigeria	Stella Marist College (SMC), Umueri.
5.	**ABANZU,** Ebenezar C.	M/16	**NANDO,** Anambra East LGA, Anambra State, Nigeria	Community Secondary School, Nando.
6.	**OKOYE,** Cyprian C.	M/20	***OROMA-ETITI,*** Anambra West LGA, Anambra State, Nigeria	Community Secondary School, Umuoba-Anam.
7.	**DIBOR,** Israel C.	M/17	**AGULERI,** Anambra East LGA, Anambra State, Nigeria	Father Joseph Memorial High School, Aguleri.
8.	**ANIJAH,** Chibuike S.	M/17	**NSUGBE,** Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe.

IFOMSSA SENIOR: CATCHMENT LIST

S/N	Name of Student	Sex	Student's Town of Origin & LGA	Name of School
9.	**EZEDIGWE JOY**	F/13	**UMUERI,** Anambra East LGA, Anambra State, Nigeria	Stella Marist College (SMC), Umueri.
10.	**NNELI,** Fidelia C.	F/18	**IGBARIAM,** Anambra East LGA, Anambra State, Nigeria	Community High School, Igbariam
11.	**NWACHUKWU,** Chinyere B.	F/18	**Umuoba-Anam,** Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe.
12.	**ONUORAH,** Angela C.	F/16	**NSUGBE,** Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe.

IFOMSSA JUNIOR

S/N	(All 10 are indigenes of Nsugbe, enrolled at Community High School, NSUGBE, Anambra State, Nigeria)
13.	**OBIEKWE,** Franklin (Male; 14 years)
14.	**IFEADI,** Emmanuel (Male; 14 years)
15.	**NWAJI,** Chinenye (Female; 13 years)
16.	**IGBOANUGO,** Uju (Female; 14 years)
17.	**EMOUH,** Anthony (Male; 14 years)
18.	**OKONKWO,** Chidera (Male; 14 years)
19.	**ONUORA,** Raphael (Male; 13 years)
20.	**OKIWE,** Emmanuel (Male; 13 years)
21.	**CHINWUBA,** Frank (Male; 13 years)
22.	**MGBATAOGU,** Augustine (Male; 13 years)

NOTES

- *IFOMSSA stands for " Ifedioramma Okafor Memorial Secondary School Academic" Awards; For more details, click here: http://www.ocifoundationng.org/ifomssaawards/;*
- *These Awards were established in loving memory of Obi Ifedioramma Isaac Okafor (1939 to 2016), the father of the OCI Foundation Founder, Dr. Chris Ifediora;*
- *All IFOMSSA Senior Award Winners received full amounts for their 2018 Senior Secondary School Certificate Exam Registrations (both NECO and WASSCE);*
- *All IFOMMSA Junior Winners received the full amounts for their 2018 Junior Secondary School Certificate Exam Registrations;*
- *Winners for IFOMSSA Senior Awards emerged from the" IFOMMSA Challenge" test held on January 24th 2018, while winners in the Junior Cadre were selected from their regular school performances. 2018 is the second year of giving out these awards.*

APPENDIX D

Description: Anecdotal Impacts of the IFOMSSA Senior Scholarship Scheme 4

Images 1 and 2 are the lists of the Cyfed Undergraduate Scholarship winners from 2019 and 2020/21, respectively. They also show the IFOMSSA Senior Recipients captured in images A, B and C (encircled in red.

1. **2019 Recipients of the Cyfed Undergraduate Scholarship: This shows two recipients of past IFOMSSA Senior Scholarships on the list, both highlighted in red.** (https://ocifoundation.org/winners-2019-cyfed-undergraduate-scholarship-14-06-2019//)

WINNERS - 2019 CYFED UNDERGRADUATE SCHOLARSHIP (08/06/2019)

The OCI Foundation congratulates the following winners of the 2019 Cyfed Undergraduate Scholarships Award. Each of these Cyfed Scholar will receive an annual financial support, renewable every academic year until his/her graduation. Renewal of the award is subject to good behaviour and academic performance.

S/N	Name	Gender	Name of Institution	Course	Level	Duration	Local Govt Area
1	**Oforka** Victor C. 2017 IFOMSSA Senior Scholar	Male	**Chukwuemeka Odumegwu Ojukwu University, Uli** Anambra State, Nigeria	Industrial Chemistry	Year 2	4 years	Anambra East, Nigeria
2	**Oforjama** Naomi C.	Female	**Federal Polytechnic, Oko,** Anambra State, Nigeria	Science Laboratory Technology	Year 1 (OND-1)	4 years	Nnewi South, Nigeria
3	**Mmadubuko** Prosper C. 2017 IFOMSSA Senior Scholar	Male	**Nwafor Orizu College of Education,** Nsugbe (Affiliated to the University of Nigeria, Nsukka, Nigeria)	Education Biology	Year 1	4 years	Anambra East, Nigeria
4	**ILOBI** Chidimma E. Full award available from 2020	Female	Federal Polytechnic, Oko Anambra State, Nigeria	Science Laboratory Technology	Year 1 (OND-1)	4 years	Anambra East, Nigeria
5	**AMAKOM** Kosiso K. Award pending	Male	**Federal University of Technology, Owerri** Imo State, Nigeria	Electrical Electronics Engineering	Year 3	4 years	Anambra East, Nigeria
6	**AKWAEZE** Lazarus O. Award pending		**St. Alberts Institute for Higher Education, Kaduna** (Affiliated to the University of Jos, Plateau State, Nigeria)	B.A. Philosophy and Religion	Year 3	4 years	Anambra East, Nigeria
7	**OKONKWO** Victoria O. Award pending	Female	**Federal Polytechnic, Oko** Anambra State, Nigeria	Computer Engineering	Year 3 (HND-1)	4 years	Anambra East, Nigeria

NOTE: The 'IFOMSSA Senior Scholars' won the Foundation's Scholarship for senior secondary school students. The Foundation offers 4 sets of scholarships.

[redacted]

Assoc. Prof. Chris O. Ifediora

(MBBS, MPH, FRACGP, HMS-SEAL, FIMC, CMC, AFANZAHPE)

Founder and President, OCI Foundation

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2. **20120/21 Recipients of the Cyfed Undergraduate Scholarship: This shows SIX recipients of past IFOMSSA Senior Scholarships on the list, all on thr far right column. The 2020 and 2021 editions were merged due to the loss of academic activities orchestrated by ther COVID-19 Epidemic** (https://ocifoundation.org/winners-of-the-2020-21-cyfed-undergraduate-scholarships/)

WINNERS – 2020/21 CYFED UNDERGRADUATE SCHOLARSHIP (09/04/2021)

The **OCI Foundation** congratulates the following winners of the **2020/21 Cyfed Undergraduate Scholarship Award.** The 2020 & 2021 editions were merged due to COVID-19.
Each Cyfed Scholar will receive an annual financial support, renewable every academic year until graduation (subject to good behaviour and academic performance).

S/N	Name	Sex	Name of Institution (all in Nigeria)	Course	Level	Length	Remark
1	**AKPEH,** Stella C.	F	Nnamdi Azikiwe University, Awka, Anambra State	Adult Education	Year 2	4 years	IFOMSSA Scholar, 2018
2	**ODILI,** Valentine C.	M	University of Uyo, Uyo, Akwa-Ibom State	Medicine/Surgery	Year 2	6 years	
3	**MMADUBUKO,** Chisom F.	M	University of Port Harcourt, Port Harcourt, Rivers State	Biochemistry	Year 2	4 years	
4	**NWACHUKWU,** Chinyere B.	F	Nnamdi Azikiwe University, Awka, Anambra State	Education Economics	Year 2	4 years	IFOMSSA Scholar, 2018
5	**OKECHI,** Okwudili M.	M	Nwafor Orizu College of Education, Nsugbe, Anambra State (Affiliated to the University of Nigeria, Nsukka)	Education English	Year 2	4 years	
6	**Oforka,** Victor C.	M	Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State	Industrial Chemistry	Year 2	4 years	IFOMSSA Scholar, 2017
7	**Oforjama,** Naomi C.	F	Federal Polytechnic, Oko, Anambra State	Science Laboratory Technology	Year 2 (OND-2)	4 years	
8	**AMAKOM,** Kosiso K.	M	Federal University of Technology, Owerri, Imo State	Elec/Elect Engr	Year 4	5 years	
9	**AKWAEZE,** Lazarus O.	M	St. Alberts Institute for Higher Education, Kaduna (Affiliated to the University of Jos, Plateau State)	B.A. Philosophy and Religion	Year 4	4 years	The very first Cyfed Scholar to Graduate
10	**OKONKWO,** Victoria O.	F	Federal Polytechnic Bauchi, Bauchi State	Electronics/Telecom	Year 3 (HND-1)	4 years	
ADDITIONAL WINNERS (TO RECEIVE 45% OF YEARLY SCHOLARSHIP AMOUNT AND ARE ALL ELIGIBLE TO RENEW)							
11	**ONUORAH,** Angela C.		Nwafor Orizu College of Education, Nsugbe, Anambra State (Affiliated to the University of Nigeria, Nsukka)	Business Education	Year 2 (OND-2)	4 years	IFOMSSA Scholar, 2018
12	**OBIOZOR,** Ifunanya L.		Taraba State University, Jalingo, Taraba State	Political Science	Year 2	4 years	IFOMSSA Scholar, 2017
13	**ANIJAH,** Chibuikem S.		Metallurgical Training Institute, Onitsha, Anambra State	Welding/Fabrication	Year 2	4 years	IFOMSSA Scholar, 2018

NOTE: The 'IFOMSSA Senior Scholars' won the Foundation's Scholarship for senior secondary school students. The OCI Foundation offers 6 sets of scholarships and financial incentives for Education.

[redacted]

ASSOC. PROF. CHRIS O. IFEDIORA (MBBS, MPH, FRACGP, HMS-SEAL, FIMC, CMC, AFANZAHPE)
Founder and President, OCI Foundation

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APPENDIX E

Description: Template used for collecting the Quantitative Data.

QUANTITATIVE DATA COLLECTION FORM:
OCI Foundation's IFOMSSA Award Study (2014 - 2019)

1) Candidate's names: ……

2) Candidate's Gender:
   a. ☐Male
   b. ☐Female

3) What year was the exam (WASSCE or NECO) taken? ……

4) What is the candidate's SCHOOL NAME?

   ……

5) Which LGA is the candidate's school is located *(select only one)*?
   a. ☐Anambra East
   b. ☐Anambra West
   c. ☐Ayamelum

6) Which of the following is correct about this candidate *(tick all boxes that apply)*?
   NOTE: FOR YEARS 2017, 2018 AND 2019 for students in ANAMBRA EAST ONLY.
   a. ☐Candidate participated in the IFOMSSA Challenge Selection Exam
   b. ☐Candidate won the IFOMSSA Senior Scholarship Award

7) What is the candidate's score in WASSCE (1 to 9)?
   a. English Language ….
   b. Mathematics ….
   c. Biology …..
   d. Civic Education …..
   e. Exam not taken …..

8) What is the candidate's score in NECO (1 to 9)?
   a. English Language ….
   b. Mathematics ….
   c. Biology …..
   d. Civic Education …..
   e. Exam not taken …..

UNIVERSITY OF SOUTHERN QUEENSLAND

OCI Foundation
Onyebuchi Chris Ifediora
"...we rise, by lifting others"

APPENDIX F

Description: Interview Questionnaire 1: Student Participant Winners

Pre-Interview Questions (Breaking the Ice)

1. Thank you for accepting to be part of this interview.
2. I am . . . (name, professional background, location, and relationship to the project)
3. This interview concerns the IFOMSSA Senior Scholarships, introduced in 2017 to assist students.
4. This interview is designed to help us evaluate its impact, and see how improvements can be made.
5. Do you mind introducing yourself, please?
6. Please, kindly confirm your gender: (a) Male (b) Female (c) Other
7. Please, kindly confirm your age range: (a) <16 (b) 16 to 18 (c) 18 to 25 (d) Over 25
8. Which school or LGA are you affiliated with?
9. Did you undertake your WASSCE/NECO in the school above?
10. What year did you undertake your WASSCE or NECO?
11. How did you feature in the IFOMSSA Participant Scheme? (a) *From an eligible school but not selected for the IFOMSSA Challenge (b) Selected for, and participated in, the IFOMSSA Challenge but did not get scholarship (c) Participated in, the IFOMSSA Challenge and WON THE Scholarship*

MAIN QUESTIONS FOR STUDENTS (1A): WINNERS		
A.	**Questions on the mixed needs and merit-based (hybrid) scholarship**	
	General	1) What do you know about the IFOMSSA Scholarship Scheme?
	Needs-based	1) How do you view the economic/financial status of your family?
		2) How do you see the economic/financial abilities of students in your school?
	Merits-based	3) How do you view "merit" in the entire selection process for the IFOMSSA Awards?
B.	**Questions on the students' own perception of "mass motivation for student beneficiaries"**	
	Impact on exam preparation	1) What do you think about the IFOMSSA Scholarship Scheme and students' **PREPARATIONS** for the senior certificate exams?
	Impact of actually RECEIVING the award (high performers)	2) What do you think **about winning** the actual IFOMSSA Scholarship and your own **PREPARATION** for the certificate examinations?
	Impact of PARTICIPATION in selection exam (moderate performers)	3) What do you think about **your participation** in the IFOMSSA Challenge and your **PREPARATION** for the certificate examinations?
	General Question (covers areas not thought of)	4) What else do you have to say regarding the IFOMSSA Scholarship Scheme? ***Probes***: • *Motivation of student?* • *Academic performances of your colleagues at the senior certificate examinations?*
C.	**Questions on the students' perceived impact of the community involvement and influences**	
	Questions exploring possible community influences	1) How did your family take (react to) your eligibility for the IFOMSSA Scholarship award? Probe: What do you know about adjustments, if any, made by your family regarding your eligibility for the scholarship Scheme?
		2) How do your friends/peers view the IFOMSSA Scholarship Scheme?
		3) How did your teachers/school principal explain the IFOMSSA Scholarship scheme to you? Probes: (a) Did your teachers make announcements about the Scholarship? (b) How often were the announcements made? (c) Where and when were the announcements made?
		4) What was the role of (or influence from) your community leaders? *(traditional or other community leaders, Zonal Education and/or Government officials)*
		5) What do you know about any television, radio or newspaper report of the IFOMSSA Scholarship Awards? ***Probe**: Did the media coverage have any effect on your approach to the Scheme?*
D	GENERAL	Do you have any comments, observations or suggestions you might want to share?

APPENDIX G

Description: Interview Questionnaire 2: Student Participant Non-Winners

Pre-Interview Questions (Breaking the Ice)

1. Thank you for accepting to be part of this interview.
2. I am . . . (name, professional background, location, and relationship to the project)
3. This interview concerns the IFOMSSA Senior Scholarships, introduced in 2017 to assist students.
4. This interview is designed to help us evaluate its impact, and see how improvements can be made.
5. Do you mind introducing yourself, please?
6. Please, kindly confirm your gender: (a) Male (b) Female (c) Other
7. Please, kindly confirm your age range: (a) <16 (b) 16 to 18 (c) 18 to 25 (d) Over 25
8. Which school or LGA are you affiliated with?
9. Did you undertake your WASSCE/NECO in the school above?
10. What year did you undertake your WASSCE or NECO?
11. How did you feature in the IFOMSSA Participant Scheme? (a) *From an eligible school but not selected for the IFOMSSA Challenge (b) Selected for, and participated in, the IFOMSSA Challenge but did not get scholarship (c) Participated in, the IFOMSSA Challenge and WON THE Scholarship*

MAIN QUESTIONS FOR STUDENTS (1B): PARTICIPANT NON-WINNERS		
A.	**Questions on the mixed needs and merit-based (hybrid) scholarship**	
	General	1) What do you know about the IFOMSSA Scholarship Scheme?
	Needs-based	1) How do you view the economic/financial status of your family?
		2) How do you see the economic/financial abilities of students in your school?
	Merits-based	3) How do you view "merit" in the entire selection process for the IFOMSSA Awards?
B.	**Questions on the students' own perception of "mass motivation for student beneficiaries"**	
	Impact on exam preparation	1) What do you think about the IFOMSSA Scholarship Scheme and students' **PREPARATIONS** for the senior certificate exams?
	Impact on exam performance	2) What do you think about the IFOMMSA Challenge and students' **PERFORMANCES** on the senior certificate examinations?
	Impact of PARTICIPATION in selection exam (moderate performers)	3) What do you think about **your participation** in the IFOMSSA Challenge and your **PREPARATION** for the certificate examinations?
	General Question (*to cover areas not thought of)*	4) What else do you have to say regarding the IFOMSSA Scholarship Scheme? ***Probes***: • *Motivation of student?* • *Academic performances of your colleagues at the senior certificate examinations?*
C.	**Questions on the students' perceived impact of the community involvement and influences**	
	Questions exploring possible community influences	1) How did your family take (react to) your eligibility for the IFOMSSA Scholarship award? Probe: What do you know about adjustments, if any, made by your family regarding your eligibility for the scholarship Scheme?
		2) How do your friends/peers view the IFOMSSA Scholarship Scheme?
		3) How did your teachers/school principal explain the IFOMSSA Scholarship scheme to you? Probe: (a) Did your teachers make announcements about the Scholarship? (b) How often were the announcements made? (c) Where and when were the announcements made?
		4) What was the role of (or influence from) your community leaders? *(traditional or other community leaders, Zonal Education and/or Government officials)*
		5) What do you know about any television, radio or newspaper report of the IFOMSSA Scholarship Awards? ***Probe****: Did the media coverage have any effect on your approach to the Scheme?*
D	GENERAL	Do you have any comments, observations or suggestions you might want to share?

APPENDIX H

Description: Interview Questionnaire 3: Student Non-Participant Non-Winners

Pre-Interview Questions (Breaking the Ice)

1. Thank you for accepting to be part of this interview.
2. I am . . . (name, professional background, location, and relationship to the project)
3. This interview concerns the IFOMSSA Senior Scholarships, introduced in 2017 to assist students.
4. This interview is designed to help us evaluate its impact, and see how improvements can be made.
5. Do you mind introducing yourself, please?
6. Please, kindly confirm your gender: (a) Male (b) Female (c) Other
7. Please, kindly confirm your age range: (a) <16 (b) 16 to 18 (c) 18 to 25 (d) Over 25
8. Which school or LGA are you affiliated with?
9. Did you undertake your WASSCE/NECO in the school above?
10. What year did you undertake your WASSCE or NECO?
11. How did you feature in the IFOMSSA Participant Scheme? (a) *From an eligible school but not selected for the IFOMSSA Challenge (b) Selected for, and participated in, the IFOMSSA Challenge but did not get scholarship (c) Participated in, the IFOMSSA Challenge and WON THE Scholarship*

NAIN QUESTIONS FOR STUDENTS (1C): NON-PARTICIPANTS NON-WINNERS		
A.	**Questions on the mixed needs and merit-based (hybrid) scholarship**	
	General	1) What do you know about the IFOMSSA Scholarship Scheme?
	Needs-based	1) How do you view the economic/financial status of your family?
		2) How do you see the economic/financial abilities of students in your school?
	Merits-based	3) How do you view "merit" in the entire selection process for the IFOMSSA Awards?
B.	**Questions on the students' own perception of "mass motivation for student beneficiaries"**	
	Impact on exam preparation	1) What do you think about the IFOMSSA Scholarship Scheme and students' **PREPARATIONS** for the senior certificate exams?
	Impact of just being ELIGIBLE (low performers) on exam performance	2) What do you think about **your school being eligible** for IFOMSSA Scholarship (whether you won the award or not) and your **PREPARATION** for the certificate examinations?
	General Question (*To cover areas not thought of)*	3) What else do you have to say regarding the IFOMSSA Scholarship Scheme? ***Probes***: • *Motivation of student?* • *Academic performances of your colleagues at the senior certificate examinations?*
C.	**Questions on the students' perceived impact of the community involvement and influences**	
	Questions exploring possible community influences	1) How did your family take (react to) your eligibility for the IFOMSSA Scholarship award? Probe: What do you know about adjustments, if any, made by your family regarding your eligibility for the scholarship Scheme?
		2) How do your friends/peers view the IFOMSSA Scholarship Scheme?
		3) How did your teachers/school principal explain the IFOMSSA Scholarship scheme to you? Probe: (d) Did your teachers make announcements about the Scholarship? (e) How often were the announcements made? (f) Where and when were the announcements made?
		4) What was the role of (or influence from) your community leaders? *(Traditional or other community leaders, Zonal Education and/or Government officials)*
		5) What do you know about any television, radio or newspaper report of the IFOMSSA Scholarship Awards? ***Probe***: *Did the media coverage have any effect on your approach to the Scheme?*
D	GENERAL	Do you have any comments, observations or suggestions you might want to share?

APPENDIX I

Description: Interview Questionnaire 4: Parents of Student Award Winners

Pre-Interview Questions (Breaking the Ice)

1. Thank you for accepting to be part of this interview.
2. I am . . . (name, professional background, location, and relationship to the project)
3. This interview concerns the IFOMSSA Senior Scholarships, introduced in 2017 to assist students.
4. This interview is designed to help us evaluate its impact, and see how improvements can be made.
5. Do you mind introducing yourself, please?
6. Please, kindly confirm your role in the IFOMSSA Scholarship Scheme:
    a. Parent: Mum or Dad?
    b. Guardian?
    c. Other?
7. Which school or LGA are you affiliated with?
8. How did you feature in the IFOMSSA Participant Scheme?
    a. Parent of a student that won the IFOMMSA award? Please confirm.
    b. What year did your ward participate in the Scheme?

MAIN QUESTIONS FOR PARENTS OF STUDENTS THAT WON		
A.	**Questions on the mixed needs and merit-based (hybrid) scholarship**	
	General	1) What do you know about the IFOMSSA Scholarship Scheme?
	Needs-based	1) How do you view the economic/financial status of your family?
	Merits-based	1) How do you view the "merit", if any, in the entire selection process for the IFOMSSA Awards?
B.	**Questions on teachers' own perception of "mass motivation for student beneficiaries"**	
	Perceived student view on motivation	1) How do you think your child felt about their chances with the IFOMSSA Scholarship Scheme?
	Own perception	2) How do you view "motivations" for students regarding the IFOMSSA Challenge?
	Own role	3) What do you think of your role in motivating the students about the Scheme?
	Impact on exam preparation	4) How do you think the IFOMSSA Scholarship Scheme might have affected students' **PREPARATIONS** for the senior certificate exams?
	Impact on exam performance	5) How do you think the IFOMMSA Challenge affected your child's **PERFORMANCES** on the senior certificate examinations?
	General Question (to cover areas not thought of)	6) What else do you have to say regarding the IFOMSSA Scholarship Scheme? ***Probes***: • *Motivation of student?* • *Academic performances at the senior certificate examinations?*
C.	**Questions on the teachers' perceived impact of the community involvement and influences**	
	Questions exploring possible community influences	1) How did your family take (react to) the eligibility of your child to the IFOMSSA Scholarship award? Probe: (a) Was any adjustments made by your family regarding your eligibility for the scholarship Scheme?
		2) What do you know about any television, radio or newspaper report of the IFOMSSA Scholarship Awards? ***Probe***: *a) Did the media coverage have any effect on your family's approach to the Scheme?*
D	GENERAL	Do you have any comments, observations or suggestions you might want to share?

APPENDIX J

Description: Interview Questionnaire 5: Teachers and School Principals

Pre-Interview Questions (Breaking the Ice)

1. Thank you for accepting to be part of this interview.
2. I am . . . (name, professional background, location, and relationship to the project)
3. This interview concerns the IFOMSSA Senior Scholarships, introduced in 2017 to assist students.
4. This interview is designed to help us evaluate its impact, and see how improvements can be made.
5. Do you mind introducing yourself, please?
6. How did you feature in the IFOMSSA Participant Scheme?
    a. **Teacher in a school that was eligible for the award?** ***Tell us more (subject taught, number of years IFOMSSA Scheme witnessed, etc.)***
    b. **Principal of a school that was eligible for the award:** ***Tell us more (number of years IFOMSSA Scheme witnessed, etc.)***
7. Which school or LGA are you affiliated with?
    a. Are you still in active service?

MAIN QUESTIONS FOR TEACHERS/PRINCIPALS		
A.	**Questions on the mixed needs and merit-based (hybrid) scholarship**	
	General	1) How do you view the entire IFOMSSA Scholarship Scheme?
	Needs-based	2) How do you describe the economic status of students in the schools benefitting from the IFOMSSA Scholarship Scheme?
		3) How do you view the economic status of the families whose children were beneficiaries of the IFOMSSA Scholarship Scheme?
	Merits-based	4) How do you view the "merit", if any, in the entire selection process for the IFOMSSA Awards?
B.	**Questions on teachers' own perception of "mass motivation for student beneficiaries"**	
	Perceived student view on motivation	1) How do you think your students feel about their selection chances for the IFOMSSA Challenge and winning of the actual Scholarship?
	Own perception	2) How do you view "motivations" for students regarding the IFOMSSA Challenge?
	Own role	3) What do you think of your role in motivating the students about the Scheme?
	Impact on exam preparation	4) What do you think about the IFOMSSA Scholarship Scheme and students' **PREPARATIONS** for the senior certificate exams?
	Impact on exam performance	5) What do you think about the IFOMMSA Challenge and students' **PERFORMANCES** at the senior certificate examinations?
	Impact on groups of **performers**	6) In your own view, what do you think of the role of the Scheme on different group of students (Scholarship winners and non-winners; Challenge participants and non-participants)?
	General Question (to cover areas not thought of)	7) What else do you have to say regarding the IFOMSSA Scholarship Scheme? ***Probes**: (a) Motivation of student? (b) Academic performances of your colleagues at the senior certificate examinations?*
C.	**Questions on the teachers' perceived impact of the community involvement and influences**	
	Questions exploring possible community influences	1) What do you know about how the families' reacted to the news of their childrens' eligibility for the IFOMSSA Scheme?
		2) What do you know about adjustments, if any, made by families regarding their children's eligibility to the Scheme?
		3) Tell me about discussions, if any, among the teachers/principals/parents/community leaders regarding the IFOMSSA Scholarship Scheme?
		4) Tell me about influences, if any, of teachers and school principals on students about the IFOMSSA Scholarship scheme?
		5) What was the role of (or influence from) your community leaders? *(Traditional or other community leaders, Zonal Education and/or Government officials)*
		6) What do you know about any television, radio or newspaper report of the IFOMSSA Scholarship Awards? ***Probe**: Did the media coverage have any effect on your approach to the Scheme?*
D	GENERAL	1) How has the enrolment patterns for the certificate examinations been before and after the scholarships were introduced? 2) Do you have any comments, observations or suggestions you might want to share?

APPENDIX K

Description: Interview Questionnaire 6: Community Leader/Government Staff

Pre-Interview Questions (Breaking the Ice)

1. Thank you for accepting to be part of this interview.
2. I am . . . (name, professional background, location, and relationship to the project)
3. This interview concerns the IFOMSSA Senior Scholarships, introduced in 2017 to assist students.
4. This interview is designed to help us evaluate its impact, and see how improvements can be made.
5. Do you mind introducing yourself, please?
6. How did you feature in the IFOMSSA Participant Scheme?
    a. Community Leader of a town that whose school and students benefitted from the award: *Tell us more (LGA where town is located, actual involvement, number of years IFOMSSA Scheme witnessed, etc.)*
    b. Government officer that was involved in aspects of the award: *Tell us more (role and nature of involvement, number of years IFOMSSA Scheme witnessed, etc.)*

MAIN QUESTIONS FOR COMMUNITY LEADERS AND ZONAL/GOVERNMENT STAFF/OFFICIALS		
A.	**Questions on the mixed needs and merit-based (hybrid) scholarship**	
	General	1) How do you view the entire IFOMSSA Scholarship Scheme?
	Needs-based	2) How do you describe the economic status of students in the schools benefitting from the IFOMSSA Scholarship Scheme?
		3) How do you view the economic status of the families whose children were beneficiaries of the IFOMSSA Scholarship Scheme?
	Merits-based	4) How do you view the "merit", if any, in the entire selection process for the IFOMSSA Awards?
B.	**Questions on community perception of "mass motivation for student beneficiaries"**	
	Perceived student view on motivation	1) How do you think your students feel about their selection chances for the IFOMSSA Challenge and winning of the actual Scholarship?
	Own perception	2) How do you view "motivations" for students regarding the IFOMSSA Challenge?
	Own role	3) What do you think of your role in motivating the students about the Scheme?
	Impact on exam preparation	4) What do you think about the IFOMSSA Scholarship Scheme and students' **PREPARATIONS** for the senior certificate exams?
	Impact on exam performance	5) What do you think about the IFOMMSA Challenge and students' **PERFORMANCES** at the senior certificate examinations?
	Impacts on **high, medium and low performers**	6) In your own view, what do you think of the role of the Scheme on different group of students (Scholarship winners and non-winners; Challenge participants and non-participants)?
	General Question (to cover areas not thought of)	7) What else do you have to say regarding the IFOMSSA Scholarship Scheme? ***Probes***: • *Motivation of student?* • *Academic performances of your colleagues at the senior certificate examinations?*
C.	**Questions on the perceived impact of community involvement and influences**	
	Questions exploring possible community influences	1) What do you know about how the families' reacted to the news of their childrens' eligibility for the IFOMSSA Scheme?
		2) What do you know about adjustments, if any, made by families regarding their children's eligibility to the Scheme?
		3) Tell me about discussions, if any, among the schools, community leaders, parents and government officials (if any) regarding the IFOMSSA Scholarship Scheme?
		4) Tell me about influences, if any, of you as a community leader or government officer within the Otuocha Educational Zone?
		5) What do you know about any television, radio or newspaper report of the IFOMSSA Scholarship Awards? ***Probe***: *(a) Did the media coverage have any effect on your approach to the Scheme?*
D	GENERAL	Do you have any comments, observations or suggestions you might want to share?

APPENDIX L

Description: Consent Forms 1: Parents and Participants 18 years or older

Consent Form for Participants Aged ≥ 18 Years (Staff, Parents, etc.): Page 1 of 3

[redacted]

Parent/ guardian Participant Information Sheet
Interview

[redacted] HREC Approval number: 22008858

Project Title

A mixed-methods study to explore the effects of educational scholarship schemes designed to engage communities in incentivizing high school students of developing African countries.

Research team contact details

Principal Investigator Details **Supervisor details**

[redacted]

Description

We wish to inform you that, as part of the programs associated with the [redacted], the scholarship scheme of the [redacted], a research study is being conducted with students and other participants affiliated to some selected senior secondary schools in the [redacted]. As you know, the [redacted] to Senior Secondary School Students III (SSS III), and have been conducted annually since 2017.

This letter is reaching you, either because your ward was enrolled in one of the selected schools, or because you were a community leader or staff with a school or Educational Zone overseeing the benefitting schools. as such, you have been been selected to take part in an interview designed to assess the experiences regarding the scheme. Students, staff, and community leaders are all being interviewed, particularly those that participated between 2017 and 2020.

The study will help us assess the impact of the scholarship scheme, and how things can be improved on. Your consent is needed before participation in this research, and this letter is to obtain this consent.

Participation

It is expected that the interviews will take between 30 and 60 minutes for each participant. Apart from this time consideration, nothing else is expected of you. There are also no foreseeable risks associated with participation in this research.

Please, kindly note that the involvement of all participants in this study is voluntary, and your decision whether to participate or not in the research will not impact any ongoing interactions you might have with the [redacted]. Strict confidentiality will also be maintained throughout. As such, even though you will be identified before the interviews are held, measures are in place to de-identify you and all other interview participants in any research outputs. Ethical clearance has been obtained from the [redacted] Human Research Ethics Committee (Reference is as stated above).

If you do not wish to withdraw from this project or withdraw data collected about yourselves, please contact the Research Team (contact details at the top of this form).

Your to take part or not, or even to withdraw at any time, will in no way impact current or future relationships with the [redacted]

Page 1 of 2

Expected benefits

The findings from this work may help to improve the efficacy of th[redacted]and may shape policies and the design of similar programs by other NGOs and governmental bodies, both within and outside Nigeria. some of these institutions might seek to adopt measures from this study, which is designed to benefit a large number of students, with any available financial aids, which might be limited

A copy of the finished work may be published in academic journals, and can be made available to you through the [redacted]. Alternatively, a request for a plain language summary of results can be made directly to us via the lead investigator[redacted]

Risks

As stated, it is expected that the interviews will take between 30 and 60 minutes for each participant. Apart from this time consideration, nothing else is expected of you. There are also no foreseeable risks associated with participation in this research.

Privacy and confidentiality

All comments and responses are confidential unless required by law.

Strict confidentiality will also be maintained throughout. As such, even though you will be identified before the interviews are held, measures are in place to de-identify you and all other interview participants in any research outputs.

Any data collected as a part of this project will be stored securely, as per [redacted] Research Data and Primary Materials Management Procedure.

Consent to participate

If you wish to accept this invitation to participate in the study, please kindly complete the attached Consent Form and deliver to the Zonal Director of [redacted]i. She can be reached through th[redacted] Awards Liaison Officer o[redacted]. Should your response be in the affirmative, we will be in touch thereafter, to arrange a convenient time and date for the interview, and to address any other concerns you might have. If you do not wish to participate, kindly let the Zonal Director know through the number above.

Questions

Please refer to the Research team contact details at the top of the form to have any questions answered or to request further information about this project.

Concerns or complaints

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of [redacted]. Manager of Research Integrity and Ethics on [redacted] or email [redacted] The Manager of Research Integrity and Ethics is not connected with the research project and can address your concern in an unbiased manner.

Thank you for taking the time to help with this research project. Please keep this document for your information.

[redacted]

Parental/guardian permission form
Interview

[redacted] HREC Approval number: HXREAXXX

Project Title

A mixed-methods study to explore the effects of educational scholarship schemes designed to engage communities in incentivizing high school students of developing African countries.

(Approval Number: 22008858)

Research team contact details

Principal Investigator Details **Supervisor details**

[redacted]

Description

I, ……, agree to participate in the research project titled as above, which is being conducted by researchers from the [redacted]

I have received, read and kept a copy of the participant information letter, which has been presented to me in plain language. I am aware of the options available to me for asking questions about this research, and I have no concerns. I understand the general purposes, risks and methods of this research.

I consent to participate in the research project and the following has been explained to me:

- the research may not be of direct benefit to me;
- my participation is completely voluntary;
- my right to withdraw from the study at any time without any implications to me;
- the potential risks including any possible inconvenience, discomfort or harm as a consequence of my participation in the research project;
- the steps that have been taken to minimise any possible risks;
- what I am expected and required to do;
- whom I should contact for any complaints with the research or the conduct of the research;
- I am able to request a copy of the research findings and reports;
- security and confidentiality of my personal information.

In addition, I consent to:

- audio-visual recording of any part of or all research activities;
- publication of results from this study on the condition that my identify will not be revealed.

Position: …… (please print)

Name (first & last)			
Signature		**Date**	

APPENDIX M

Description: Consent Forms 2: Participants Under 18 years

Consent Form for Participants Aged < 18 Years: Page 1 of 3

[redacted]

Under 18 years Participant Information Sheet
Interview

[redacted] **HREC Approval number: 22008858**

Project Title

A mixed-methods study to explore the effects of educational scholarship schemes designed to engage communities in incentivizing high school students of developing African countries.

Research team contact details

Principal Investigator Details	Supervisor details
[redacted]	

Description

We wish to inform you that, as part of the programs associated with th[redacted], the scholarship scheme of the [redacted] a research study is being conducted with students in some selected senior secondary schools in the [redacted] As you know, the IFOMSSA Senior Awards cover Senior Secondary School Students III (SSS III), and have been conducted annually since 2017.

This letter is reaching you because you were enrolled in one of the selected schools, and have been selected to take part in an interview designed to assess their experiences regarding the scheme. The interviews will cover students that participated between 2017 and 2020. It is not exclusive to those who received the awards. Some of those who did not eventually receive the award are also being interviewed, and we believe that you might be within one of these categories.

The study will help us assess the impact of the scholarship scheme, and how things can be improved on. Your consent is needed before participation in this research, and this letter is to obtain this consent.

Participation

It is expected that the interviews will take between 30 and 60 minutes for each participant. Apart from this time consideration, nothing else is expected of you. There are also no foreseeable risks associated with participation in this research.

Please, kindly note that the involvement of all participants in this study is voluntary, and your decision whether to participate or not in the research will not impact your ongoing interactions you might have with the IFOMSSA scheme. Strict confidentiality will also be maintained throughout. As such, even though you will be identified before the interviews are held, measures are in place to de-identify you and all other interview participants in any research outputs. Ethical clearance has been obtained from the [redacted]d Human Research Ethics Committee (Reference is as stated above).

If you do not wish to withdraw from this project or withdraw data collected about yourselves, please contact the Research Team (contact details at the top of this form).

Your decision whether they take part, do not take part, or take part and then withdraw, will in no way impact their current or future relationship with the [redacted]

Page 1 of 2

Expected benefits

The findings from this work may help to improve the efficacy of the [redacted], and may shape policies and the design of similar programs by other NGOs and governmental bodies, both within and outside Nigeria. some of these institutions might seek to adopt measures from this study, which is designed to benefit a large number of students, with any available financial aids, which might be limited

A copy of the finished work may be published in academic journals, and can be made available to you through the Ministry of Basic Education in Anambra State. Alternatively, a request for a plain language summary of results can be made directly to us via the lead investigator [redacted]

Risks

As stated, it is expected that the interviews will take between 30 and 60 minutes for each participant. Apart from this time consideration, nothing else is expected of you. There are also no foreseeable risks associated with participation in this research.

Privacy and confidentiality

All comments and responses are confidential unless required by law.

Strict confidentiality will also be maintained throughout. As such, even though you will be identified before the interviews are held, measures are in place to de-identify you and all other interview participants in any research outputs.

Any data collected as a part of this project will be stored securely, as per University of Southern Queensland's Research Data and Primary Materials Management Procedure.

Consent to participate

If you wish to accept this invitation to participate in the study, please kindly complete the attached Consent Form, and deliver to the [redacted]. She can be reached through the IFOMSSA Awards Liaison Officer on [redacted]. Should your response be in the affirmative, we will be in touch thereafter, to arrange a convenient time and date for the interview, and to address any other concerns you might have. If you do not wish to participate, kindly let the Zonal Director know through the number above.

Questions

Please refer to the Research team contact details at the top of the form to have any questions answered or to request further information about this project.

Concerns or complaints

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of Southern Queensland, Manager of Research Integrity and Ethics on [redacted] or email [redacted]. The Manager of Research Integrity and Ethics is not connected with the research project and can address your concern in an unbiased manner.

Thank you for taking the time to help with this research project. Please keep this document for your information.

[redacted]

Consent form
Interview

USQ HREC Approval number: HXREAXXX

Project Title

A mixed-methods study to explore the effects of educational scholarship schemes designed to engage communities in incentivizing high school students of developing African countries.

(Approval Number: 22008858)

Research team contact details

Principal Investigator Details **Supervisor details**

[redacted]

Statement of consent

By signing below, you are indicating that you:

- Have read and understood the information document regarding this project. ☐Yes / ☐ No
- Have had any questions answered to your satisfaction. ☐Yes / ☐ No
- Understand that if you have any additional questions, you can contact the research team. ☐Yes / ☐ No
- Are over 18 years of age. ☐Yes / ☐ No
- Understand that any data collected may be used in future research activities ☐Yes / ☐ No
- Understand that the interview will be audio/video recorded ☐Yes / ☐ No
    - Understand that you can participate in the interview without being audio/ video recorded
    - If you **do not** want to tbe audio/video recorded during the interview, please initial here: ☐Yes / ☐ No
- Agree to participate in the project. ☐Yes / ☐ No

Name (first & last)			
Signature		**Date**	

Please return this document to a research team member before undertaking the interview.

Page 1 of 1

APPENDIX N

Description: IFOMSSA Challenge Participants and Winners – 2017

1. 2017 IFOMSSA Challenge List

S/NO	NAME OF STUDENT	GENDER	AGE	HOME TOWN	L. G. A	NAME OF SCHOOL
1	Ogugua Eunice	F	16	Aguleri	Anambra East	Justice Chinwuba Memorial Secondary School, Aguleri
2	Aniijah Mary	F	16	Aguleri	Anambra East	Justice Chinwuba Memorial Secondary School, Aguleri
3	Okafor Emeka	M	17	Aguleri	Anambra East	Justice Chinwuba Memorial Secondary School, Aguleri
4	Nzekwe Peter O.	M	16	Enugu-Out Aguleri	Anambra East	Col. Mike Attah Secondary School, Enugu-Otu
5	Igweze Tochukwu R.	F	15	Enugu-Out Aguleri	Anambra East	Col. Mike Attah Secondary School, Enugu-Otu
6	Chukwuemeka Basil C.	M	16	Enugu-Out Aguleri	Anambra East	Col. Mike Attah Secondary School, Enugu-Otu
7	Onuorah Chinyere B.	F	18	Aguleri	Anambra East	Community Secondary School, Umuoba-Anam
8	Obiozor Ifunanya L.	F	18	Nkpor	Idemili North	Community Secondary School, Umuoba-Anam
9	Ezeobodo Mmasichukwu G.	F	16	Aguleri	Anambra East	Community Secondary School, Umuoba-Anam
10	Ajana Michael	M	18	Nando	Anambra East	Community Secondary School, Nando
11	Michael Mmelikam	M	16	Nando	Anambra East	Community Secondary School, Nando
12	Nwadiogbu Gloria	F	16	Nando	Anambra East	Community Secondary School, Nando
13	Nnatuanya Jacinta	F	17	Igbariam	Anambra East	Community High School, Igbariam
14	Igboemeka Modesta	F	18	Igbariam	Anambra East	Community High School, Igbariam
15	Atuanya Chinaza	F	18	Igbariam	Anambra East	Community High School, Igbariam
16	Okechukwu Emmanuel	M	18	Umueri	Anambra East	Government Technical College, Umueri
17	Obidi Tochukwu	M	19	Umueri	Anambra East	Government Technical College, Umueri
18	Obiora Abigail	F	19	Agame	Delta	Government Technical College, Umueri
19	Ezeh Obinna Victor	M	16	Nsukka	Nsukka	Fr. Joseph Memorial High School, Aguleri
20	Ezechukwu Franklin	M	18	Aguleri	Anambra East	Fr. Joseph Memorial High School, Aguleri
21	Oforka Victor	M	18	Aguleri	Anambra East	Fr. Joseph Memorial High School, Aguleri
22	Udenze Anthonia	F	19	Umueze Anam	Anambra East	Community High School, Nsugbe
23	Anierobi Rhodachris	F	17	Nsugbe	Anambra East	Community High School, Nsugbe
24	Okafor Ifeoma O.	F	17	Nsugbe	Anambra East	Community High School, Nsugbe
25	Omenlu Grace	F	17	Awhum	Udi	Community High School, Nsugbe
26	Nwali Nnenna	F	17	Efion	Abakaliki	Community High School, Nsugbe
27	Ogugua Onyinye	F	17	Igbakwu	Ayamelum	Community High School, Nsugbe
28	Anozie Chinonso	M	18	Nsugbe	Anambra East	Community High School, Nsugbe
29	Madubuko Prosper	M	17	Nsugbe	Anambra East	Community High School, Nsugbe
30	Udah Eucharia O.	F	18	Mgbago Umueri	Anambra East	Stella Marist College, Umueri
31	Odili Linda C.	F	18	Ivite Aguleri	Anambra East	Stella Marist College, Umueri
32	Eze Rita N.	F	17	Ogbaku	Awgu LGA	Stella Marist College, Umueri
33	Adike Goodness C.	F	18	Umueri	Anambra East	Community Secondary School, Ifite-Umueri
34	Dominic Chidimma E.	F	17	Umueri	Anambra East	Community Secondary School, Ifite-Umueri
35	Nnoveli Judith C.	F	17	Umueri	Anambra East	Community Secondary School, Ifite-Umueri

2017 [redacted] ** Awards: Final list of students eligible for the [redacted] on January 25th 2017:

Established in loving memory of [redacted]

2. 2017 IFOMSSA Senior (and Junior) Scholarship Winners' List

[redacted]

2017 "SENIOR IFOMSSA AWARDS" WINNERS

MERIT LIST

S/N	Name of Student (Exam Number)	Sex	Town of Origin	Name of School
1	**ADIKE, Goodness** *(OTZ/IFF/2017/008)*	F	Umueri	CSS IFITE-UMUERI
2	**OBIOZOR, Ifunanya** *(OTZ/IFF/2017/012)*	F	Nkpor	CSS UMUOBA-ANAM
3	**DOMINIC, Chidimma** *(OTZ/IFF/2017/016)*	F	Umueri,	CSS IFITE-UMUERI
4	**UDENZE, Anthonia** *(OTZ/IFF/2017/010)*	F	Umueze-Anam	CHS NSUGBE
5	**EZEH, Obinna** (OTZ/IFF/2017/004)	M	Nsukka	FR. JMHS AGULERI
6	**NWADIOGBU, Gloria** (OTZ/IFF/2017/025)	F	Nando	CSS NANDO
7	**OFORKA, Victor** (OTZ/IFF/2017/024)	M	Aguleri	FR. JMHS AGULERI

CATCHMENT LIST

S/N	Name of Student (Exam Number)	Sex	Town of Origin	Name of School
8	**OKAFOR, Oluchukwu** *(OTZ/IFF/2017/023)*	F	Nsugbe	CHS NSUGBE
9	**ANIEROBI, Rhoda** *(OTZ/IFF/2017/014)*	F	Nsugbe	CHS NSUGBE
10	**MADUBUKO, Prosper** *(OTZ/IFF/2017/018)*	M	Nsugbe	CHS NSUGBE

***IFOMSSA (Ifedioramma Okafor Memorial Secondary School Academic) Awards*

({ HYPERLINK [redacted])

2017 "JUNIOR IFOMSSA AWARDS" WINNERS

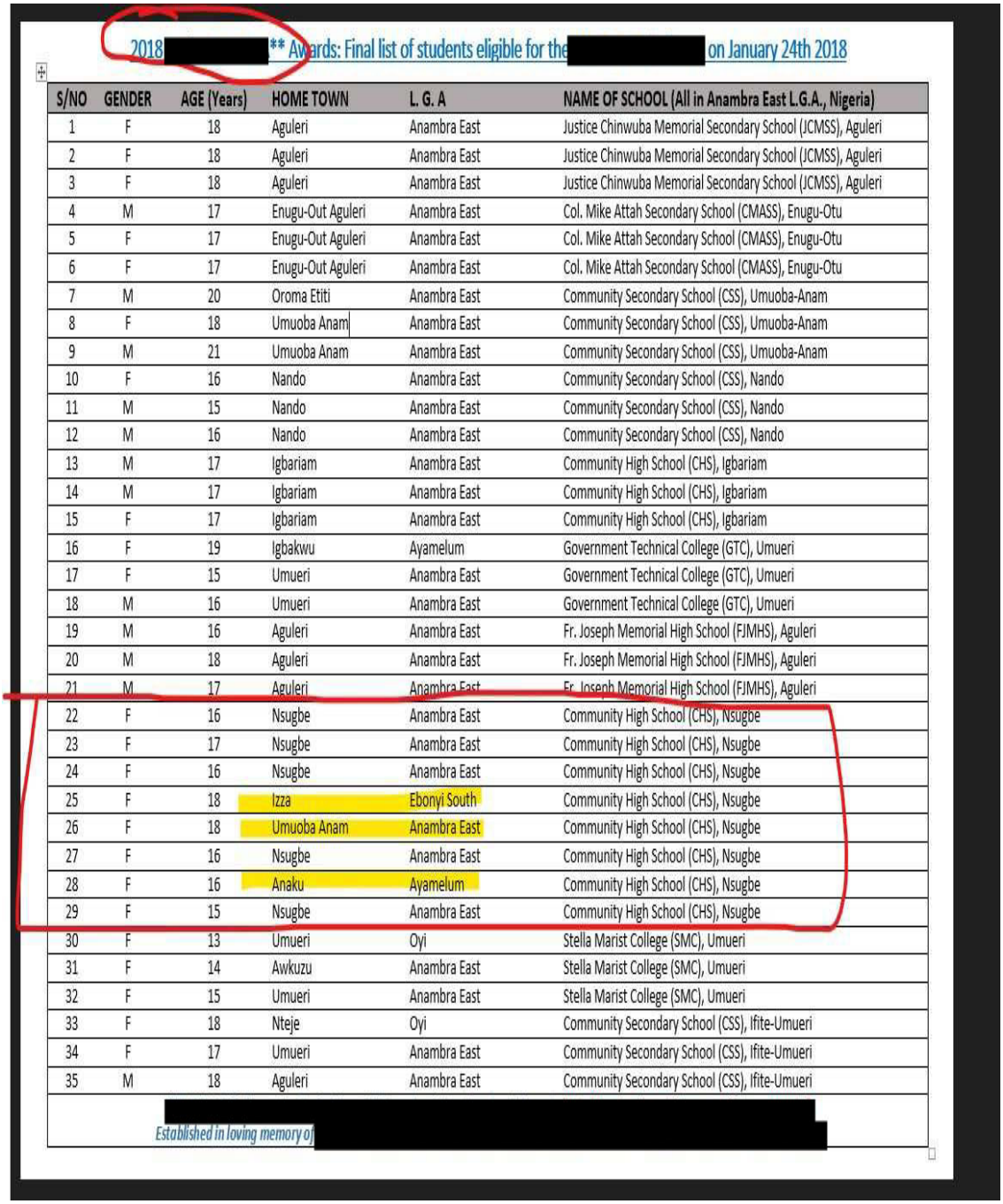
All are indigenes of Nsugbe, and are enrolled at the Community High School, Nsugbe.

1. NWABISI, Marycynthia (Female)
2. **OGBUAGU,** Simeon (Male)
3. **ONYEOBI,** Stephanie (Female)
4. **NWAKASI,** Ebuka (Male)
5. **OKOYE,** Favour (Female)

APPENDIX O

Description: IFOMSSA Challenge Participants and Winners – 2018

1. 2018 IFOMSSA Challenge List



2018 [redacted] ** Awards: Final list of students eligible for the [redacted] on January 24th 2018

S/NO	GENDER	AGE (Years)	HOME TOWN	L. G. A	NAME OF SCHOOL (All in Anambra East L.G.A., Nigeria)
1	F	18	Aguleri	Anambra East	Justice Chinwuba Memorial Secondary School (JCMSS), Aguleri
2	F	18	Aguleri	Anambra East	Justice Chinwuba Memorial Secondary School (JCMSS), Aguleri
3	F	18	Aguleri	Anambra East	Justice Chinwuba Memorial Secondary School (JCMSS), Aguleri
4	M	17	Enugu-Out Aguleri	Anambra East	Col. Mike Attah Secondary School (CMASS), Enugu-Otu
5	F	17	Enugu-Out Aguleri	Anambra East	Col. Mike Attah Secondary School (CMASS), Enugu-Otu
6	F	17	Enugu-Out Aguleri	Anambra East	Col. Mike Attah Secondary School (CMASS), Enugu-Otu
7	M	20	Oroma Etiti	Anambra East	Community Secondary School (CSS), Umuoba-Anam
8	F	18	Umuoba Anam	Anambra East	Community Secondary School (CSS), Umuoba-Anam
9	M	21	Umuoba Anam	Anambra East	Community Secondary School (CSS), Umuoba-Anam
10	F	16	Nando	Anambra East	Community Secondary School (CSS), Nando
11	M	15	Nando	Anambra East	Community Secondary School (CSS), Nando
12	M	16	Nando	Anambra East	Community Secondary School (CSS), Nando
13	M	17	Igbariam	Anambra East	Community High School (CHS), Igbariam
14	M	17	Igbariam	Anambra East	Community High School (CHS), Igbariam
15	F	17	Igbariam	Anambra East	Community High School (CHS), Igbariam
16	F	19	Igbakwu	Ayamelum	Government Technical College (GTC), Umueri
17	F	15	Umueri	Anambra East	Government Technical College (GTC), Umueri
18	M	16	Umueri	Anambra East	Government Technical College (GTC), Umueri
19	M	16	Aguleri	Anambra East	Fr. Joseph Memorial High School (FJMHS), Aguleri
20	M	18	Aguleri	Anambra East	Fr. Joseph Memorial High School (FJMHS), Aguleri
21	M	17	Aguleri	Anambra East	Fr. Joseph Memorial High School (FJMHS), Aguleri
22	F	16	Nsugbe	Anambra East	Community High School (CHS), Nsugbe
23	F	17	Nsugbe	Anambra East	Community High School (CHS), Nsugbe
24	F	16	Nsugbe	Anambra East	Community High School (CHS), Nsugbe
25	F	18	Izza	Ebonyi South	Community High School (CHS), Nsugbe
26	F	18	Umuoba Anam	Anambra East	Community High School (CHS), Nsugbe
27	F	16	Nsugbe	Anambra East	Community High School (CHS), Nsugbe
28	F	16	Anaku	Ayamelum	Community High School (CHS), Nsugbe
29	F	15	Nsugbe	Anambra East	Community High School (CHS), Nsugbe
30	F	13	Umueri	Oyi	Stella Marist College (SMC), Umueri
31	F	14	Awkuzu	Anambra East	Stella Marist College (SMC), Umueri
32	F	15	Umueri	Anambra East	Stella Marist College (SMC), Umueri
33	F	18	Nteje	Oyi	Community Secondary School (CSS), Ifite-Umueri
34	F	17	Umueri	Anambra East	Community Secondary School (CSS), Ifite-Umueri
35	M	18	Aguleri	Anambra East	Community Secondary School (CSS), Ifite-Umueri

[redacted]

Established in loving memory of [redacted]

2. 2018 IFOMSSA Senior (Junior) Scholarship Winners' List

[redacted]

2018 [redacted] AWARDS" WINNERS

S/N	Name of Student (Exam Number)	Sex	Town of Origin	Name of School
	MERIT LIST			
1	**ODEH,** Vivian C. *OTZ/IFOMSSA/EX/2018/026*	F	IZZA	CHS NSUGBE
2	**ENEMUO,** Chidera V. *OTZ/IFOMSSA/EX/2018/010*	M	AGULERI	FJMHS AGULERI
3	**AKPEH,** Stella C. *OTZ/IFOMSSA/EX/2018/002*	F	NSUGBE	CHS NSUGBE
4	**AMUA,** Chidimma ***C.****OTZ/IFOMSSA/EX/2018/003*	F	AWKUZU	SMC UMUERI
5	**ABANZU,** Ebenezar C. (OTZ/IFF/2017/004)	M	NANDO	CSS NANDO
6	**OKOYE,** Cyprian C. *OTZ/IFOMSSA/EX/2018/030*	M	OROMA-ETITI	CSS UMUOBA-ANAM
7	**DIBOR,** Israel C. *OTZ/IFOMSSA/EX/2018/008*	M	AGULERI	FJMHS AGULERI
8	**ANIJAH,** Chibuike S. *OTZ/IFOMSSA/EX/2018/024*	M	NSUGBE	CHS NSUGBE
	CATCHMENT LIST			
9	**EZEDIGWE JOY** *OTZ/IFOMSSA/EX/2018/011*	F	UMUERI	SMC UMUERI
10	**NNELI,** Fidelia C. *OTZ/IFOMSSA/EX/2018/027*	F	IGBARIAM	CHS IGBARIAM
11	**NWACHUKWU,** Chinyere B. *OTZ/IFOMSSA/EX/2018/021*	F	Umuoba-Anam	CHS NSUGBE
12	**ONUORAH,** Angela C. *OTZ/IFOMSSA/EX/2018/031*	M	NSUGBE	CHS NSUGBE

2018 "JUNIO[redacted] AWARDS" WINNERS

All are indigenes of Nsugbe, and are enrolled at the Community High School, Nsugbe.

1. **OBIEKWE,** Franklin (Male)
2. **IFEADI,** Emmanuel (Male)
3. **NWAJI,** Chinenye (Female)
4. **IGBOANUGO,** Uju (Female)
5. **EMOUH,** Anthony (Male)
6. **OKONKWO,** Chidera (Male)
7. **ONUORA,** Raphael (Male)
8. **OKIWE,** Emmanuel (Male)
9. **CHINWUBA,** Frank (Male)
10. **MGBATAOGU,** Augustine (Male)

APPENDIX P

Description: IFOMSSA Challenge Participants and Winners – 2019

1. 2019 IFOMSSA Challenge List

S/NO	NAME OF STUDENT	GENDER	AGE	HOME TOWN	L.G.A/State/Country	NAME OF SCHOOL
1	IGBOKWU, Stella	19	F	Igbariam	Anambra East	Community High School (CHS), Igbariam
2	EKWUNIFE, Emmanuel	19	M	Igbariam	Anambra East	Community High School (CHS), Igbariam
3	MGBAKOR, Christian		M	Igbariam	Anambra East	Community High School (CHS), Igbariam
4	KALU, Stephen	16	M	Amaigbo	Nwangele (Imo State)	Community Secondary School (CSS), Umuoba-Anam
5	AKWUOBA, Virginia	19	F	Umuoba Anam	Anambra East	Community Secondary School (CSS), Umuoba-Anam
6	ILOCHUKWU, Jennifer	16	F	Aguleri	Anambra East	Community Secondary School (CSS), Umuoba-Anam
7	ABANZU, Ebenezar	17	M	Nando	Anambra East	Community Secondary School (CSS), Nando
8	ODINAKACHUKWU, Lucy	15	F	Nando	Anambra East	Community Secondary School (CSS), Nando
9	ONYEMALU, Ogochukwu	18	F	Nando	Anambra East	Community Secondary School (CSS), Nando
10	NNAEMEKA, Onyinyechi	16	F	Aguleri	Anambra East	Justice Chinwuba Memorial Secondary School (JCMSS), Aguleri
11	MACHIE, Destiny	16	F	Aguleri	Anambra East	Justice Chinwuba Memorial Secondary School (JCMSS), Aguleri
12	CHUKWUKA, Lotachi	17	F	Aguleri	Anambra East	Justice Chinwuba Memorial Secondary School (JCMSS), Aguleri
13	AKWUEZE, Anthony	16	M	Umueri	Anambra East	Government Technical College (GTC), Umueri
14	ONUKWUBE, Fidelis	20	M	Umueri	Anambra East	Government Technical College (GTC), Umueri
15	IKEAGU, Helen	16	F	Umueri	Anambra East	Government Technical College (GTC), Umueri
16	OFORKA, Benjamin	16	M	Aguleri	Anambra East	Fr. Joseph Memorial High School (FJMHS), Aguleri
17	OFORZO, Gabriel	17	M	Oroma-Etiti	Anambra East	Fr. Joseph Memorial High School (FJMHS), Aguleri
18	UDDOH, Cornelius	16	M	Ogidi	Idemmili North	Fr. Joseph Memorial High School (FJMHS), Aguleri
19	PIUS, Michael	18	M	Obbagbene	Delta (Delta State)	Community High School (CHS), Nsugbe
20	ODEH, Christian	17	M	Okorffia	Ebonyi South (Ebonyi)	Community High School (CHS), Nsugbe
21	ASARE, Emmanuel	16	M	Krobo	Kumasi (Ghana)	Community High School (CHS), Nsugbe
22	OSITA, Chiagozie	18	M	Nsugbe	Ebonyi South	Community High School (CHS), Nsugbe
23	MAKO, Onyebuchi	17	M	Nsugbe	Anambra East	Community High School (CHS), Nsugbe
24	AKWOBI, Precious	17	F	Nsugbe	Anambra East	Community High School (CHS), Nsugbe
25	UCHE, Okafor	17	F	Nsugbe	Anambra East	Community High School (CHS), Nsugbe
26	IKECHUKWU, Esther	17	F	Nsugbe	Anambra East	Community High School (CHS), Nsugbe
27	ONWUDEBE, Helen	16	F	Umueri	Anambra East	Stella Marist College (SMC), Umueri
28	EGWUATU, Favour	15	F	Aguleri	Anambra East	Stella Marist College (SMC), Umueri
29	EKWEONU, Onyinye	16	F	Umueri	Anambra East	Stella Marist College (SMC), Umueri
30	OZOEMENAM, Ifeoma	17	F	Umueri	Anambra East	Community Secondary School (CSS), Ifite-Umueri
31	CHUKWUJEKWU, Ogechi	17	F	Umueri	Anambra East	Community Secondary School (CSS), Ifite-Umueri
32	CHIEKE, Blessing	18	F	Umueri	Anambra East	Community Secondary School (CSS), Ifite-Umueri
33	GINIKANWA, Angela	19	F	Ifite-Ogwuari	Ayamelum	Community Secondary School (CSS), Ifite-Ogwuari
34	EJIKEME, Miracle	17	F	Anaku	Ayamelum	Community High School (CHS), Anaku
35	ANEDU, Chinyere	16	F	Omor	Ayamelum	Community Secondary School (ACSS), Omor
36	NSOKE, Promise	18	F	Umueze-Anam	Anambra West	Community Secondary School (CSS), Umueze-Anam
37	OKEKE, Uchenna	18	M	Mmiata-Anam	Anambra West	Community Secondary School (CSS), Mmiata-Anam
38	EKWEALOR, Benedeth	18	F	Umuem-Anam	Anambra West	Christ the King College (CKC) Umuem-Anam

2019 [redacted] ** Awards: Final list of students eligible for the [redacted] on Monday, February 11th, 2019

2. **2019 IFOMSSA Senior (and Junior) Winners' List**

WINNERS' LIST - The 2019 (3rd [redacted] SENIOR AND JUNIOR AWARDS (22/02/2019)

IFOMSSA SENIOR: MERIT

S/N	Name of Student	Sex/Age	Student's Town of Origin & LGA	Name of School (All in Otuocha Educational Zone (PPSSC) Nigeria
1.	**KALU**, Stephen	M/16	**Amaigbo**, Nwangele LGA, Imo State, Nigeria	Community Secondary School, Umuoba Anam.
2.	**ABANZU**, Ebenezar	M/17	**NANDO**, Anambra East LGA, Anambra State, Nigeria	Community Secondary School, Nando.
3.	**AKWUEZE**, Anthony	M/16	**UMUERI**, Anambra East LGA, Anambra State, Nigeria	Government Technical College (GTC, Umueri)
4.	**EKWEONU**, Onyinye	F/16	**UMUERI**, Anambra East LGA, Anambra State, Nigeria	Stella Marist College (SMC), Umueri.
5.	**OFORKA**, Benjamin	M/16	**AGULERI**, Anambra East LGA, Anambra State, Nigeria	Father Joseph Memorial High School, Aguleri.
6.	**ODINAKACHUKWU**, Lucy	F/15	**NANDO**, Anambra East LGA, Anambra State, Nigeria	Community Secondary School, Nando.
7.	**EJIKEME**, Miracle	F/17	**ANAKU**, Ayamelum LGA, Anambra State, Nigeria	Ogbe High School (OHS), Anaku.

IFOMSSA SENIOR: CATCHMENT

S/N	Name of Student	Sex	Student's Town of Origin & LGA	Name of School
8.	**UCHE**, Okafor	F/17	**NSUGBE**, Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe
9.	**EKWUNIFE**, Emmanuel	M/19	**IGBARIAM**, Anambra East LGA, Anambra State, Nigeria	Community High School, Igbariam
10.	**AKWUOBA**, Virginia	F/19	**Umuoba-Anam**, Anambra East LGA, Anambra State, Nigeria	Community Secondary School, Umuoba Anam
11.	**MAKO**, Onyebuchi	M/17	**NSUGBE**, Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe
12.	**OSITA**, Chiagozie	M/18	**NSUGBE**, Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe

IFOMSSA JUNIOR

S/N (All 10 are indigenes of Nsugbe, enrolled at Community High School, NSUGBE, Anambra State, Nigeria)

13. **MOKWE**, Onyeka (M/15)
14. **MOLOKWU**, Chijioke (M/14)
15. **ANIJAH**, Tochukwu (M/16)
16. **CHUKWUMA**, Chisom (M/15)
17. **CHKWUDI**, Chioma (F/14)
18. **OKAFOR**, Mercy (F/17)
19. **MADUBUEZE**, Blessing (F/14)
20. **OKAFOR**, Emmanuel (M/16)
21. **OBI**, Chidera 9M/16)
22. **EJIKE**, Henry (M/15)
23. **NWEKE**, Jennifer (F/15)
24. **NWEKE**, Henry (M/14)
25. **OBIEZUEZUE**, EBUKA (M/14)
26. **OKECHUKWU**, Onyebuchi (M/14)
27. **IFEADI**, Chijioke (M/15)
28. **OKAFOR**, Chinenye (M/16)
29. **IKEM**, Ukamaka (F/13)
30. **EKWEALOR**, Precious (F/15)
31. **OSITA**, Dumebi (F/16)
32. **IKEH**, Chukwujekwu (M/14)
33. **IBEKWE**, Godwin (M/16)
34. **AKWUE**, Mmesoma (F/15)
35. **OKAFOR**, Joy (F/16)

NOTES

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APPENDIX Q

Description: IFOMSSA Challenge Participants and Winners – 2020

1. 2020 IFOMSSA Challenge List

WINNERS' LIST - The 2020 (4th) [redacted] (12/02/2020)

2020 SENIOR SCHOLARSHIP : WINNERS BASED ON MERIT (7)				
S/N	Name of Student	Sex/Age	Student's Home Town of Origin & LGA	Name of School & Local Govt Area (LGA)
1.	EZEH, Emmanuel	M/18	OKPUJE, Nsukka LGA, Enugu State, Nigeria	Father Joseph Memorial High School, Aguleri (Anambra East)
2.	OBIORAH, Gospel	M/17	IFITE-OGWARI, Ayamelum LGA, Anambra State, Nigeria	Community Secondary School (CSS), Omor (Ayamelum)
3.	OBIAJULU, Amarachi	F/16	NENI, Anaocha LGA, Anambra State, Nigeria	Stella Marist College (SMC), Umueri (Anambra East)
4.	EKENE, Ebuka	M/19	UMUMBO, Ayamelum LGA, Anambra State, Nigeria	Community Secondary School (CSS), Umumbo (Ayamelum)
5.	EKEH, Peter	M/17	Enugu-Ezike, Igbo Eze North LGA, Enugu State, Nigeria	Father Joseph Memorial High School, Aguleri (Anambra East)
6.	OLIOBI, Emmanuel	M/16	NIMO, Njikoka LGA, Anambra State, Nigeria	Father Joseph Memorial High School, Aguleri (Anambra East)
7.	ANOSIKE, Chidiogo	F/16	UMUEZE ANAM, Ayamelum LGA, Anambra State, Nigeria	Community High School, Nsugbe (Anambra East)
2020 SENIOR SCHOLARSHIP: WINNERS BASED ON CATCHMENT (8)				
S/N	Name of Student	Sex/Age	Student's Home Town of Origin & LGA	Name of School (All are from Anambra East LGA)
8.	NDIVE, Emmanuel	M/16	UMUERI, Anambra East LGA, Anambra State, Nigeria	Community Secondary School (CSS), Ifite-Umueri
9.	NNELI, Juliana	F/18	NANDO, Anambra East LGA, Anambra State, Nigeria	Community Secondary School (CSS), Nando
10.	CHRIS-NATE, Chinenye	F/16	AGULERI, Anambra East LGA, Anambra State, Nigeria	Stella Marist College (SMC), Umueri
11..	EKWENZE, Mary-John	F/19	UMUOBA-ANAM, Anambra East LGA, Anambra State	Community Secondary School (CSS), Umueze-Anam
12.	OGBUAGU, Simeon	M/16	NSUGBE, Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe
13.	NWABUISI, Marycynthia	F/16	NSUGBE, Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe
14.	ONYEOBI, Stephanie	F/16	NSUGBE, Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe
15.	MGBAKOR, Christian	M/16	IGBARIAM, Anambra East LGA, Anambra State, Nigeria	Community High School, Igbariam

2020 JUNIOR SCHOLARSHIP WINNERS (37)							
S/N	(All 37 winners are indigenes of Nsugbe Town that are enrolled at Community High School, NSUGBE, Anambra State, Nigeria)						
16.	AKWOBI, PROMISE; F/14	26.	AKUDO, SUCCESS; F/15	36.	AKUDO, CHRISTOPHER; M/18	46.	CHARLES, WISDOM; M/15
17.	MOGU, CHINONSO; M/17	27.	NWOYE, DUMEBI; M/16	37.	OKOYE, AMAECHI; M/18	47.	AKWOBI, FRANCIS; M/15
18.	MOGU, TOCHUKWU; M/16	28.	EMEKA, CHINENYE; F/15	38.	OKAFOR, ISAIAH; M/14	48.	NWALUNO, CHINECHEREM; M/16
19.	UCHENNA, PRECIOUS; F/14	29.	OBIEKWE, CHIOMA; F/15	39.	AKWUE, GODWIN; M/16	49.	EBELE, CHUKWUDI; F/15
20.	OGBAGU, LIVING HOPE; M/17	30.	IKEM, PETER; M/15	40.	CHINWEZE, OKECHUKWU; M/16	50.	NWOSA, MMESOMA; F/15
21.	ALOKWU, SOMTO; F/15	31.	EZEDU, CHINENYE; F/15	41.	IFEADI, ONYEKA; M/16	51.	OKAFOR, MIRACLE OLUEBUBE; F/16
22.	UZOECHINA, SCHOLARSTICA; F/15	32.	ONYEOBI, CHIDERA; F/14	42.	UDUH, OLUEBUBE; F/15	52.	CHUKWUNONSO, Kosiso; M/15
23.	ADEH, ODERAH; M/16	33.	ONYEKWU, CHIEMELIE; M/15	43..	NWEKE, NNENNA; F/14		
24.	NWOYE, MARYCYNTHIA; F/15	34.	EKWEALOR, CHINENYE; F/15	44.	NWAKASI, CHINENYE; F/14		
25.	NWARINNE, PAUL; M/15	35.	OKONKWO, AMAECHI; M/15	45.	OBIUDU, KAMSI; F/13		

NOTES (TOTAL WINNERS FOR THE 2020 SCHOLARSHIP AWARDS = 52)

[redacted]

[redacted]

2. 2020 IFOMSSA Senior (and Junior) Winners' List

WINNERS' LIST - The 2020 (4th) [redacted] (12/02/2020)

2020 SENIOR SCHOLARSHIP : WINNERS BASED ON MERIT (7)				
S/N	Name of Student	Sex/Age	Student's Home Town of Origin & LGA	Name of School & Local Govt Area (LGA)
1.	**EZEH,** Emmanuel	M/18	**OKPUJE,** Nsukka LGA, Enugu State, Nigeria	Father Joseph Memorial High School, Aguleri (Anambra East)
2.	**OBIORAH, Gospel**	M/17	**IFITE-OGWARI,** Ayamelum LGA, Anambra State, Nigeria	Community Secondary School (CSS), Omor (Ayamelum)
3.	**OBIAJULU,** Amarachi	F/16	**NENI,** Anaocha LGA, Anambra State, Nigeria	Stella Marist College (SMC), Umueri (Anambra East)
4.	**EKENE,** Ebuka	M/19	**UMUMBO,** Ayamelum LGA, Anambra State, Nigeria	Community Secondary School (CSS), Umumbo (Ayamelum)
5.	**EKEH,** Peter	M/17	**Enugu-Ezike,** Igbo Eze North LGA, Enugu State, Nigeria	Father Joseph Memorial High School, Aguleri (Anambra East)
6.	**OLIOBI,** Emmanuel	M/16	**NIMO,** Njikoka LGA, Anambra State, Nigeria	Father Joseph Memorial High School, Aguleri (Anambra East)
7.	**ANOSIKE,** Chidiogo	F/16	**UMUEZE ANAM,** Ayamelum LGA, Anambra State, Nigeria	Community High School, Nsugbe (Anambra East)
2020 SENIOR SCHOLARSHIP: WINNERS BASED ON CATCHMENT (8)				
S/N	Name of Student	Sex/Age	Student's Home Town of Origin & LGA	Name of School (All are from Anambra East LGA)
8.	**NDIVE,** Emmanuel	M/16	**UMUERI,** Anambra East LGA, Anambra State, Nigeria	Community Secondary School (CSS), Ifite-Umueri
9.	**NNELI,** Juliana	F/18	**NANDO,** Anambra East LGA, Anambra State, Nigeria	Community Secondary School (CSS), Nando
10.	**CHRIS-NATE,** Chinenye	F/16	**AGULERI,** Anambra East LGA, Anambra State, Nigeria	Stella Marist College (SMC), Umueri
11..	**EKWENZE,** Mary-John	F/19	**UMUOBA-ANAM,** Anambra East LGA, Anambra State	Community Secondary School (CSS), Umueze-Anam
12.	**OGBUAGU,** Simeon	M/16	**NSUGBE,** Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe
13.	**NWABUISI,** Marycynthia	F/16	**NSUGBE,** Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe
14.	**ONYEOBI,** Stephanie	F/16	**NSUGBE,** Anambra East LGA, Anambra State, Nigeria	Community High School, Nsugbe
15.	**MGBAKOR,** Christian	M/16	**IGBARIAM,** Anambra East LGA, Anambra State, Nigeria	Community High School, Igbariam

2020 JUNIOR SCHOLARSHIP WINNERS (37)							
S/N	(All 37 winners are indigenes of Nsugbe Town that are enrolled at Community High School, NSUGBE, Anambra State, Nigeria)						
16.	**AKWOBI**, PROMISE; F/14	26.	**AKUDO,** SUCCESS; F/15	36.	**AKUDO**, CHRISTOPHER; M/18	46.	**CHARLES**, WISDOM; M/15
17.	**MOGU**, CHINONSO; M/17	27.	**NWOYE**, DUMEBI; M/16	37.	**OKOYE**, AMAECHI; M/18	47.	**AKWOBI**, FRANCIS; M/15
18.	**MOGU**, TOCHUKWU; M/16	28.	**EMEKA**, CHINENYE; F/15	38.	**OKAFOR**, ISAIAH; M/14	48.	**NWALUNO**, CHINECHEREM; M/16
19.	**UCHENNA**, PRECIOUS; F/14	29.	**OBIEKWE**, CHIOMA; F/15	39.	**AKWUE**, GODWIN; M/16	49.	**EBELE**, CHUKWUDI; F/15
20.	**OGBAGU**, LIVING HOPE; M/17	30.	**IKEM**, PETER; M/15	40.	**CHINWEZE**, OKECHUKWU; M/16	50.	**NWOSA**, MMESOMA; F/15
21.	**ALOKWU**, SOMTO; F/15	31.	**EZEDU**, CHINENYE; F/15	41.	**IFEADI**, ONYEKA; M/16	51.	**OKAFOR**, MIRACLE OLUEBUBE; F/16
22.	**UZOECHINA**, SCHOLARSTICA; F/15	32.	**ONYEOBI**, CHIDERA; F/14	42.	**UDUH**, OLUEBUBE; F/15	52.	**CHUKWUNONSO**, Kosiso; M/15
23.	**ADEH**, ODERAH; M/16	33.	**ONYEKWU**, CHIEMELIE; M/15	43..	**NWEKE**, NNENNA; F/14		
24.	**NWOYE**, MARYCYNTHIA; F/15	34.	**EKWEALOR**, CHINENYE; F/15	44.	**NWAKASI**, CHINENYE; F/14		
25.	**NWARINNE**, PAUL; M/15	35.	**OKONKWO**, AMAECHI; M/15	45.	**OBIUDU**, KAMSI; F/13		

NOTES (TOTAL WINNERS FOR THE 2020 SCHOLARSHIP AWARDS = 52)

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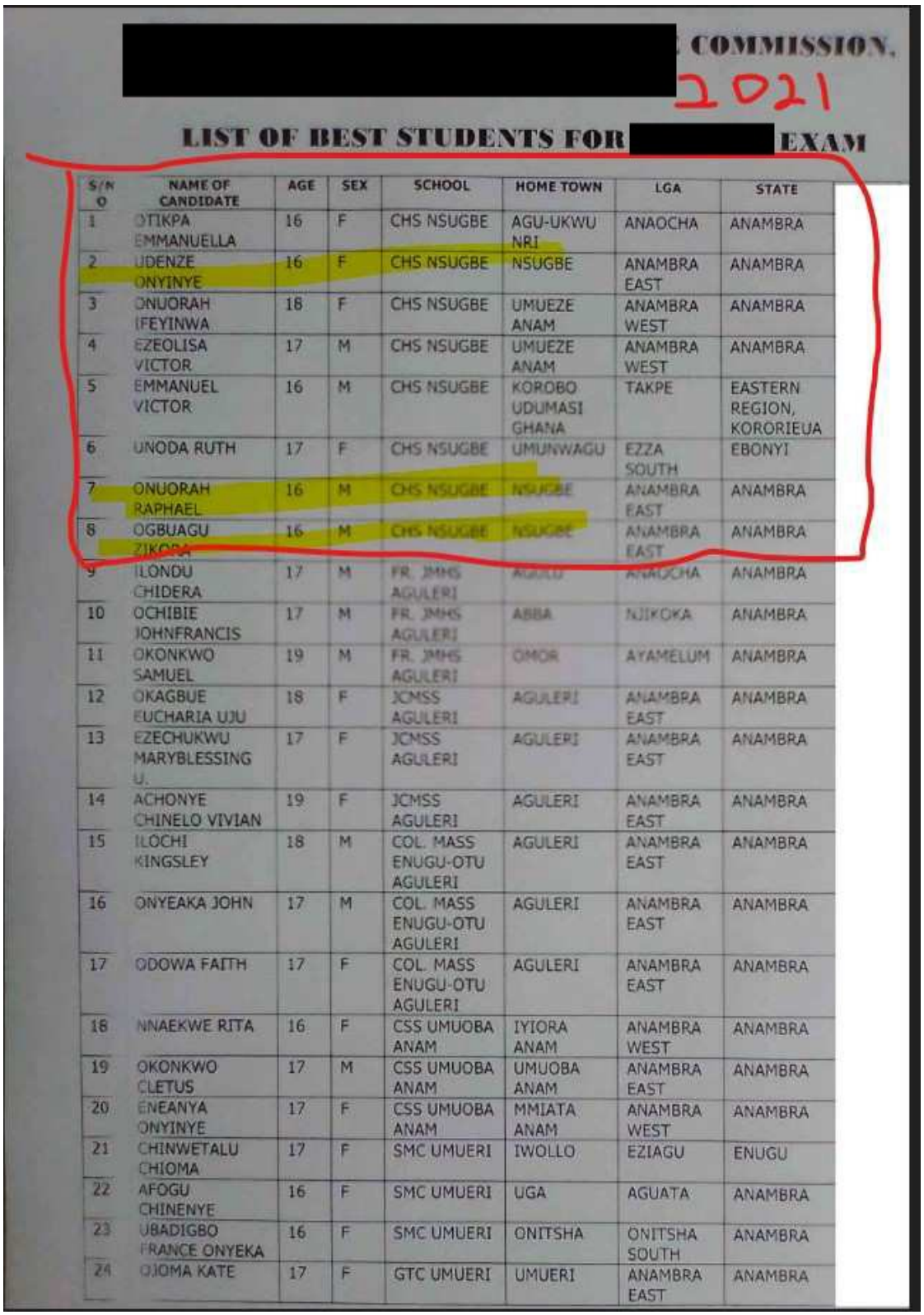
APPENDIX R

Description: IFOMSSA Challenge Participants and Winners – 2021

1. 2021 IFOMSSA Challenge List



[redacted] COMMISSION.

2021

LIST OF BEST STUDENTS FOR [redacted] EXAM

S/NO	NAME OF CANDIDATE	AGE	SEX	SCHOOL	HOME TOWN	LGA	STATE
1	OTIKPA EMMANUELLA	16	F	CHS NSUGBE	AGU-UKWU NRI	ANAOCHA	ANAMBRA
2	UDENZE ONYINYE	16	F	CHS NSUGBE	NSUGBE	ANAMBRA EAST	ANAMBRA
3	ONUORAH IFEYINWA	18	F	CHS NSUGBE	UMUEZE ANAM	ANAMBRA WEST	ANAMBRA
4	EZEOLISA VICTOR	17	M	CHS NSUGBE	UMUEZE ANAM	ANAMBRA WEST	ANAMBRA
5	EMMANUEL VICTOR	16	M	CHS NSUGBE	KOROBO UDUMASI GHANA	TAKPE	EASTERN REGION, KORORIEUA
6	UNODA RUTH	17	F	CHS NSUGBE	UMUNWAGU	EZZA SOUTH	EBONYI
7	ONUORAH RAPHAEL	16	M	CHS NSUGBE	NSUGBE	ANAMBRA EAST	ANAMBRA
8	OGBUAGU ZIKORA	16	M	CHS NSUGBE	NSUGBE	ANAMBRA EAST	ANAMBRA
9	ILONDU CHIDERA	17	M	FR. JMHS AGULERI	AGULU	ANAOCHA	ANAMBRA
10	OCHIBIE JOHNFRANCIS	17	M	FR. JMHS AGULERI	ABBA	NJIKOKA	ANAMBRA
11	OKONKWO SAMUEL	19	M	FR. JMHS AGULERI	OMOR	AYAMELUM	ANAMBRA
12	OKAGBUE EUCHARIA UJU	18	F	JCMSS AGULERI	AGULERI	ANAMBRA EAST	ANAMBRA
13	EZECHUKWU MARYBLESSING U.	17	F	JCMSS AGULERI	AGULERI	ANAMBRA EAST	ANAMBRA
14	ACHONYE CHINELO VIVIAN	19	F	JCMSS AGULERI	AGULERI	ANAMBRA EAST	ANAMBRA
15	ILOCHI KINGSLEY	18	M	COL. MASS ENUGU-OTU AGULERI	AGULERI	ANAMBRA EAST	ANAMBRA
16	ONYEAKA JOHN	17	M	COL. MASS ENUGU-OTU AGULERI	AGULERI	ANAMBRA EAST	ANAMBRA
17	ODOWA FAITH	17	F	COL. MASS ENUGU-OTU AGULERI	AGULERI	ANAMBRA EAST	ANAMBRA
18	NNAEKWE RITA	16	F	CSS UMUOBA ANAM	IYIORA ANAM	ANAMBRA WEST	ANAMBRA
19	OKONKWO CLETUS	17	M	CSS UMUOBA ANAM	UMUOBA ANAM	ANAMBRA EAST	ANAMBRA
20	ENEANYA ONYINYE	17	F	CSS UMUOBA ANAM	MMIATA ANAM	ANAMBRA WEST	ANAMBRA
21	CHINWETALU CHIOMA	17	F	SMC UMUERI	IWOLLO	EZIAGU	ENUGU
22	AFOGU CHINENYE	16	F	SMC UMUERI	UGA	AGUATA	ANAMBRA
23	UBADIGBO FRANCE ONYEKA	16	F	SMC UMUERI	ONITSHA	ONITSHA SOUTH	ANAMBRA
24	OJOMA KATE	17	F	GTC UMUERI	UMUERI	ANAMBRA EAST	ANAMBRA

2. 2021 IFOMSSA Senior (and Junior) Winners' List

WINNERS' LIST - The 2021 (5th) [redacted] AWARDS (15/03/2021)

2021 SENIOR SCHOLARSHIP: WINNERS BASED ON MERIT (8)

S/N	Name of Student	Sex/Age	Student's Home Town of Origin & LGA	Name of School & Local Govt Area (LGA)
1.	**ACHONYE,** Chinenye V.	F/19	**AGULERI,** Anambra East LGA, Anambra State, Nigeria	Justice Chinwuba Mem. Sec. Sch. (JCMSS), Aguleri (Anambra East)
2.	**ILONDU,** Chidera E.	M/17	**Agulu,** Anaocha LGA, Anambra State, Nigeria	Father Joseph Memorial High School, Aguleri (Anambra East)
3.	**CHINWETALU,** Chioma M.	F/17	**IWOLLO,** Eziagu LGA, Enugu State, Nigeria	Stella Marist College (SMC), Umueri (Anambra East)
4.	**OTIKPA,** Emmanuella C.	F/16	**AGUKWU-NRI,** Anaocha LGA, Anambra State, Nigeria	Community High School (CHS), Nsugbe
5.	**ONUORAH,** Raphael C.	M/16	**NSUGBE,** Anambra East LGA, Anambra State, Nigeria	Community High School (CHS), Nsugbe
6.	**OKAGBUE,** Eucharia U.	F/18	**AGULERI,** Anambra East LGA, Anambra State, Nigeria	Justice Chinwuba Mem. Sec. Sch. (JCMSS), Aguleri (Anambra East)
7.	**OCHIAKA,** Deborah C.	F/16	**UDI,** Udi LGA, Enugu State, Nigeria	Stella Marist College (SMC), Umueri (Anambra East)
8	**AFOGU,** Chinenye B.	F/16	**UGA,** Aguata LGA, Anambra State, Nigeria	Stella Marist College (SMC), Umueri (Anambra East)

2021 SENIOR SCHOLARSHIP: WINNERS BASED ON CATCHMENT (5)

S/N	Name of Student	Sex/Age	Student's Home Town of Origin & LGA	Name of School (All are from Anambra East LGA)
9.	**NNALUE,** Kosiso G.	F/17	**OMOR,** Ayamelum LGA, Anambra State, Nigeria	Amikwe Community Secondary School (ACSS), Omor
10.	**OGBUAGU,** Zikora J.	M/16	**NSUGBE,** Anambra East LGA, Anambra State, Nigeria	Community High School (CHS), Nsugbe
11.	**UDENZE,** Ugochi J.	F/16	**NSUGBE,** Anambra East LGA, Anambra State, Nigeria	Community High School (CHS), Nsugbe
12.	**OBECHE,** Stella O.	F/17	**NSUGBE,** Anambra East LGA, Anambra State, Nigeria	Community High School (CHS), Nsugbe
13.	**ONUORAH,** Anthonia O.	F/17	**Mmiata Anam,** Anambra West LGA, Anambra State, Nigeria	Community Secondary School (CSS), Umueze Anam

2021 JUNIOR SCHOLARSHIP WINNERS (31)

S/N (All 31 winners are indigenes of Nsugbe Town that are enrolled at Community High School, NSUGBE, Anambra State, Nigeria)

1.	**ADIEME**, Chinasa; F/15	2.	**MBANUGO**, Chidimma F/18	3.	**OKONKWO**, Uche; M/16	4.	**AGBONWE**, Ofoma; M/16
5.	**CHUKWULOZIE**, Somto; M/17	6.	**OKONKWO**, Uju; F/13	7.	**NWACHUKWU**, Oluebube; F/15	8.	**ETUKA**, Hillary; M/15
9.	**IKWUNNE**, Cynthia; F/15	10.	**IKWUNNE**, Christopher; M/16	11.	**ORANEKWU**, Chibuike; M/16	12.	**AKWOBI**, Timothy; M/17
13.	**AKWOBI**, Chimuanya; F/16	14.	**ANIEGBOKA**, Chiemelie; M/17	15.	**NTOKA**, Chibuzor; M/15	16.	**OKIWE**, Onyinye; F/16
17.	**OKIWE**, Oluchukwu; F/16	18.	**BOSAH**, Chiagozie; M/16	19.	**CHIDOKWE**, Marygift; F/13	20.	**CHINWEUBAH**, Emmanuel; M/14
21.	**NWOYE**, Irene; F/15	22.	**NDUBISI**, Somadina; M/16	23.	**CHUKWUEBUKA**, Joseph; M/15	24.	**NWANKWO**, Francess; F/16
25.	**CHUKWUMA**, Ifechukwu; F/15	26.	**OBIEZEAZU**, Chibuike; M/15	27.	**IFEADI**, Chidubem; M/15	28.	**OKAFOR**, Kingsley; M/16
29.	**OGBUAGU**, Onyedika; M/16	30.	**EJINDU**, Emmanuel; M/16	31.	**NWOYE**, Chidera; M/16		

NOTES (TOTAL WINNERS FOR THE 2021 SCHOLARSHIP AWARDS = 44)

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