CRITICAL MEDIA LITERACY AND ENGLISH FOR ACADEMIC PURPOSES: AN EXAMINATION OF TEACHER AND STUDENT PERSPECTIVES AND PRACTICES

A Thesis submitted by

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ABSTRACT

This study aimed to develop empirical and theoretical understandings of the relationship between critical media literacy and English for Academic Purposes (EAP) language learning contexts. EAP courses are for students from non-English speaking backgrounds to prepare them to meet the more complex course demands such as University courses. There is a pre-occupation with developing students' functional language skills in English for Academic Purposes courses, rather than understanding the ideational meaning that language also brings with it. This study explored English for Academic Purposes teachers' language-related literacy practices through the integration of critical media literacies in the classroom, to: 1) identify the range of critical literacy skills that English for Academic Purposes students require in this media-saturated age; 2) identify useful critical media literacy skills; and 3) generate a framework for English for Academic Purposes curriculum design that develops students' critical media literacy skills. This single-sited case study research was conducted in a private language school in Queensland. The methodology was informed by a pragmatist approach combined with a conceptual focus on Practice Architectures to employ a design-based research method. Data collection included interviews with teachers and student focus groups, as well as field notes, research reflections and work samples, which were thematically analysed to inform the development of critical media literacy skills in English for Academic Purposes curriculum. The results of the study will contribute to empirical knowledge and theories regarding critical media literacy. The results may also augment professional development programs and teachers' professional skills and knowledge to enhance the concept of academic literacy in English for Academic Purposes programs, to instil a broader impression of literacy rather than functional literacy that focuses solely on developing students' foundational English linguistic skills.

CERTIFICATION OF THESIS

I, Bradley Joseph Perks, declare that the PhD Thesis entitled *Critical Media Literacy and English for Academic Purposes: An Examination of Teacher and Student Perspectives and Practices* 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:21/08/2023

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

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ABBREVIATIONS

EAP	English for Academic Purposes
CL	Critical literacy
CML	Critical media literacy
EAL/D	English as an Additional Language or Dialect
SAE	Standard Australian English
SLA	Second language acquisition
ELICOS	English Language Intensive Courses for Overseas Students
DBR	Design-based research

CHAPTER 1: INTRODUCTION

1.1. Introduction

The rapid advances in technologies and concurrent increases in internet use have highlighted the importance of preparing students to access, use, understand and critically assess all forms of media. It is important to investigate this because students have a high adoption rate of digital devices and are exposed to a vast array of virtually unfiltered information. This high adoption of media has caused students to be increasingly put at risk of being exposed to various forms of disinformation, propaganda, radical and violent messages, indoctrination, cyberbullying, and hate speech (McDougall et al., 2018). This research project explored how the spread of disinformation and 'fake news' presents challenges for education systems, specifically in English for Academic Purposes (EAP) programs, with teachers and students needing to develop skills and relevant knowledge to navigate these fast-changing digital environments.

Education is often promoted as the removal of ignorance (Australian Human Rights Commission, 2022; Peels & Pritchard, 2021; Szkudlarek & Zamojski, 2020), and, it has been increasingly reported that critical media literacy is an educational response to fake news (Buckingham, 2019; Guess et al., 2020; Saunders et al., 2017). Buckingham (2019) reported that teaching media in a 'post-truth' age requires debunking fake news and media bias which can combat the spread of disinformation. of this broader context. The Oxford English Dictionary defines post-truth as 'relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief' (Buckingham, 2019 p.216). As this implies, the term post-truth represents a critical, even sarcastic, claim about the world. However, ignorance can often result from a lack of opportunity. In the case of the study's participants, who are foreign EAP students, who might not have been exposed to critical text analysis classroom opportunities, these critical media skills are lacking. These skills are not only needed to successfully critically assess all forms of media but are vital for their successful transition into the academic demands of Australian universities. According to Wilson (2016), every university in Australia entails critical thinking skills as an asset to their school/program, and gaining these critical skills is essential to student's success in higher education (Bharuthram, 2012; Chanock et al., 2012; Devereux & Wilson, 2008, Vered, 2016). This is something that can be addressed by incorporating critical media literacy skills in EAP programs, to give educational opportunities to those students who do not possess these critical skills. It might also bring additional value by informing other

critical literacy or media classes in a mainstream secondary school setting with domestic English as an Additional Language or Dialect (EAL/D) students who are similarly not proficient in Standard Australian English (SAE).

1.2. Background to the study

Scholars, including Kellner and Share (2005), have been interested in, and pushing for, the need for critical media literacy since the early 2000s. And the 2016 election in the US added impetus for this type of literacy intensified in the media (Bovet & Makse, 2019). A contributing factor was the US presidential election, in which many observers cited as fake news played a crucial role in the presidential debate between Donald Trump and Hilary Clinton (Bovet & Makse, 2019). Popularity and an observable increase in usage of this term can be seen by The Macquarie Dictionary choosing 'fake news' as their word for 2016 (Allen & McAleer, 2019) and similarly, The Oxford English Dictionary (OED) selected the adjective 'post-truth' as its word of the year in 2016 (Maddalena & Gili, 2020), and the phenomenon of fake news was recognised by various governing bodies (European Commission, 2018; Charlton, 2019; World Economic Forum, 2018). No doubt there have been scholars advocating readers to be critical of fake news before this period which had been spurred on by similar events, however, since this doctoral study was conducted around this time this study selected this social and political event in history and the subsequent ripple effects to focus the research on. The legitimacy of news was being questioned, there were election results, well established, and social media platforms cast into the limelight for being involved in fake news. Exploring what exactly constituted fake news and who created and shared fake news seemed to be a worthwhile topic to research.

I felt there was a need for educators to instil media literacy skills in their students to be able to confidently recognise this form of disinformation and adequately dissect the falsehoods portrayed by the author (s) in the media. This need stemmed from my 11 years of experience teaching EAP courses in Japan and Australia at the university level, where I saw both a desire among the students and yet an inability for them to confidently identify such fake news in social media news posts. The curricula I used had a sufficient amount of critical literacy content necessary to tackle this false or misleading information presented as news, but not in the specialised area of fake news in the media. My interest in fake news mixed with my EAP teaching and educational background gave me the impetus to examine this phenomenon in my class. Even though the study was conducted in Australia, Donald Trump and the U.S. election

were saturated in the media. Many headlines (see Appendix 1) in the US focused on the idea of 'fake news' as well as the failure of some young people to recognise fake news when they saw it. This had a flow on effect spurring education scholars to call for the importance of promoting digital literacies so college students can detect fake news and combat it (Robertson & Scheidler-Benns, 2016).

The area of interest in this study was not fake news itself, but rather that people willingly believe it with no scepticism (Bali, 2017). Rather that some young people do not possess confidence in using the necessary skills to interpret misinformation critically, and formal education can do more in promoting critical media literacy. Weller (2016) has theorised we are at an age of 'unenlightenment' in which the youth have a lack of desire for knowledge, and Spelic (2018) has pondered that young learners are 'incurious' about checking the authenticity of the news. In the Australian context, there has been a promising finding in Notley's et al. (2017) survey findings that 43% of young Australians find news about their local community events and issues interesting, and this topic is only the second to news is news about technology (52%). This presents the argument that young Australians have an interest in news that pertains to issues in their local community, which runs contrary to Weller's (2016) theory about youth being unenlightened lacking a desire for knowledge. Similarly, a recent survey conducted in Australia by Nettlefield and Williams (2018) found a clear majority of teachers view critical thinking about media as important. However surprisingly when asked how often they apply critical engagement with news stories in class only a quarter of the teachers surveyed (24%) said they rarely turned it into a classroom activity (Nettlefield & Williams, 2018). As a result, very few teachers cover critical analysis of news stories in class. Perhaps there is no surprise that the Notley et al.'s (2017) survey found that young Australians aged 16-20 have difficulty critically consuming and verifying news at school and home. Furthermore, students are not confident about spotting fake news online with only (20%) receiving lessons at school in the past year to help them work out if news stories are true and can be trusted (Notley et al., 2017). Critical Media Literacies or (CML) in this study was operationalised as the ability to identify credible and reliable information and to conversely recognise bad sources of information.

1.3. Research problem

The research issue is that not all students receive quality teaching regarding how to critically engage with and make decisions about news media. This is evident to see from Nettlefield and Williams' (2018) findings that only a quarter of the teachers surveyed (24%) said they check

the authenticity of the news in classroom activities. Therefore, adolescents in the Australian secondary school sector are needing targeted education in this form of literacy. However, it is specifically the EAP students who are in most need of a CML educational intervention. Critical literacy is regarded as an important skill for high school learners in their senior years of schooling (ACARA, 2014; Cross, 2011; Gutierrez, 2014), therefore there is an official acknowledgment of the importance of covering this form literacy in the mainstream classroom (s). However, in EAP courses there has not been such an acknowledgement, or allocation of curriculum time devoted to these critical skills according to Wilson (2016). This is a problem for EAP students in English Language Intensive Courses for Overseas Students (ELICOS) programs, in which the majority of the curriculum is devoted to traditional academic literacies (e.g., academic writing, presentation skills, proficiency test preparation), tending to neglect critical pedagogy (Hellsten, 2013; Wilson, 2016).

Moreover, the international student transition into Australian tertiary programs is complicated if students have not had sufficient pedagogical exposure to critical literacy, as Hellsten (2013) stated it is the lack of critical thinking skills which is cited as being overlooked in international students' experiences. Specifically, these aforementioned international students might have difficultly grasping the critical context when doing critical text analysis activities. Critical reading is important for these students because it enables readers to evaluate the arguments in the text which is a precursor to moving onto the more in-depth critical analysis of texts such as being aware of your opinions and assumptions (Hellsten, 2013). According to Wilson (2016), every university in Australia entails critical thinking skills as an asset to their school/program, and gaining these critical skills is essential to the student's success in higher education (e.g., Bharuthram, 2012; Chanock et al., 2012; Devereux & Wilson, 2008; Vered, 2016). As a result, the international academic transition period can be challenging for many of these students. Teaching and learning are not just a matter of skill acquisition or knowledge transmission; it is about access and apprenticeship into institutions, resources, and texts (Freebody, 2007). International students possessing skills to critically analyse news stories in the media will set them up for long- term success in Australian tertiary schools where students need to evaluate sources of information critically and independently (Wilson, 2016). It is also important to note that expecting foreign Asian international students entering Western universities would lack critical thinking skills takes an assimilationist approach mindset, which makes certain assumptions that might not be the case and this counter argument will also be incorporated in the argument.

The research problem presented in the research literature is that teaching critical reading in the EAP classroom has been described by Davies and Barnett (2015, p.68) as challenging the students' worldview which 'makes life awkward'. What they are referring to is that EAP students, particularly those coming from an Asian educational background experience awkwardness when they are exposed to diverse educational and worldview perspectives. As Davies and Barnett state (2015) the Egyptian students felt learning critical pedagogy was challenging and there was student resistance from the students as result. Similarly, student reluctance was reported in Pohl's (2008) study, when using critical pedagogy to question the hegemony of Western education in an EAP group. Also, Wallace's study (2003) was abandoned by several Arabic students when critical pedagogy was used to examine controversial texts on Islam. These findings from the Egyptian and other Middle Eastern students raise the point for the potential for other Asian EAP students' resistance presented with Western pedagogy in an education setting. It is important to note that the participant students in this study originate from mainland China and Hong Kong and therefore the geopolitical, cultural and educational values could be vastly different.

Another problem that featured prominently in the research literature affecting the EAP study participants in this study, and for the ELICOS students by extension is the course and/or curriculum design being heavily focused on English proficiency test preparation. Some of the EAP students carried on those aforementioned course expectations and expected the curriculum to address them. Wilson (2016) describes how EAP students are under huge amounts of pressure to pass their English proficiency test requirements but urges that critical thinking skills will assist them in their university studies. This study is not suggesting an abandonment of proficiency test preparation in the EAP curriculum, rather that there is room for these critical literacy skills in the curriculum which will be useful for these students when they enter into their tertiary programs.

1.4. Research aims

The study aimed to explore the inhibitors and enablers CML of media texts and the teaching of EAP students in an ELICOS setting to create an in-depth understanding of the educational setting and develop good teaching practices. The aim of the educational intervention was to explore how these students engage and analyse fake news texts, the study specifically looked at the aspects of critical reading of media texts tasks and social media production tasks that lead to effective student work. More specifically, it explored the impact of a classroom

intervention that aimed to improve EAP students' critical media literacies, and how EAP students can successfully critically engage with and analyse social media texts. The classroom observations and supporting teacher workshops categorised findings into inhibitors and enablers for the teaching of critical literacy and perspective of fake news in the media. It explored teachers' and students' perspectives and practices related to critical literacy and the media, applying Design-based Research (DBR) to support EAP students. The students were the focus of this study, exploring ways to best equip them to gather CML skills, for which working alongside the teachers was necessary. Therefore, qualitative teacher interviews, to understand the teacher's self-understandings and judgments in the practical setting were conducted, to capture what ELICOS teachers know and do when teaching EAP students to critically analyse media posts.

CML was used in this study for a critical analysis of fake news posts on social media. The goal of critical media literacy is to engage with media by critically examining representations, systems, structures, ideologies, and power dynamics that shape and reproduce culture and society. It is an inquiry-based process for analysing and creating media by interrogating the relationships between power and knowledge (Critical Media Literacy Conference of the Americas, 2021). A critical media literacy classroom educational invention syllabus was introduced, which sought to design a fake news critical reading checklist. The checklist was based on The Critical Media Literacy framework (see conceptual framework) designed by Kellner and Share (2019). The effectiveness of the CML framework (see Appendix 2) was tested on EAL/D students; through the use of a fake news reading checklist, and to develop their CML proficiency to a point where they can independently find a fake news post on social media, analyse it and produce a response. In an attempt to positively impact future practice teaching CML to EAP students and subsequently improve the ways their particular educational setting operates, their teaching, and their student learning.

The research aims sought to make a significant impact in three ways:

1. To provide information about ELICOS teacher's CML knowledge.

2. To provide information about what influences students' thinking of the 'fake news' media in an educational setting.

3. To provide ELICOS schools and teachers with a greater understanding about the teaching of CML.

The research aims were constructed to explore the relationship between what teachers know and do in teaching CML for EAP students and develop their (teacher's) in-class strategies to ensure student success in this form of literacy. The study's aim was to develop a better understanding of classroom practices in the critical engagement of social media and to identify impediments and teaching implications associated with gains in CML skills, which could inform EAP curriculum development and/or teaching practices in the field of CML.

As previously mentioned, EAP students might not have had a lot of critical pedagogy exposure, and the ELICOS curriculum is English proficiency test-heavy and focuses on traditional academic literacies. Traditional academic literacies such as academic essay writing, presentation skills, academic lecture note-taking skills etc, as Ramos-García (2018) explained this is largely due to the teaching practices of EAP students, being concerned with 'communication skills in English which are required for study purposes in formal education systems' (Ramos-García, 2018, p.8), and more specifically academic purposes in higher education sectors. EAP programs and teacher education has been based to a large extent in departments of linguistics and applied linguistics and not in departments of education where critical pedagogy is more regarded as an important academic literacy (Haque, 2007).

Critical pedagogy in EAP programs has not featured prominently, and perhaps as a result there is not much impetus to cover more critical pedagogy due to educational expectations being focused on language skills progression. However, as argued in the previous section critical thinking skills are valuable and necessary for student success in most Australian tertiary programs (Wilson, 2016). Moreover, CML can lead to student engagement if students can make a connection to the critical educational content and their lives this was found in Notley's et al. (2017) survey findings that 43% of young Australian students are engaged in the news about their local community events and issues. This supports the argument that young Australians have an interest in news about their local community issues. Further adding to this line of argument is Ranieri and Fabbro's (2016), and Locke and Cleary's (2011) claim that student engagement in CML tasks comes from selecting a text that has relevance to the student's lives. The topic of 'fake news' was chosen because the participant students have likely been exposed to fake news on social media, given there is considerable research stating adolescents spend a vast majority of their time on social media (Social buddy, 2020) and therefore likely to see the relevancy of spotting fake news on social media.

1.5. Research questions

To address the aims of the study, there are five guiding research questions:

1. What do ELICOS teachers know and do when teaching EAP students to critically analyse media articles?

2. What are the inhibitors and enablers for the teaching of critical literacy of fake news in the media?

3. How can design-based research support students' learning of critical literacy and the media to enable them to become critical consumers and producers of media texts?

1.6. Impetus for the research

My impetus to research this topic comes from experience from teaching for 11 years in the tertiary education sector in Japan, and having observed Japanese university students struggle in their study abroad experiences at Western universities. I felt that there were certain elements in the curriculum missing that could aid their transition into foreign education institutions. Specifically, it was classroom culture shock due to Western curriculum content that focuses more on independent research skills abilities, and critical thinking which they seemingly struggled with. Now, in the Australian ELICOS sector I am seeing foreign Asian international students struggle in EAP classes in the same area, namely due to being not prepared for Western pedagogy, in particular critical pedagogy, which gave me the motivation to study this area of education preparation. My observation is not an isolated occurrence, with Davies and Barnett (2015) similarly observing Egyptian Asian EAP students struggle with diverse educational teaching pedagogies and worldview perspectives.

The 'internationalisation' of higher education has brought new elements of cross-cultural influences of pedagogy and practice according to Hellsten (2013), namely the alleged lack of critical cognitive resources among Asian international students, is the likely cause of these students experiencing a cultural academic shock. Specifically, Asian students who have been exposed to a Confucian education system which typically includes China, Japan, South Korea, Taiwan, Hong Kong, Singapore, and Vietnam — and globally through Asian diaspora

communities (Tan, 2017). Navigating this poetential cultural academic shock is a key to their academic transition, as Hellsten (2013) added from the student learning perspective a smooth transition into new and foreign learning environments is believed to determine academic success. Recognising that this international academic transition period can be challenging for many international students in Australian universities was the motivation for this study.

To balance the argument, expecting foreign Asian international students entering Western universities are lacking critical thinking skills takes an assimilationist approach mindset, which makes certain assumptions that might not be the case, namely that this student segment experiences cultural maladjustment and has a cognitive disadvantage in Western university courses (Biggs & Tang, 2011). Adopting this approach might lead to a detrimental cognitive deficit label being given to 'Asian' international students (Biggs & Tang, 1999) studying in 'the West', and perpetuates stereotypical beliefs about 'Asian' learning modes (Confucian) as being detrimental to academic achievement. However, there is a lack of empirical evidence to support claims that Asian learning styles (surface and rote learning, etc) are counteractive to learning in 'western' learning systems (Watkins, 2014). On the contrary, there is evidence to support that these claims are contraindicative, as Biggs and Tang (2011) state there is data that places 'Asian' students in the top five percent of university courses generally. Even though this study takes the stance that foreign Asian international EAP students have not been sufficiently exposed to critical pedagogy in formal education, that was not the case with two out of the five research participants reporting familiarity and displaying critical literacy proficiency in this form of teaching/learning.

Why I came to do this study is because I saw from the teacher's perspective that both in a foreign university and Australian university preparation in EAP courses the curriculum was solely focused on traditional academic literacies (e.g., academic writing, presentation skills, academic lecture note-taking). Also, there was an emphasis on English proficiency measured through easily quantified tests such as International English Language Testing System (IELTS) or Pearson tests. These are the selling points of the EAP courses, and naturally, the students expect to develop these skills in class (Wilson, 2016). The students, who mostly come from Middle East Asian countries and might have had little exposure to critical pedagogy are sometimes sceptical of taking time out of the busy curriculum to cover critical pedagogy, as Wilson (2016) cites these students felt that teaching which was not specifically directed to tests was irrelevant. Therefore, I chose CML because it incorporates critical literacy criteria which

is a literacy they will need to develop as they prepare for further tertiary education and the media aspect would be both relatable and useful to the student demographic given adolescents spend about 3 hours a day on social media (Social Buddy, 2020).

This student segment needs to go beyond just learning academic 'English', in terms of the four language learning macro skills: reading, writing, listening and speaking, which will enable them to pass an English proficiency language entry test. For students to prepare for university in English-speaking contexts, they need to go beyond these basic language skills, critical thinking skills are the existence of tertiary education, and as Moore (2013) argued, it is also the spotlight of university preparation courses. Specifically, critical reading skills, is an aspect of EAP that is often overlooked according to Wilson (2016) every university in Australia entails critical thinking skills as an asset to their school/program, and gaining these critical skills is essential to the student's success in higher education (e.g., Bharuthram, 2012; Chanock et al., 2012; Devereux & Wilson, 2008; Vered, 2016). This led to the decision to design an EAP intervention program that tested and developed a fake news critical reading checklist, to develop such aforementioned critical reading skills. Many EAP students do not have a great deal of experience in critical reading and critical thinking—or at least in the kinds of critical thinking expected in tertiary education (Wilson, 2016). The types of CML higher-order reading strategies included in the fake news reading checklist included identifying assumptions, detecting bias, comparing and contrasting texts, and checking the author and date of the text, that were constructed to expand the EAP students' critical academic literacy skills.

Fake news as previously mentioned was gaining media attention in 2016, and as Notley et al. (2017) noted the student demographic aged 16-20 has difficulty critically consuming, and verifying news at school and home. Fake news in social media was chosen because the student participants have been exposed to fake news and they reported that they see the relevance to this in their lives. Ranieri and Fabbro (2016), and Locke and Cleary (2011) claim that student engagement in CML tasks comes from selecting a text that has relevance to the student's lives. EAP students are busily preparing for Australian university entry requirements, which as previously mentioned requires preparing for English proficiency tests and overlooks critical thinking skills. Wilson (2016) stated Australia entails critical thinking skills as an asset to their school/program and gaining these critical skills are essential to the students' success in higher education. The fake news reading checklist identifying assumptions, detecting bias, checking the author, etc, was modelled on the Critical Media Literacy Framework (Kellner & Share,

2019). This CML framework was transplanted into the fake news reading checklist form to provide these EAP with a critical reading tool to hone their critical thinking/reading skills which are designed to pique their interest in CML and expose them to critical pedagogy practices they're likely to encounter in Australian universities after they graduate their EAP course.

Social media was chosen because this is where 43% of Australian teenagers get their news from (Notley et al., 2017), which is no surprise because 16-24 year olds use social media about 3 hours a day (Social buddy, 2020). Therefore, the participant age range would be familiar with using social media platforms, and it is argued that news on social media is more difficult to assess credibility. This is as Fletcher and Park (2017) explain digital news comes from established news media and other sources that are mixed and shared in social media, which requirements for both readers and society to check the credibility of the news source (Flanagin & Metzger, 2008; McGrew et al., 2017; McGrew et al., 2018; Silverman, 2015). Social media is accessible, convenient, and familiar to the target participants, and there is an argument to be made that this mode of media requires more CML skills to assess the credibility of news stories.

1.7. Research significance

This study built upon the current body of research advocating the benefits of CML, and this form of literacy can be applied to critically analysing fake news on social media. The research findings from the educational program could have a broad impact on ELICOS, senior high school or EAP teachers either at university level or preparation programs for university. While professional learning of CML skills in formal education has already been studied (Saunders et. al, 2017; Herroro-Diz, 2020), it has not produced educational materials or allowed the students to construct a social media response to classroom analysed fake news posts on social media, which fully encapsulates CML skills. This study provided a previously unexplored opportunity to develop new in-class educational materials for building teacher capacity for CML pedagogy in an EAP classroom.

While critical literacy for Asian EAP students in their classroom has already been recommended (Wilson, 2016; Barnett, 2015; Pohl, 2008; Wallace, 2003), it has not yet been written up as an educational intervention program with lesson notes, lesson plans and educational products. The literature suggests there is a need for empirically tested CML

teaching materials (Notley's et al. 2017; Bulger & Davison, 2018; Corser et al., 2022), with the majority (78%) of Australian teachers citing a lack of teaching materials resulting in their reluctance to cover critical analyses of news topics in class (Notley's et al. 2017; Corser et al., 2022). Educational sectors may benefit from a clearer understanding of CML applied in a formal education setting, as this emerging form of literacy has concepts that are deeply rooted in critical literacy (Kellner & Share, 2019), and as a result perhaps known to educators and recognised as legitimate knowledge.

1.8. Overview of research design

This study used Design-Based Research to improve the practice teaching CML through fake news recognition. It was a study that aimed to test new ideas, namely covering fake news in a formal education setting among EAP students. The educators (teacher/researcher) and fellow teacher, who were interviewed, were engaged in a study of their own classroom practices equipping EAP students with CML skills in an ELICOS school. The study focused on students to be able to correctly identify, label and respond to fake news on social media and the practice of ELICOS teachers being able to successfully teach these students CML skills to complete this task.

The following section gives a brief overview of DBR data collection techniques used in this study and why. It was important to gain an understanding of the classroom settings to effectively conduct the CML educational intervention program involving observing student involvement and engagement in the fake news content. Understanding the classroom settings, social and psychological atmosphere, pupils' motivation, attitudes towards learning topics and students' experiences was achieved through participant observation (Juuti, Lavonen & Meisalo 2016). Taking the teacher/researcher role through participant observation allowed me to collaborate closley with participants to achieve theoretical and pragmatic goals to effectively bring about educational changes which is a characteristic of DBR according to Wang and Hannafin (2005). This study was interested in capturing and observing the students' experiences on what it was like to be gradually exposed to critical pedagogy on fake news and document their reactions. Qualitative research designs are aimed at constructing a rich, detailed description of this educational setting which is anticipated will explore a social understanding of the students' views about a fake news story that is relevant to their lives is represented in the media and how CML is necessary to deconstruct this message.

In addition to observing the fake news CML intervention sessions, pre and post student focus group interviews were conducted. The purpose of the researcher asking questions in the focus group sessions was to 'enquire' about the effectiveness of educational interventions according to McIntyre-Mills, Goff and Hillier (2011). Operationalised in this study, the purpose of the focus groups was to capture the main themes facing EAP students CML acquisition, which Brannen and Pattman (2005) note focus group data collection methods produce a shared understanding and facilitate the participants reaching a consensus using a group dynamic. Data collected from focus groups differs from interviews according to Schostak (2005), in that focus groups can bring together multiple views and spaces between views can be explored. Asian EAP students can be a marginalised group in academia, with an assumed lack of critical thinking skills and according to Janks (2013) critical literacy works from dimensions including: power, diversity, and access. The study attempted to explore these aforementioned dimensions and how they relate to EAP students analysing fake news messages in the media. Furthermore, exploring EAP students struggles in EAP achieving CML and analysing fake news in the media are a few themes possible that this study sought to explore.

To answer the study's research question about what ELICOS teachers know and do when teaching CML, semi-structured interviews were conducted with the participating teacher (Tracie). The qualitative in-depth semi-structured interviews attempted to explain the full scope of practice architectures, namely the doings, sayings and relating (Mahon et al., 2017). Practices like raising student's critical literacy skills in the area of fake news social media messages are held in place by preconditions that enable and constrain some kinds of action at the expense of others (Kemmis & Grootenboer, 2008; Schatzki, 1996, 2002, 2016). Kemmis and Grootenboer (2008, p. 57) refer to these preconditions as 'practice architectures', which identifies the intricate social patterns of 'saying, doing and relating' that enable and constrain each new interaction, exploring the intricate characteristics of their practices. Designing a framework for EAP curriculum design based on both literature and empirical data involves communicating with EAP teachers using a number of specialist discourses. These included discourses on academic education, the content of CML in education (ideas from theory and research, policy and practice) and discourses about the subject design. As Bakker and van Eerde (2015) elaborate, these ideas could be about the levels of mastery students should achieve, the kinds of activities necessary, types of assessments and how the subject should be evaluated after it has been taught.

The students were the focus of this study, exploring ways to best equip them to gather CML skills, for which working alongside the teachers is necessary. Design-based research gives primacy to teachers' self-understandings and judgments in the practical setting (Kemmis, McTaggart, & Nixon 2014), to subsequently improve, the ways their particular educational setting operates, their teaching, and their student learning (Creswell & Creswell, 2017). Design-based research was chosen as the most appropriate research methodology to design an educational intervention to positively impact syllabus, curriculum design, educational tools and produce and educational product (Collins, Joseph & Bielaczyc, 2004; Armstrong, Dopp & Welsh, 2022).

Audio recordings of the classroom intervention were examined, focus group comments and student samples were collected during the intervention sessions. The student samples consisted of their completed fake news reading checklists and fake news social media responses. Collecting all this participant data is as Somekh and Lewin (2011) explain is appropriate in qualitative research to provide a rich context for analysis. The student samples were the critical reading checklist (fake news reading checklist) covering the above mentioned CML framework steps data collection techniques were designed in collaboration with the participating teacher, tested and refined. The fake news reading checklist was designed to enable students to develop CML higher-order reading strategies namely identifying assumptions, detecting bias, comparing and contrasting texts, and checking the author and date of the text. A class presentation was produced by each student discussing the aforementioned checklist criteria, to consolidate the CML skills. Finally, a fake news response in the form of social media post was produced by the students (see appendix), these responses graphically identity the initial social media response as fake and detailed why it was fake. The fake news reading checklist also acted a presentation evaluation form, in that the audience (students and teacher / researcher) could evaluate the effectiveness of the presentation against the reading checklist sheet. Similarly, in Ranieri and Fabbro's (2016) study, a product evaluation form was used to gauge the effectiveness of their high school students' effective CML analysis of racial discrimination in media. The effectiveness of using a of product elevation form in the Ranieri and Fabbro (2016) study inspired this study to replicate it, because this study was also interested in monitoring similar high order CML skills, specifically evaluating the educational experiences of EAP students and focusing on critical media literacy that could enable the development of critical reading/ viewing skills.

1.9. Key outcomes

A number of key outcomes are expected from this research. These include to:

- Identify how useful CML is with EAL/D students in this media-saturated age; such as common conventions fake news creators use for example emotive or outrage words, phrases, images and symbols used to persuade the audience.

- Identify empirically tested critical media literacy pedagogical skills; such as scaffolding teaching instructions, metalanguage for critical literacy concepts and metalanguage for EAL/D students.

- Generate a framework for EAP curriculum design that develops students' critical media literacies. Explicit teaching instructions and empirically tested teaching materials, which contain authentic materials and edited teaching materials for specific CML skills acquisition.

It is hoped that the results will contribute to empirical knowledge and theories of critical media literacies and may also augment professional development programs and teachers' professional skills and knowledge to enhance teaching of this form of literacy in both the secondary school context and ELCIOS sector.

1.10. Structure of thesis

This chapter has introduced the topic of the research project, providing a background to the study, outlining the research problem, aims of the research program, the research questions which guided this study, the overview of the research design and key outcomes. Key concepts and definitions have been provided, as well as an explanation of the significance of the research project. Chapter 2 presents a review of relevant literature, Chapter 3 will explain Design-based Research and provide a rationale for choosing this research methodology, Chapter 4 will report on the findings through the theoretical lens of practice architectures, and Chapter 5 will discuss the implications of the study's findings and what this means for the CML and the students studying it. Chapter 6 will present conclusions and suggestions for future research.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

The purpose of this chapter is to provide a summary of the relevant literature pertaining to critical media literacy in education. The literature review will explain what critical media literacy is; why EAP students should be learning it; the educational roots of this emerging form of literacy and educational pedagogy; early studies in media literacy; decisions to examine fake news in social media; the impact of fake news in society focusing on its users and presenting an argument why it is an essential academic skill; the potential resistance among ELICOS teachers and EAP students; the benefits of student selection in critical media educational activities and the critical media literacy framework.

In educational research fake news has been aligned with a concern of the validity of news, that readers, in this case students, should be scrupulous about the authenticity of the news they are consuming. However, the term 'fake news' has also begun to be misappropriated by politicians around the world to describe news organisations whose coverage they find disagreeable (Derakhshan & Wardle, 2017). This can be seen with former United States president Donald Trump, who repeatedly used this term, and his team and supporters to dismiss facts and experts. Misappropriated because the term was not used incidentally, it was Donald Trump's appeal. An excerpt from the *The Daily Show*, an American political satirical news show, captured the ethos of the Trump contingency fake news attitude: "Do I have proof? No. Do I have articles? No. But my mind is made up" one supporter declares proudly towards the end of the show (Weller, 2016). This sentiment of wilful ignorance to proof is connected to the research problem in this study, that some youth are willing to accept claims made in social media news without checking its authenticity.

2.2. What is critical media literacy?

Critical media literacy is described as being an emerging form of literacy by (Funk et al., 2016), and as such it is seen as an emerging pedagogy through an educator's lens.Literacy in this educational stream, namely in media is the ability to identify credible and reliable information and to conversely recognise bad sources of information. However new this form of literacy might seem; it still borrows a lot from the firmly established critical pedagogy field.

Kellner and Share (2005, p. 373) acknowledged the challenge of developing critical media literacy is because

> it is not a pedagogy in the traditional sense with firmly established principles, a canon of texts, and tried-and-true teaching procedures. It requires a democratic pedagogy, which involves teachers sharing power with students as they join together in the process of unveiling myths [and] challenging hegemony.

It is evident to see that CML, is a branch of this form of literacy that builds on these critical thinking foundations by teaching students to read, analyse and decode media texts (Kellner & Share, 2019), by considering the way the viewer is positioned, identifying values and emotions the text appeals to, examining the information the creator has included and omitted (Kellner & Share, 2007). The critical literacy theory tenants of reading texts in an active, reflective manner to better understand power, inequality, and injustice in human relationships (Luke, 2013) are seemingly present and modified for this form of media literacy.

2.3. Why should students learn CML?

As previously discussed in the introductory chapter, adolescent students in that late high school or perhaps entering the tertiary age range are either at the age (16-25) where they spend on average three hours a day on social media (Social buddy, 2020) and consume their news mostly on social media where they are potentially exposed to a large amount of fake news (Herrero-Diz et al., 2020; Kurasawa 2018; Newman et al., 2019). They need CML skills because they are not confident in spotting fake news and/or perhaps not used to applying critical thinking skills in a formal education setting (Notley et al., 2017). Critical media literacy is an educational response that expands the notion of literacy to include different forms of mass communication, popular culture, and new technologies (Kellner & Share, 2019). This form of media is widely used and popular among this student demographic, despite their ability to recognise fake news, therefore formal education is needed to develop this form of literacy.

2.4. Earlier studies in media literacy and the origins of CML

The validity of the term critical media literacy has been called into question for its necessity, for example, scholars such as Ashley (2015) and Dyson (1998) may argue that this is simply a matter of semantics, that CML and media literacy are the same things. However, there are clear differences between what we call media literacy and what we call CML. Firstly, the concept of

media literacy and what it encompasses in an educational setting has been around longer, according to Hobbs and Jensen (2009) it has been taught in schools since the 1970s. It was officially recognised by such organisations as *Media Literacy Project, Center for Media Literacy* in 1997, and *Media Literacy Now* (2001) which have been in existence for over twenty years. Perhaps, critical media literacy is just an evolution of this form of literacy, or does it cover vastly different content? Media literacy has been described as "the ability to access, analyse, evaluate and create media in a variety of forms (medialiteracyproject.org, 2016). And, a literacy that 'empowers people to be critical thinkers and makers, effective communicators and active citizens' (medialit.org, 2016). Both of these are worthwhile approaches to media education, and have their rightful place in the curriculum; however, neither of these common approaches to media literacy promote the idea of critical questioning, analysis, and critique. Kellner and Share remind us of the importance of CML and provides insight on the delineation between the two literacies. "Many of these programs tend to teach students the technical skills to merely reproduce hegemonic representations with little awareness of ideological implications or any type of social critique" (Kellner & Share, 2019 p.13). Critical media literacy extends earlier media literacies expanding media analysis by examining the power dynamics in media stories and who creates it for what purposes which is essential in analysing fake news stories in social media.

What can be taken away from these earlier media literacy educational inceptions such as Media Literacy Project, Center for Media Literacy, and Media Literacy Now; considering Kellner and Share's assertions is that media literacy has perhaps evolved into critical media literacy? Is CML an extension of media literacy for those educators and students seeking to critically analyse media stories in more depth? The critical analysis of power recommended by Kellner and Share (2009) as being vital in CML is incorporated into this study through the fake news reading checklist (see Appendix C). Analysing power in media messages is operationalised in this study through **'Q4. Who do you think is advantaged and disadvantaged?'** (see Appendix B). The wording of this question explores the dichotomy of potential power and social privilege repressed in the chosen fake news story, crucially applying tenets of CML through a social critique. And '**Q5. Why do you think this person created or shared this fake news story?'** What values, ideas, or messages are they trying to spread? (see Appendix C) The wording of this question also extols CML facets by critically analysing media stories in more depth, namely who creates it for what purposes analysing the agenda of the author (s).

2.5. The sharing behaviour by adolescents on social media

The sharing behaviour on social media among young adults is a focus of researchers and teachers in the field of CML because this is a pivotal feature of social media. According to Derakhshan and Wardle (2017), social networking sites are driven by the sharing of emotional content. Moreover, these sites are specifically constructed to facilitate likes, comments and sharing to elicit a tiny release of dopamine in their user's brains. As Boyd (2017) explains we are social beings and are attracted to the types of posts that conform to the prevailing attitudes of our social circle, this performative aspect of how people use social networks is critical to understanding how fake news spreads. Fake news and the influence of social media easily allow the spreading of alternative facts. As Kurasawa (2018) claims Facebook, Twitter, Instagram and Snapchat incentivise attention-grabbing misinformation and inaccurate "scoops", this inaccurate information can spread virally expanding its reach and influence significantly. The one-to-model of information distribution between publishers and the public, or the broadcast news model has been taken over by official and unofficial sources of news according to Hermida (2016). Sheller (2015) adds news is being pushed to audiences through social media, where it is mixed with commentary and recommendations from personal social networks, and where the audience/consumer can easily add comments, share items, and re-distribute it to their social networks. This new model of information flow whereby fake news can be easily disseminated via social media needs increased levels of critical media literacy among people who circulate it. The knowledge and understanding of how fake news is created and shared on social media provides important contextual information for this study and for any future study of fake news. The fake news reading checklist focused on this knowledge and understanding and entire lesson was developed to the seven most common types of people who create and share fake news.

A study that collected data from 480 adolescents in Spain specifically focused on why this segment of the population shares unverified news posts on social media. The social media platform used by the researchers was WhatsApp, this was chosen because it can facilitate the sending and forwarding of news posts which according to Herrero-Diz et al. (2020) often contain emotional, or outrageous language to camouflage hoaxes, rumours, or manipulations, under the guise of reliable information. A key finding of their study was the appearance of information presented as news (headline, image, being published on a digital portal, etc.)

ensures that, regardless of the nature of the content, this information is more likely to be shared among teens. In other words, news stories that grabbed their attention regardless of the journalistic integrity of the author or news source were being shared. This finding is significant because the participants were not able to discern the veracity of the content when false information has the appearance or structure of the news. After all, the language used deceives them, which highlights the power of fake news and the vulnerability of teens to them. This finding coincides with other social media researchers' assertions, that sharing is fuelled by emotions (Middaugh, 2019; Badillo, 2019; Wardle & Derakhshan, 2017) and that 'outrage' language seeks to provoke strong emotional responses through the presentation of misleading, out of- context, flashy facts, personal attacks, generalizations etc is attractive to adolescent social media users and they are sharing these without hesitation (Wardle & Derakhshan, 2017). Badillo (2019) adds teenagers are especially vulnerable to this type of language because they tend to 'act before they think' and this encourages more sharing on social media. This research literature collective wisdom on fake news posts tendencies to use emotional or outrage language and appearance and structure enlightens educators with the common conventions used by authors in media deception. Becoming aware of these conventions addresses this study's research aim to provide information on CML knowledge to provide schools and teachers with a greater understanding about the teaching of CML. Teaching these conventions to students could be argued is an essential criterion for CML educational interventions in fake news.

The finding from the Herrero-Diz (2020) study shaped the design of the fake news reading checklist used in the current study greatly. One of the main recommendations from the Herrero-Diz study was that adolescents need to develop their critical reading skills, namely being sceptical of excessively conspicuous headlines in social media news headlines. This finding reinforces Ciampaglia and Menczer's (2018) claim that social media users are affected by the emotional connotations of a headline, even though that's not a reliable indicator of an article's accuracy. The fake news reading checklist utilised in the current study was influenced by the recommendations from the Herrero-Diz et al. (2017) study, specifically the initial question 'look at the headline' section which asks the students 'Does the headline uses excessive punctuation or capital letters, what grabs your attention' (see Appendix B). This question was aimed at alerting the participants in the current study to pay attention to outrage language that Wardle and Derakhshan (2017) speak of being as a factor in fake news and further out of-

context, flashy facts, personal attacks, generalisations which all are characteristics of social media news platforms specifically aimed at targeting adolescents' users.

The finding from the Herrero-Diz (2020) survey results underlines the importance of in-class education responses to combat young social media users' lack of CML skills. A significant finding was that the teenagers were indeed either not willing or able to verify the credibility of false information before sharing it. That is despite their assertions that they fact-check all news posts before sharing, except if it comes from a trusted source such as friends and family. And, this candid admission seemingly highlights Spanish adolescents' possible gullibility or naivety in CML skills that news posts are immediately shared without question from friends and family. This survey finding is significant because it affirms Spring's (2020) argument that friends and/or family are one of the seven most likely people to share fake news on social media. This supposedly trusted source of information would perhaps come as a surprise to most adolescent social media users who cannot separate their feelings of trust towards their friends and/or family and objectively critically analyse every social media post regardless of who shared with them.

This is an interesting finding and one which emphasises the importance of an educational response from teachers to equip this age group with CML skills to better discern fake news on social media to prevent its proliferation and enable this age group to be more social media savvy. There is a need to make this demographic social media savvy because as the Herroro-Diz study highlights teachers were previously dealing with the peculiarities of digital natives, but it now finds itself dealing with "digital naïves": teenagers who do not question the credibility of the information they consume and who are driven by emotion, rumour, and deceit (Schulten, 2015, p.45). A limitation of this study is that the survey findings identify a belief already held by social media and education researchers, but does not extend to a classroom intervention to make students more social media savvy. What is needed is an in-class intervention program to learn CML to verify the credibility false information before they share it. Exploring this could provide information about what influences student's thinking about the media in an educational setting to address the proliferation of sharing fake news among adolescents.

Increasing levels of critical media literacy among this vulnerable adolescent age group is what this current sort to rectify. This approach to tackling the digital navies problem is supported by

countless researchers in this field (Kellner & Share 2017; Schulten, 2015; Valero & Oliveira, 2018) just to name a few. There are very useful websites and apps with sophisticated algorithms (such as PolitiFact.com, AAP FactCheck, Full Fact etc), however, most researchers agree the best "antidote" to the threats posed by false news is education (Larkin, 2017; McDougall et al., 2019) and they make the case that "Knowledge and education are by far the best weapons against fake news" (Valero & Oliveira, 2018, p. 72). Despite the advancements in fake news detecting websites that can provide accuracy ratings and truthfulness ratings, Spratt and Agosto (2017) argue there is a need for educators to instil a sense of responsibility in their students to prevent the circulation and spread of fake news, which is a big step toward them becoming information- conscious consumers. He significance of these claims strengthen researchers and educators rationale to use educational interventions to respond to fake news.

The timing and need for this study is pertinent due to researchers claims that there is not enough media education in schools. Badillo (2019, p.31) explains it is evident that "the lack of formal or informal education processes in the use of new media" is affecting our perception of their effects: "Schools are vital in helping children and young people effectively discern the truth when they seek information and news online" (Goldberg, 2017, p. 436). Similarly, a recent survey conducted in Australia found a clear majority of teachers view critical thinking about media as important, however surprisingly when asked how often they apply critical engagement with news stories nearly a quarter of the teachers surveyed (24%) said they rarely turned it into a classroom activity (Nettlefield, & Williams, 2018). As a result, there is no surprise that young Australians aged 16-20 have difficulty critically consuming and verifying news at school and home (Notley et al., 2017). Further, students are not confident about spotting fake news online and worryingly only (20%) had received lessons at school in the past year to help them work out if news stories are true and can be trusted (Notley et al., 2017).

One of the key challenges to teaching and learning critical media literacy in classrooms is how to effectively bring together school and out-of-school media literacy practices. One that as earlier mentioned utilises social media platforms where users can share and post. The task for media literacy teaching is to find ways in which students' media experience can be integrated into classroom learning, as well as to consider the usefulness of media literacy teaching to students´ out-of-school lives (McDougall et al., 2018). The direction of CML research is pointing towards correcting disinformation, both in and outside of educational settings, which is rarely (fully) effective according to Lewandowsky (et al., 2017). The gap in the research is

that there is a real need to conduct an educational intervention program specifically aimed at empirically tested educational materials for teachers to use in class to better equip students with critical media literacy skills in identifying fake news in social media.

2.6. Critical media literacy: an essential academic skill

This chapter draws several parallels between EAL/D high school students in a subject English class and EAP students in an ELICOS class, and critical literacy and critical media literacy. As previously mentioned CML is an emerging pedagogy (Kellner & Share, 2019), and as a result, there is not as much research literature on this form of literacy as opposed to critical literacy which contains a vast amount of theoretical literature and empirically tested action research literature. Therefore, this chapter will in parts explain the relevancy of critical literacy to critical media literacy and compare the research literature similarity from EAL/D students to EAP students.

Switching educational contexts, although staying roughly within EAP students age range (16-25), critical literacy is regarded as an important skill for high school learners in their senior years of schooling (ACARA, 2014; Cross, 2011; Gutierrez, 2014), of relevancy to this doctorate study is McDonald and Thornley's (2009) finding that critical literacy should be a focus for EAL/D learners and it is linked to academic success. There are several similarities between senior high school students (Years 11 and 12) and EAP students, in that they both are around the same age bracket, mature enough to appreciate this form of critical questioning pedagogy, and both likely to pursue tertiary studies. CL skills, such as meaning-making, assessing and evaluating information are essential elements in successful adolescent literacy learning, which is why it is a focal point of this study. At the curriculum level, there has been a focus on inclusion for EAL/D students in the secondary school curriculum, which aims to develop 'critical analysis skills' (ACARA, 2014). However, in EAP courses there has not been such an acknowledgement, or allocation of curriculum time devoted to these critical skills according to Wilson (2016) despite most university programs in Australia requiring critical thinking skills in their courses (Bharuthram, 2012; Chanock et al., 2012; Devereux & Wilson, 2008, Vered, 2016). The following paragraph presents an argument that this is an undervalued skill in the ELICOS industry, and this form of literacy is quite an in-demand skill needed for this student segment for success in higher education.

Critical media literacy is an essential skill for EAP students successfully transition into university for the following reasons. As previously mentioned, EAP students are being academically trained to enter university for the first time or enter university in an English as a medium of instruction university. EAP courses are a preparatory course designed to help students build the skills, qualifications and knowledge that are needed to enter university. The overarching social mission of universities is to develop learners critical thinking skills, the purpose of higher education is to go beyond the acts of cognition, and to incorporate the notion of critical action (Moore, 2013). As Wilson (2016) adds every university in Australia promotes critical thinking skills as a course objective in their school/programs, and gaining these critical skills is essential to the student's success in higher education (Bharuthram, 2012; Chanock et al., 2012; Devereux & Wilson, 2008; Vered, 2016). The types of CML higher-order reading strategies included in the fake news reading checklist are identifying assumptions, detecting bias, comparing and contrasting texts, and checking the author and date of the text. The higher-order reading skills inclusion in the study and fake news reading checklist were influenced by the aforementioned literature (Bharuthram, 2012; Chanock et al., 2012; Devereux & Wilson, 2008; Moore, 2013; Vered, 2016; Wilson, 2016) assertions to develop CL skills in an EAP educational program.

2.7. The potential for critical pedagogy resistance among teachers and students in EAP programs

Critical pedagogy is not commonplace in EAP and EFL educational contexts, therefore is no surprise that there is the potential for resistance among students and teachers in these programs. Historically, as Crookes and Lehner (1998) explain English as a Second Language (ESL) (which is the term predominantly used in the US and Australia before it was replaced with EAL/D) and English as a Foreign Language (EFL) teachers traditionally saw 'themselves as contributing to general welfare simply by helping people to communicate" (p. 320), therefore there was not much emphasis on focusing on socio-political issues in their classrooms. Even EAP courses, which as previously mentioned is the more advanced ELICOS course, still only teach academic skills aimed at enabling students to successfully meet the academic expectations and standards set by the university according to Pennycook (1997). In the past EAP was described by Pennycook (1997, p.101) as being a 'practice of pragmatism', in that language and knowledge were seen as value-neutral, rather than expanding the notion to encompass the social and cultural aspects, and that academic institutions and language

departments, in particular, are merely service providers. More recently, academic researchers (Abednia & Izadinia, 2013; Kumagai & Iwasaki, 2011) still argue that there is an ongoing ideology of pragmatism and neutrality in English language courses and the curriculum reflects a regard of language acquisition as solely a cognitive activity. Even if the social aspect of language is acknowledged, this is generally examined superficially with teachers simply focusing on 'who is talking to whom about what' (Akbari, 2008, p.278), rather than understanding the complexity of issues that both teachers and students face. It is this neutral stance, according to Pennycook (2021) that still generally prevents teachers and students of EAP from engaging in the politics of language learning. That is why this study sort to interview students and teachers to explore any possible resistance in the ELICOS industry and EAP programs.

The literature presents the argument that even if critical thinking is included in an EAP curriculum, it is not given enough importance to be effectively taught. As Wilson (2016) argues critical thinking in the EAP curriculum is difficult to cover in any real depth because the content of students' reading topic moves from one topic to another in EAP course books, not allowing sufficient time to deeply reflect or to develop knowledge and understanding of any particular discipline of critical thinking. The Hammond and Gibbons (2005) study conducted in an EAP classroom integrated critical thinking skills in an IELTS preparation class. However, the emphasis of critical literacy intervention focused on content and meaning rather than on critical literacy skills. This was displayed in the research procedures section which described the IELTS preparation worksheets with mock questions focusing on students using academic skills such as identifying main ideas and summarising key points. These CL skills are valuable in critical thinking, however, an argument could be made that they are rudimentary or just preliminary CL skills and this EAP study could have progressed the students' critical literacy skills to incorporate drawing inferences evaluating contrasting opinions and examining the author's intentions, just to name a few. This perfunctory approach to CL tasks is a limitation of the Hammond and Gibbon (2002) study and it is indicative of other similarly designed CL research in EAP as aforementioned by Wilson (2016). It is a limitation because this task in their educational intervention appears to be just performative without any in-depth analysis or any real engagement in the task. These previous arguments made by researchers and Wilson's assertion gave me the impetus for this doctoral study to focus on a semester-long educational intervention of the developing critical media literacy with the constant examination of fake news in social media.

Even though some teachers do acknowledge the importance of teaching critical literacy, two main factors prevent them from applying this in their classrooms. Firstly, the preoccupation with proficiency tests at the expense of critical thinking skills, which Wilson (2016, p.56) refers to as the 'tyranny of testing' in EAP courses, and Masuda (2012) adds this obsession with testing devalues critical literacy. Secondly, teachers are reluctant to initiate changes, such as including more CL content in class because of their untenured status (Sangster et al., 2013). There are numerous reasons why English language teachers are reluctant to incorporate CL context in their classes, and there have been few empirical studies that argued for the possibility of implementing critical pedagogy in an EAP context specifically exploring the teachers' perspectives in the instruction process.

The few empirical studies that argued for the possibility of implementing critical pedagogy in an EFL context in East Asian countries (e.g., Kuo, 2009; Shin & Crookes, 2005b) are limited in that they only focused on the role of the student in the instruction process, leaving the teacher's perspectives and concerns unexplored. The participants in this doctoral study are university-aged students who were learning English for successful, smooth entry into Australian university courses, further, they were all from East Asian countries. Specifically, they were exposed to EFL learning practices from their home countries therefore examining literature from EFL studies in particular EFL studies in the East Asian region was deemed most applicable to this doctoral study participants. What is needed is more studies that explore how teachers can implement critical literacy in their classrooms, focusing on their concerns and challenges. This doctoral study is timely because it explores the inhibitors and enablers of implementing CL in a language classroom from the perspective of students and teachers.

Promisingly, there have been some studies (Ko, 2013; Ko & Wang, 2009; Tan et al., 2010) conducted by teachers into the practices of critical literacy in EFL classes. The most significant was a study with English major students at a Taiwanese university (Ko, 2013) which used a similar research design to this doctoral study; using a qualitative analysis of the data collected from classroom observation, class discussion and interviews. The research aims were also closely aligned, with Ko's study interested in exploring the teaching practices; specifically, how the teachers conceptualize critical literacy and develop critical teaching, plus what difficulties or challenges they encounter in taking a critical literacy approach to EFL reading instruction. An interesting finding was that the teacher/researcher had to find a balance between time spent on covering language proficiency skills and critical literacy skills, most likely this

was due to the previously mentioned curriculum constraints and devotion to language proficiency test-taking skills argued by Wilson (2016) and Masuda (2012). The issues of justifying class time to CL activity to educational directors and students, Asian student passivity to engage with text critically, and the metalinguistic scaffolding needed for EFL learners to engage in critical literacy tasks were all significant findings that influenced the guiding questions for the co-operating teacher semi-structured interview for this study.

Teaching critical reading in the EAP classroom has been described by Davies and Barnett (2015) as challenging the students' worldview which 'makes life awkward' (pg. 69), what she is referring to is that EAP students, particularly those coming from an Asian educational background experience awkwardness when they are exposed to diverse educational and worldview perspectives. Also, student reluctance was reported in Pohl's (2008) study with Asia students, when using critical pedagogy to question the hegemony of Western education in an EAP group. Similarly, Wallace's study (2003) was abandoned by several Arabic students when critical pedagogy was used to examine controversial texts on Islam. It was anticipated that the students in this study, who all originated from Asia, would be challenged by the critical pedagogy in educational interventions and that was certainly the case with most of the students in this study. However, in this doctoral study it was not the intention of the researcher to put the participant students in an awkward position by introducing critical pedagogy to examine fake news on social media knowing that this might go against the grain of previous passive classroom practices and take valuable time away from English proficiency instruction.

There have been studies conducted with Asian students, which successfully implemented critical literacy in class. A key finding from the Navera et al. (2019) study in the Philippines was that the participants found critical literacy activities a worthwhile use of class time and of relevance to this doctoral study there was no resistance in terms of misuse of class time. There are a few similarities with the Navera study, that being the participants are both Asian students at the university level of education. Although, it is worth noting that this class was not an English language or university (in an English-speaking country) preparation course, the participants were majoring in consular and diplomatic affairs. Keeping in mind the nature of their course, these participants were perhaps more receptive to examining the social functions of language and perhaps could see the benefit of this in their future roles.

Only a relativity small number of studies (Davies & Barnett, 2015; Pohl, 2008; Wallace, 2003) have specifically examined the critical analysis of media in an ELICOS sector focusing on EAP students' successful transition into university. This deficit of research knowledge of CML in an EAP context is a problem, because as previously mentioned, universities in Australia promotes critical thinking skills as a course objective in their school/programs (Wilson, 2016), and gaining these critical skills are essential to the student's success in higher education (e.g., Bharuthram, 2012; Chanock et al., 2012; Devereux & Wilson, 2008, Vered, 2016). Moreover, in EAP courses there has not been such an acknowledgement or allocation of curriculum time devoted to these critical literacy skills according to Wilson (2016). CML is an under-researched area in this context, which makes this study timely and important, particularly because its focus on EAP students in an ELICOS class who are likely to be lacking in this skill set and need it to successfully transition into university.

The context of the commercial underpinnings of the ELICOS industry has been discussed, but not the teacher training. The typical teacher training required in this industry is a Teaching English to Speakers of Other Languages (TESOL) certificate. The TESOL teacher training as Lotherington and Jenson (2011) state uses texts to focus in on the English language learning aim to direct students' attention to correct English structures and forms rather than to critically interrogate language/semiotic use of language. Teacher training courses aim to improve students' English grammatical competence which employs conventional literacy practices without giving much importance to critical interpretations. This produces a reductionist view of language learning according to Fajardo (2015) and leads to a culture of acquiescence where literacy is reduced to reading words on a page and not critically analysing how those words shape identities and influence readers' perspectives. That both English language teachers and learners seem to favour conventional literacy practices rather than critical literacy. ELCOS students need TESOL qualified teachers who will facilitate the social significance of words rather than just the rudimentary meaning of words to expand their concept of literacy to 'read the world' (Freire, 1970; Freire & Macedo, 1987), that is to expand language learning, from functional literacy that focuses solely on developing students' linguistic skills to critical literacy that aims to give students a language of critique to achieve equality and social justice or effect social transformation (Edelsky, 1999; Lankshear & McLaren, 1993; Shor & Freire, 1985). Teacher training is an important aspect on new teachers adopting CML in the classroom, it either represents an inhibitor or enabler to the inclusion of this class.

The roots of critical literacy may be traced to Paolo Freirefocu (1972), who gave the concept of literacy a socio-political dimension. Through a problem-posing pedagogy, Freire taught Brazilian and Chilean peasants how to read by introducing them to vocabularies that were meaningful to their daily experiences. Using words as a stimulus, Freire engaged them in critical reflection on the oppressive realities around them, and how they could free themselves from this oppression and transform their worlds. Freire found that the peasants were able to retain these words in their vocabulary after they had been led to a critical consciousness of their situation (Freirefocu, 1972). This shift from functional literacy to critical literacy started to influence educators in the field of TESOL namely the changing concept of literacy to foster a deeper appreciation of the power of words to change unjust policies and practices. Using the English classroom as a site to examine competing interests between groups and their effects on society is a concrete response to Freire and Macedo's call to encourage learners to read the word as well as the world (1987). What is needed is a wider concept of academic literacy in EAP programs, that is broader than just functional literacy that focuses solely on developing students' linguistic skills. What is needed is CL skills which examine language and its relationship with power are viable options to disrupt this functional view. Understanding teachers' reluctance to cover more challenging content for their EAP learners is a precursor to implementing a CML course. This study addressed this educational concept by opening up a dialogue with teachers in the field exploring their possible reluctance or lack of knowledge in teaching such content.

2.8. Student selection: topic

Another challenging area posed by teaching CL for EAL/D students in subject English is the cultural background knowledge and choice of the studied text. Alford and Kettle (2017) explained it is the text's construction and cultural assumptions which complicate this content for EAL/D students who might not be familiar with these. These students might not have been exposed to such cultural assumptions in their cultural community or be a newly arrived immigrant. The Senior English as an Additional Language or Dialect Curriculum (ACARA, 2014) aims clearly stipulate to develop student's critical analysis skills for the representation of ideas, attitudes and values in the Australian context (ACARA, 2014). There is some accommodation to the potential unfamiliarity in the Australian context by analysing 'the representation of ideas, attitudes and values and how these vary across cultures and within

different contexts' (ACARA, 2014). However, the base context appears to be Australia, which would be difficult to unravel for a newly arrived student in a mainstream English class. A similar argument could be made for a newly arrived EAP student in an ELICOS course, in fact, it seems more likely that these students would not have lived in Australia for as long as an EAL/D student in subject English and possibly this cultural disconnect experienced in the chosen text would be a significant hurdle to comprehension. Critical thinking in higher education in Australia has various criteria and teaching strategies, however, as Kek and Huijser (2011) note they are mostly constructed by the teacher rather than student-focused. Adding additional material, namely critical literacy, to the Australian curriculum might be problematic as Kek and Huijser (2011) previously mentioned, and similar concerns are made about the ELICOS curriculum (Davies & Barnett 2015; Moore, 2013; Wilson, 2016). Adding this vital element of allowing the students' cultural choice in critical literacy activities, making it student centred, was seen as a crucial point of this study. Providing these affordances in this study allowed the participant students to choose a topic of fake news that could be culturally familiar to them.

Student selection, which considers the importance on the reader in understanding the CL content has been proposed by numerous researchers (Galante 2015; Moje et al., 2000; Navera et al., 2019; Ranieri & Fabbro 2016,) to allow the non-native English-speaking students to more effectively grasp this concept. Allison (2011) supports this line of argument claiming that critical language awareness can be developed in a mainstream English classroom if the student's first culture forms the centrepiece of the literacy event. What is meant by this? Ranieri and Fabbro (2016), and Locke and Cleary (2011) claimed that student engagement in CML tasks comes from selecting a text that has relevance to the student's lives. There is an argument presented by the literature to allow student-led text choice for CL activities in class. Further adding to this line of argument is Notley's et al. (2017) survey found that young Australians are interested in news about their local community events and issues (43%) the second most interesting topic only conceding to news about technology (52%). This supports the argument that young Australians have an interest in news about their local community issues. For this reason, the study elicited responses from practitioners in the field, teachers and educational experts at the White Rock language school and the decision to were include students in the decision-making for the selected texts.

Student selection has been used to good effect in recent CML studies. A study in the Philippines by Navera et al. (2019) allowed students to choose memes to critically analyse in class. Previous studies evaluated, interrogated, and interpreted the information presented in memes (Alvermann, 2017; Frechette, 2014) specifically memes that contained fake news. A significant finding from Navera's study was that the students were engaged in this critical text analysis activity because it was a form of social media communication that they could connect to, and it was on local/national issues that they could relate to. This finding in the Philippines study coincides with the study conducted in Australia (Notley et al., 2017) that teens become engaged in CL tasks about either local or national issues. The trend that is emerging from these studies' findings is the importance of finding the relevance to the student's lives in the selected texts in CL analysis. The choice of memes used in the Navera et al., study to engage students in connected learning opportunities capitalises on the passions and interests of students and presented the case to implement such selection options in the current study. Allowing the students to select a variety of social media posts, for example, written posts, links to videos or mems was granted in this doctoral study in an attempt to facilitate that engagement which was found in the above mentioned studies.

A strength-based approach, which Armstrong et al. (2012) advocate connects the cultural identities and community knowledge resources together for students, was utilised in this study by allowing students to select a media article of cultural relevance to them, which adopts a strength-based approach to CML. While strength-based approaches have yet to be applied to literacy programs, they could according to Armstrong (et al, 2012) who argues they provide a starting point for the development of literacy approaches that are more inclusive of community and local perspectives. Lock and Cleary's (2011) study found CL is best taught in a situation where students are exposed to a multicultural text theme that they can relate to in their daily lives, which supports Alison's (2011) claim of using culturally familiar texts in teaching CL. The students in this doctoral study were encouraged to choose a fake news story post that they could culturally relate to, and by doing so adopt a strength-based approach where their culture and/or local community was included.

2.8.1. Student selection: language—the learning benefits and challenges of translangauagaing

Student selection in terms of incorporating students' first language (L1) in the text used for critical analysis is similarly proposed to aid in CL acquisition for EAP students. Allison (2011)

claims critical language awareness can be developed in a mainstream English classroom if the student's first language forms the centrepiece of the literacy task, further adding that student choice of the language of the text could foster engagement, which as previously mentioned is an issue for EAL/D students. Allowing the EAP students in this study to explain their chosen text, using L1 words and/or cultural themes utilising translangauagaing techniques, which could facilitate comprehension of CL. Translangauagaing is the "act performed by bilinguals of accessing different linguistic features or various modes of what are described as an autonomous language, to maximize the communicative potential" (Garcia & Lin, 2017, p. 140). In other words, when multilingual use their L1 to describe something in Second Language (L2) for a purpose, it can be called translangauagaing. It is unclear from Allisson's study what exactly constitutes the student's first language forming the centrepiece of the literacy event. Perhaps the text is not just in English or the text features non-English words. Either way, in a subject English class, it seems fitting to have the EAL/D students produce an analysis of a multimodal media message predominately in English. My research question aimed to explore if individualised student choice leads to any gains in student engagement by covering CML concepts. According to Alford (2001, 2014), Alford and Jetnikoff, (2011) and Locke and Cleary (2011) there is a small body of research showing how teachers can foster EAL/D student engagement for CML content in subject English., and this shows promising signs for the inclusion in an EAP class.

Locke and Cleary's (2011) study was also set in a multicultural class and they noted that many of the students had a LOTE. It is unclear, but perhaps most of the students in this class were not EAL/D students, which would mean that my sample population would slightly differ in that in my study all the students were EAL/D students. However, of relevance to my study is those EAL/D students needed careful scaffolding in terms of metalinguistic instructions to comprehend the specific ways in which language constructs meaning. Although there are few specific details about this reported metalinguistic scaffolding necessary for the EAL/D students, something which my study explored in greater detail with the fake news reading checklist, aimed at guiding EAP students who some of whom were novices in critical pedagogy approaches.

The educational benefits of using translangauagaing could be well suited to EAL/D students learning CML skills in a classroom. This doctoral study is important because we know non-native English students benefit from translangauagaing considerations in critical language

activities (Allison, 2011). From the Alford (2001, 2014), Alford and Jetnikoff, (2011) and Locke and Cleary (2011) studies there were signs of promise for implementing translangauagaing, but we do not know specifically what translangauagaing practices enable or inhibit EAP students in CML tasks. An empirically tested educational intervention is needed to explore how these educational disciplines, translangauagaing and critical media literacy, interact in an EAP environment.

The ELICOS industry, which is usually referred to as an industry rather than an educational pursuit of excellence, so much so the word ELICOS is synonymous with 'industry'. Jensen-Clayton (2016, pg.10) deconstructs the 'ELICOS business model' as a series of illusions that are adverse to the facilitation of effective and relevant English education. One illusion that props up this industry, of relevance to this study, is the false assumption that international students are developing monolinguals while ignoring the fact that they are developing bilinguals/plurilinguals (Ellis, 2005). Therefore, it is no surprise the reluctance to adopt translanguaging practices in the classroom, as Cenoz and Gorter (2017) and Garcia and Lin (2017) claim translanguaging questions the belief that the ultimate goal of learning a second or foreign language is to achieve native (-like) competence. In the case of EAP students there is even more potential motivation to achieve native (-like) competence due to the fact that this division of ELICOS students is more likely to be staying longer in Australia after completing their tertiary studies and perhaps working and/or living permanently in Australia. Understanding the intentions and motivations of the stakeholders in an ELICOS school setting is necessary for qualitative studies like this one which explores and provides deeper insights into educational challenges.

Understanding the ELICOS industry motivations requires understanding the student or if the analogy of ELOCOS being an industry or perhaps the 'customer' motivations is a more appropriate label. The study's participant student nationality was overwhelming Chinese students, and five out of the six participants originated from mainland China. As Liu et al. (2020) describe in the past few decades, English language education at the tertiary level in mainland China has focused on general English teaching with goals to develop (listening, speaking, reading and writing) for general communication and more advanced EAP courses to prepare students for English as a Medium of Instruction (EMI) according to Cai and Cook (2015) and He and Cheng (2016). There is an expectation that EAP courses in Australia would be no different, with an emphasis on EMI preparation, or more simply put instilling an English-

only policy in class, which renders their native language a distraction. There have been several studies reporting the advantages of translanguaging pedagogy at the tertiary level (Chen, et al., 2019; Lin & He, 2017; Mazak et al., 2017), citing the multiple linguistic and semiotic resources to communicate knowledge and build academic literacies as an advantage. On the other side, studies have also highlighted the challenges of implementing translanguaging pedagogies, due to the constraints of monolingual educational ideologies at the tertiary level (Carroll & van den Hoven, 2017; Chang, 2019). Considering the obvious advantages to translanguaging pedagogy and the challenges facing teachers, scholars (Mazak & Carroll 2017) have called for more studies on professional support for teachers to develop translanguagaing approaches in their local contexts. Adding to the growing number of translanguagaing research at the EAP level in the Australian context would add to this research field.

Continuing with translanguaging in the local context, Adoniou (2015) and Coady et al. (2016) question educational strategies used for the literacy instruction of monolingual English-speaking students which they argue is insufficient for EAL/D students. There is a persistent misguided belief held by language teachers that a learner's first language is of no significance to the learning of English and that it may be a hindrance (Coleman, 2016; Naidoo & D'warte, 2017). This can also be applied in the Second Language Acquisition (SLA) field where there is still the persistent 'English only' policy, what is needed is as taking an 'asset-based approach' to supporting students who are new to the English language can help them thrive (George Lucas Educational Foundation, 2021). Translanguaging tasks, like the social media production tasks offered in this study, allow students to include language other than English to reject this monolingual approach in the classroom. Moreover, this translanguaging task facilitates what Mourssi (2015) terms 'inter-linguistic transfer', which describes how different languages support one another namely that English is learned more efficiently as an additional language when the first language is maintained (Jackson et al., 2017). In fact, Adoniou (2015) adds that in English classrooms that celebrate translanguaguing the EAL/D learner is both advantaged by the existing metalinguistic knowledge they bring to the task of learning English which native speakers do not possess. There are very few studies (Navera ,et al. 2019) conducted in an EAP class where critical analysis texts were selected the students' first language was featured in the text choice and their engagement and possibly achievement were observed. The students incorporated Tagalog and other regional Filipino languages. This gap in the research could be filled by my study, which would take an asset-based approach to the participants native language that rejects a monolingual approach and provides empirical findings if different

languages can support EAL/D learners, in this study EAP learners, when their first language is maintained.

2.9. The potential for critical pedagogy resistance among teachers in EAP programs

Following on from the previous section CML builds on critical thinking foundations by teaching students to read, analyse and decode media texts (Kellner & Share, 2005), specifically the ability to identify credible and reliable information, to critically assign value to media information (Kek & Huijser, 2011). Students are immersed in a media-rich world and are exposed to a tremendous amount of information, which requires a critical eye to decipher misinformation from fact (Burnett & Merchant, 2011; Lewandowsky et al., 2012). The ability to sift through this torrent of online media information and assign a value to each was the focus of my study, with EAP students tasked with the assignment to critically analyse fake news stories posted on social media.

Despite the ubiquity of social media in contemporary society, and the need to view it critically, it has surprisingly not found prominence in formal education. A recent survey conducted in Australia found a clear majority of the teachers view critical thinking about media as important, however surprisingly when asked how often they apply critical engagement with news stories nearly a quarter of the teachers surveyed (24%) said they rarely turned it into a classroom activity (Nettlefield, & Williams, 2018). As a result, there is no surprise that Australia's first nationally representative survey on how young Australians aged 8-16 consume, experience and verify news found that students need more help with media literacy, at school and at home (Notley et al., 2017). Of relevance to this study, is that they are not confident about spotting false news online and only (20%) had received lessons at school in the past year to help them work out if news stories are true and can be trusted (Notley et al., 2017). An argument could be made that teachers are somewhat reluctant to cover CML; my intended study will aim to provide such a space to explore and experiment with critical media engagement in a formal educational setting, where teachers can provide feedback on critical insights into messages from popular media. With so few teachers (24%) incorporating critical thinking about media into their lessons and that significant finding that Australian students need more help with media literacy at school and home, the importance of this study is evident to see.

A possible explanation for why CML is not more widely utilised in education is due to the perception that it is not a pedagogy in the traditional sense, or one with established principles, texts or well-known teaching methods (Kek & Huijser, 2011). Critical media pedagogy in the United States of America is in its 'infancy' according to Kellner and Share (2019, p. 37) who add this field of education is starting to produce results. The same argument could also be made in Australia where similar results have been recorded in Australia with Notley's et al. study that as previously mentioned few teachers (24%) surveyed have critically analysed news stories in classroom activities. Most teachers (78%) cited they need more support and resources, adding they would need specific CML content to 'guide staff/students through the process', including web links, photocopiable sheets and 'age appropriate' resources would help them guide students (Notley et al., 2017 p.6). This need for empirically tested CML classroom content from teachers formed the rationale to undertake this study. As Robertson and Scheidler-Benns (2016) explain, even though the need for CML has been widely recognised, it has rarely been implemented in the classroom context. As a result, there have been few accounts of CML pedagogical practices, especially when it comes to EAL/D. Therefore, there is a deficiency in the literature and my study could contribute to a better understanding of this emerging pedagogy in an under-researched area.

The issue with students not receiving quality teaching about how to critically engage with and make decisions about news media is the research problem. This is particularly important for English for Academic Purposes (EAP) students in English Language Intensive Courses for Overseas Students (ELICOS) programs, in which the majority of the curriculum is devoted to traditional academic literacies (e.g., academic writing, presentation skills, proficiency test preparation), tending to neglect critical pedagogy. This is a problem because the international student transition into Australian tertiary programs is complicated if students have not had sufficient pedagogical exposure to critical literacy, as Hellsten (2013) states it is the lack of critical thinking skills which is cited as being overlooked in international students' experiences. According to Wilson (2016), every university in Australia entails critical thinking skills as an asset to their school/program, and gaining these critical skills are essential to the student's success in higher education (e.g., Bharuthram, 2012; Chanock et al., 2012; Devereux & Wilson, 2008, Vered, 2016). As a result, the international academic transition period can be challenging for many of these students. Teaching and learning are not just a matter of skill acquisition or knowledge transmission; it is about access and apprenticeship into institutions, resources and texts (Freebody, 2007). This academic literacies-centric view of curriculum which will be

argued in this thesis is not setting these students up for long-term success in Australian tertiary schools where students need to evaluate sources of information critically and independently.

As previously mentioned, EAP students might not have had a lot of critical pedagogy exposure, and the ELICOS curriculum is English proficiency test heavy and focuses on traditional literacies. As Ramos-García (2018, p.8) explains this is largely due to the teaching practices of EAP, being concerned with 'those communication skills in English which are required for study purposes in formal education systems', and more specifically academic purposes in higher education sectors. EAP programs and teacher education has been based to a large extent in departments of linguistics and applied linguistics and not in departments of education where critical pedagogy in English for Academic Purposes pedagogy has a firm footing (Haque, 2007). This particular deficit of critical pedagogy in EAP courses gave me the motivation to study this area of education preparation. The 'internationalisation' of higher education has brought new elements of cross-cultural influences of pedagogy and practice according to Hellsten (2013) and exposed an alleged lack of critical cognitive resources among the Asian international students which is the likely cause of these students experiencing a cultural academic shock. Recognising that this international academic transition period can be challenging for many international students in Australian universities is the premise of this study. As Hellsten (2013) added from the student learning perspective a smooth transition into new and foreign learning environments is believed to determine academic success.

However, it is important not to take a Western-centric perspective to Asian EAP students. Assuming Asian students seeking to enter Western universities are lacking in critical thinking skills takes an assimilationist approach mindset and makes certain assumptions that might not be the case, namely that this student segment experiences cultural maladjustment and has a cognitive disadvantage (Biggs & Tang, 2011). Adopting this approach might lead to a detrimental cognitive deficit label being given to 'Asian' international students (Biggs & Tang, 1999) studying in 'the West', and perpetuates stereotypical beliefs about 'Asian' learning modes (Confucian) as being detrimental to academic achievement. However, there is a lack of empirical evidence to support claims that Asian learning styles (surface and rote learning etc) are counteractive to learning in 'western' learning systems (Watkins, 2014). On the contrary, there is evidence to support that these claims are contraindicative, as Biggs and Tang (2011) state there is data that places 'Asian' students in the top five per cent of university courses generally.

This student segment needs to go beyond just 'English', in terms of the four language learning macro skills: reading, writing, listening, and speaking, which will enable them to pass the English language entry test. For students to prepare for university in English-speaking contexts, they need to go beyond these basic language skills, critical thinking skills are the existence of tertiary education, and as Moore (2013) argued, it is also the spotlight of university preparation courses. Specifically, critical reading skills, this is an aspect of EAP that is often overlooked according to Wilson (2016) every university in Australia entails critical thinking skills as an asset to their school/program, and gaining these critical skills are essential to the student's success in higher education (e.g., Bharuthram, 2012; Chanock et al., 2012; Devereux & Wilson, 2008, Vered, 2016). This led to the decision to design an EAP intervention program that tested and developed a fake news critical reading checklist, to develop such aforementioned critical reading skills. Many EAP students do not have a great deal of experience in critical reading and critical thinking—or at least in the kinds of critical thinking expected in tertiary education (Wilson, 2016). To address this lack of reported critical skills among EAP students this doctoral study sort to respond to this problem by incorporating higher-order reading skills. The types of CML higher-order reading strategies included in the fake news reading checklist included identifying assumptions, detecting bias, comparing and contrasting texts, and checking the author and date of the text.

2.10. Summary

This literature review informs the use of CML pedagogy in learning and teaching. In the chapter I have provided an overview of relevant literature describing what CML is in an educational setting; and why this emerging form of literacy is suitable for EAP students and adolescent learners across all educational sectors. It has provided a rationale to frame the relationship between the CML and the nature of the fake news on social media and provided speculation why there might be the potential for resistance among educators and students. The review has shown the transformation of CML studies and argued why this form of literacy is a worthwhile contribution in terms of cognitive, social, affective, and curricular benefits. Academically established critical literacy skills and emerging critical media literacies pedagogies have been outlined, discussing various educational intervention modes of delivery outlying their strengths

and weaknesses. Gaps in the literature have been highlighted, revealing the needs that this research study will seek to fulfil by exploring.

CHAPTER 3: METHODOLOGY

3.1. Introduction

The purpose of this research project was to explore how using fake news on social media might influence critical media literacy learning and teaching in an EAP classroom. The research aimed to actively involve the participants in the research process with the intention to collectively understand the best practice for how critical media literacy can be operationalised to analyse fake news on social media in an educational setting. The research goal was to gain an in-depth understanding of the research site to build a multifaced understanding of this best practice of the educational intervention for teachers and students. This chapter begins by explaining the appropriateness of this methodology in responding to this research aim, which is used to introduce the following sections; 3.1 DBR (Armstrong et al., 2022; Collins et al., 2004; Jen et al., 2015) which includes problem-orientated research design, suitability to technology-enhanced learning environments, classroom practices understanding theoretical foundations, 3.3.3 standpoint theory (Harding, 2004) and 3.3.4 practice architectures (Kemmis & Grootenboer, 2008; Schatzki, 1996, 2002, 2016). This chapter moves onto with explaining the appropriacy of the chosen design-based research methodology, and how it aligns with the aims of the study and the researcher's overarching philosophy.

3.2. Justification of qualitative component

In keeping with a pragmatic research philosophy, a convergent parallel research design was deemed the most suitable. Teacher and student interviews along with teaching/ classroom resources and student samples were all collected concurrently; therefore, a convergent parallel research design was deemed most appropriate (Creswell, 2014).

Understanding the classroom settings, social and psychological atmosphere, pupils' motivation, attitudes towards learning topics or schooling in general, and students' experiences outside the school, such as discussions with their parents, and the media is not only a tenet of qualitative research but also design based research according to Juuti and Lavonen (2006). Wang and Hannafin (2005), add that DBR requires researchers to collaborate intimately with participants to achieve theoretical and pragmatic goals to effectively bring about educational changes. It is evident to see that qualitative research designs are best suited for constructing a rich, detailed description of this educational setting.

As Creswell (2014) notes, qualitative researchers typically gather multiple forms of data, such as interviews, and documents rather than relying on a single data source. The multiple sources of data are appropriate to capture the rich data to capture the practice architectures of CML in a subject English class.

The qualitative data collected attempted to explain the full scope of practice architectures, namely the doings, sayings and relating. Designing a semester-long EAP intervention based on both literature and empirical data that involves communicating with ELICOS teachers using several of specialist discourses. These included discourses on ELICOS education, the content of CML in education (ideas from theory and research, policy and practice) and the subject design (e.g. ideas about critical literacy components that could be transferred into CML, ideas about the levels of mastery students should achieve, ideas about the kinds of activities students should engage in a subject of this level and type, the number and type of assessment items appropriate for the subject and ideas about how the subject should be evaluated after it has been taught). Preparing for the CML classes involved constructing a fake news reading checklist which the content on this checklist, that needed to be refined to be able to be classroom ready. The social media response task needed to be workshopped with the ELICOS and specialist EAP teachers and even modified for the class-level requirements. Furthermore, preparing a CML education subject also involved a network of relationships between teachers, students enrolled in the class, educational leaders at the ELICOS school and academic bodies who set the curriculum and standards for educational goals for these students. When a DBR study is conducted, the participants and researchers become a shared community (Berland, 2011).4

3.3. Theoretical foundations of DBR

What I bring to this study in terms of my philosophical orientation about the world and the nature of research would prescribe to a pragmatism approach, for the following reasons. Firstly, I am pragmatic in my research worldview because my epistemological position to research is it should be conducted and oriented towards real-world practice and more importantly apply to real-world settings. Design-based research aligns with my pragmatic approach because as previously mentioned this research prefaces being situated in a real educational context and as Bell (2004) states DBR researchers aim to better understand the learning contexts to better

understand learning experiences. Also, as Barab and Squire (p.8, 2004) postulate the goal of DBR is to 'directly impact practice while advancing theory that will be of use to others', which these scholars argue DBR research implies a pragmatic philosophical underpinning where the value of theory is in its importance to produce changes in the world. Adopting a pragmatism approach meshes with DBR, in that DBR theory lies in its ability to produce changes in the world.

Secondly, I place importance on answering the research problem first. In my research, I want to address the overarching problem that adolescents lack the basic fundamental critical news literacy skills and are sharing fake news posts on social media. This view of the practical purpose of research reveals my philosophical choice to adopt pragmatism. Addressing EAP students' inability to succeed in CL tasks in first-year university courses, which complicates their transition into Australian universities, is an ethical concern of mine. As previously described, the private language school's EAP syllabus does not prioritise higher-order CL skills in the students necessary for university success, despite having a course description of being a university preparation course. The syllabus displayed, as previously argued by Pennycook (1997, p.101) as being a 'practice of pragmatism', in that language and knowledge were seen as value-neutral, rather than expanding the notion to encompass the social and cultural aspects, and that academic institutions and language departments, in particular, are merely service providers (Abednia & Izadinia, 2013; Kumagai & Iwasaki, 2011). Providing equity in education for these marginalised EAP students is an overarching problem that this study acknowledges. Moreover, recognising and accommodating student diversity could be considered a progressive educational practice. What I bring to this study in terms of my axiological orientation is to incorporate the philosophical pragmatism of John Dewey's moral education, in that curriculum and the learning experience of students need to be accessible to all (Pavlis & Gkiosos, 2017). The study's aim was to improve the educational equity to these EAP students who might not be familiar with this type of pedagogy, who might not have been exposed in their educational history. By basing this study in a real-world setting and providing appropriate scaffolding it was aimed at being accessible and inclusive to these EAP students.

3.4. The conceptual framework underpinning CML

Foundational ideas of what are the key functions of CML have been collected from multidisciplinary bodies of knowledge on critical literacy and media studies and organised into a conceptual framework that guided this research (see Table 1). This conceptual framework is based on my research problem and objective to foster CML among EAP students. Furthermore, this conceptual framework illustrates my research approach in a visual form to ease readers' understanding of my research approach. The conceptual framework has been adapted from Kellner and Share (2019), which is based on key concepts for being critical of media content whilst being accessible and simplified for students and teachers. An example of this is how the concepts have clear classroom pedagogical questions posed to students and teachers in who, how, what, why and whom questions.

Critical media literacy phenomena are linked in a six-part compilation, bringing together expert opinions in the discipline of critical literacy and media studies. This CML checklist was used by the research participants in the fake news reading checklist taking relevant conceptual understandings that were relevant to fake news on social media, such as "HOW was this text constructed and delivered" and of particular relevance to social media "WHY was this text created and/or shared?". The CML checklist was easily amendable in its intended application. Having a flexible conceptual framework fulfils Akcam's et al. (2019) benchmark for qualitative approaches to conceptual framework designs. The six concepts allow practitioners to ruminate on the topics, potentially helping to explain or predict phenomena that occur in the media messages.

Table 1

Critical Media Literacy Framework

Conceptual Understandings	Questions
1. Social Constructivism All information is co-constructed by individuals and/or groups of people who make choices within social contexts.	WHO are all the possible people who made choices that helped create this text?
2. Languages/Semiotics Each medium has its own language with specific grammar and semantics.	HOW was this text constructed and delivered/accessed?

3. Audience/Positionality Individuals and groups understand media messages similarly and/or differently depending on multiple contextual factors.	HOW could this text be understood differently?
4. Politics of Representation Media messages and the medium through which they travel always have a bias and support and/or challenge dominant hierarchies of power, privilege, and pleasure.	WHAT values, points of view, and ideologies are represented or missing from this text or influenced by the medium?
5. Production/Institutions All media texts have a purpose (often commercial or governmental) that is shaped by the creators and/or systems within which they operate.	WHY was this text created and/or shared?
6. Social & Environmental Justice Media culture is a terrain of struggle that perpetuates or challenges positive and/or negative ideas about people, groups, and issues; it is never neutral.	WHOM does this text advantage and/or disadvantage?

Note. This table demonstrates the theoretical elements of critical media literacy as conceived by scholars Kellner and Share (2019).

3.5. Design-based research

The study's research problem focused on how some EAP students in Australia may not be receiving quality teaching about how to critically engage with and make decisions about news on social media. Design-based research was chosen as the research methodology most appropriate to address the research problem as this methodology was developed to improve classroom practices by designing educational interventions aimed at solving research problems, refining theory and producing educational products; curriculum, syllabus, educational tools (Collins et al., 2004; Armstrong et al., 2022). One reason why these students are not receiving quality teaching about how to critically engage with and make decisions about news on social media is that only about a reported quarter (24%) of Australian teachers are critically analysing media stories in class partly due to a lack of teaching materials (Notley et al., 2017). This presents the argument why there is a need for problem-oriented research to address this. By actively involving the participants in the research process, my intention was for the participants to assist in designing educational tools in developing this form of critical media literacy.

A design-based research (DBR) methodology influenced by a pragmatic epistemology was developed and employed as the main research paradigm informing this study. This research methodological framework is advocated by Jen et al. (2015) as being useful to guide the process of designing educational interventions. Educational interventions in DBR are used to describe an 'educational program that introduces a systematic change in the teaching–learning environment' (Jen et al., 2015, p.193), and the overall aim of those interventions is to address learning problems to enrich learning (Barab & Squire, 2004; Design-Based Research Collective, 2003; Kennedy-Clark, 2015; Plomp, 2013). The learning problem this study seeks to address is that adolescents, find it particularly hard to recognise fake news in social media and they would like to be able to gain the necessary CML skills to rectify this (Notley et al., 2017). In addition to adolescent students seeking guidance in this area, Australian teachers also admit to not addressing this form of literacy in their classes citing a lack of classroom teaching materials. Design-based research is an appropriate methodology to respond to this educational problem because it can be utilised as a problem-orientated research framework according to Abdallah and Wegerif (2014). Positioned neither purely positivist nor purely interpretivist in orientation, DBR's research paradigms are based on the problem presented in the study, and the research objectives are the impetus that guides the research process (Abdallah & Wegerif, 2014). That is why this study focused on problem-orientated research, namely the educational deficit faced by adolescents and the lack of empirically tested classroom materials for teachers to use in the classroom. This was argued to be an educational problem because these EAP students, who are going on to study in Australian universities have likely received little to no critical pedagogy instruction in formal education and DBR would be appropriate to address this learning problem.

Addressing this lack of teaching and learning in the discipline of critical media pedagogy, specifically examining the surging trend of fake news on social media, DBR methodology is well suited to this for the following reasons. Design-based research is an emerging research approach according to Anderson and Shattuck (2012), and as Wang and Hannafin (2005; 2012) note, the development of DBR has always been associated with new technology and innovations in education. Design-based research design has been demonstrated as a suitable methodology in Technology-Enhanced Learning Environments (TELE) due to the active involvement of its researchers in learning and teaching (Wang & Hannafin, 2005; Wang, & Shao, 2012). An example of DBR's application in a TELE setting was Wang and Shao's (2012)

study, where the researcher/instructor designed and implemented an English as a Foreign Language (EFL) collaborative learning intervention using the online multimedia platform *Second Life.* Interactive online virtual worlds and social media share many similarities, online users interact with each other and share and create content. Of relevance to this study, they are similar in that they are both forms of online social participation gaining increased attention in educational research. It is evident to see that the interactive nature of virtual online worlds and social media share commonalities. Wang and Shao's (2012) study provides a lot of affordances for this study in that language educators can successfully merge language learning and teaching using DBR methodology for technology-enhanced learning environments. This is of particular relevance to this study, in that fake news, social media manipulation and misinformation are considered new forms of media literacy and it is a relatively new teaching pedagogy in education. As previously mentioned, critical media literacy is described as being an emerging form of literacy by Funk (et al., 2016), and as such it is seen as an emerging pedagogy through an educator's lens for which DBR matches well as a research design.

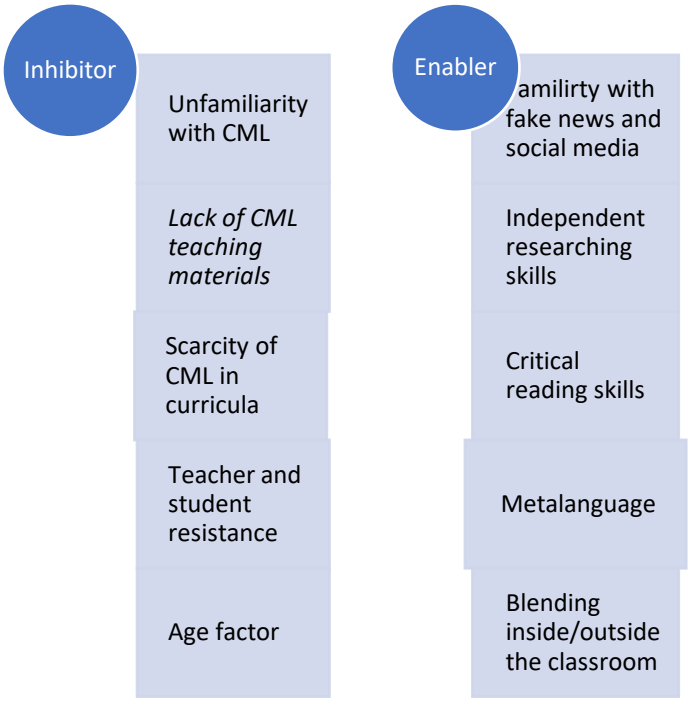
3.5.1. Design-based research origins and educational impetus

The origins of this research design can be traced back to researchers like Allan Collins (1990) and Ann Brown (1992) (the American researcher credited with first developing DBR) who claimed that educational research was failing to improve classroom practices. They identified that most of the educational research was being conducted in controlled, laboratory-like settings which were as a result not as helpful for educational practitioners. Proponents of DBR claimed that this type of educational research was not helpful because it was detached from practice (The Design-Based Research Collective, 2002). Proposing such detachment poses two main problems. Firstly, practitioners do not benefit from the researchers' work and secondly, research results may be inaccurate, because they fail to account for the context being too abstract or sterilized to be useful in real-world contexts (The Design-Based Research Collective, 2002). Concluding that findings and theories based on controlled lab results may not accurately reflect what happens in real-world educational settings (Jen et al., 2015). Advocates of DBR propose that conducting research in context, rather than in a controlled laboratory setting, yields more authentic and useful knowledge (Barab & Squire, 2004) and that this produces research validity as a result, which can more accurately inform practice (Anderson & Shattuck, 2012). Improving classroom practices that are not detached from

practice is what this research was seeking to achieve, therefore DBR's delineation is well suited to this study. As this study specifically aimed to empirically test CML educational intervention program it grouped the research questions and subsequent findings into thematic findings of inhibitors and enablers (see Table 2)

Table 2

Design Based Research thematic findings



Note. This table demonstrates the Design Based Research thematic findings grouped into key study findings.

3.5.2. Roles of participants in design-based research

In addition to treating the research site as an integral part of the research, DBR researchers also view participants as playing a vital in how the educational interventions are conducted. In DBR, researchers usually collaborate with practitioners in all phases of their research (in this study it was the pre-invention workshops and follow-up teacher interviews), and they treat these practitioners as research partners because they respect their knowledge of the context and the expertise these practitioners have acquired (Barab & Squire, 2004; Hoadley, 2004; MacDonald,

2008). This was why Tracie the senior ELICOS teacher played such a prominent role in the findings and was given multiple follow up interviews. Tracie was consulted on the appropriates of classroom material to introduce fake news on social media, asked for recommendations about suitable fake news sites, consulted on the fake news reading checklist design and ways that students could display their knowledge of CML in an optimal way by responding to a fake news post. Also, DBR researchers recognise that the participants' (in this study EAP students) actions in the initial problem identification, literature review, intervention design, and implementation process influence the results of the study. In this study, the invention design, implementation of the fake news topics and the fake news reading checklist were all informed by the EAP students. Feedback was elicited from the students during all phases of the educational interventions on the effectiveness of the educational content, course materials mostly the fake news reading checklist. Further, in the focus group sessions students were further consulted on the effectiveness of the program like an exit interview format. In DBR, all participants are immersed in the setting and ideally work as collaborators, not just informants, with the researchers and the design process (Chan et al., 2006; Wang & Hannafin, 2005). During the intervention sessions, the fake news reading checklist was formed and refined largely based on the participant students and participant teachers comments. This input illustrates the point that participants' ideas in DBR are as important as the ideas of the researcher (Barab & Squire, 2004; Chan et al., 2006; Collins et al., 2004; Zaritsky et al., 2003). Instead of trying to control for or eliminate such variation as seen in experimental type research, DBR researchers are more interested in documenting and understanding the reasons for such variations and how they affect student learning (Samarapungavan et al., 2011). This is an important aspect because student learning, namely improving critical media literacy, is the overarching goal of the study.

3.5.3. The argument against experimental research in education

A research method that has been deemed lacking in education is experimental research, which is conducted by theorists focusing on isolating variables to test and refine theory. Whereas, DBR is argued by Barab and Squire (2004) and Collins et al. (2004) as being more suitable to educational settings because it is conducted by designers focused on (a) understanding

contexts, (b) designing effective systems, and (c) making meaningful changes for the subjects of their studies. Experimental research methods generate refined understandings of how the world works, which may indirectly affect practice (Creswell & Creswell, 2017). This is contrasted with DBR where the intention in the research process is to both refine theory and practice (Collins et al., 2004; Armstrong et al., 2022). The importance placed on affecting practice is a focal point of these researchers advancing DBR.

Adding to this, Anderson and Shattuck (2012) explain that DBR evolved near the beginning of the 21st century to become a practical research methodology that could merge the cavity between research and practice in formal education settings. This coupling of practice and research is hailed by DBR researchers (Armstrong et al., 2022; Barab & Squire, 2004; Collins et al., 2004) as a better fit for educational purposes than experimental research. Supporting this line of argument, Bell (2004) problematises experimental research contribution to educational research questioning the practical and theoretical progress without conducting empirical research in naturalistic settings and lack of refining user-centred theoretical knowledge of teaching and learning.

As Creswell and Creswell (2017) explain experimental researchers purposely separate themselves from the subjects of their study, and this isolation is appropriate in that it allows them to make dispassionate observations as they test and refine their research objectives. In comparison, design-based researchers recognise they are situated in a real educational context, bring an agenda to the research and aim to understand the educational context (Barab & Squire, 2004). It is that understanding in this real-life context that is an asset of DBR according to Brown (1992, p. 143) who noted that "an effective intervention should be able to migrate from our experimental classroom to average classrooms operated by and for average students and teachers, supported by realistic technological and personal support". This merging of practice and research combined with the priority to root understanding of the real-life context is suitable for this study due to the teacher/researcher role I adopted and that this was an in-tact class aimed at providing findings for other in-tact classes.

3.5.4. Standpoint theory

The EAP students in the study could be considered a marginalised group, and to best understand their marginalisation the standpoint theory was used to explore this. The standpoint theory, which attempts to perceive and understand phenomena from the standpoint/perspective of marginalised groups to gather multiple perspectives on issues (Harding, 2004) was chosen for this study. The study began in April 2020, and at that time there was an anti-China sentiment in Australia due to China's alleged involvement in creating the disease. Therefore, the students could be classified as a marginalised group, which was the case with the participant students finding several anti-Chinese fake news stories on social media. The data collected to analyse this theoretical position was taken from focus group interviews. This style of data collection was deemed most appropriate because according to Schostak (2005), focus groups are more advantageous than individual interviews, in that focus groups can bring together multiple views and spaces between views can be explored. A more exhaustive rationale for this using the data collection method in the study is written further in this chapter in section 3.20.

The Standpoint theoretical position was well suited to my study, which aimed to gather students' views on two main areas of marginalisation. Firstly, their experiences of being exposed to dominant social institutions and their ideologies. Dominant, because this group of Chinese (specifically Mainland China and Hong Kong) EAP learners as previously discussed are placed in a Western ideological formal education setting and have expectations to develop their critical literacy skills. Exploring this would be particularly advantageous in capturing the inhibitors and enablers facing EAP students in their CML acquisition, namely answering this question **RQ4 What specific aspects of critical reading of media texts tasks and social media production tasks lead to effective student work?** The study utilised the standpoint theory in the focus group articulating the importance of a group's experience, of a distinctive kind of collective consciousness, which can be achieved through the group's struggles to gain an insight into the kind of knowledge that they need to comprehend the educational invention's topics and tasks. For Paulo Freire (as cited in Elas, 1975), literacy training should lead learners to not only be able to read and write but be aware and even critical of the oppressive forces they might face. That educators are not value neutral, that all educational practice implies a theoretical stance and contains 'an interpretation of man and world' (Elas, 1975 pg.9). The students will be asked about their impressions of critical pedagogy and if they value critical thinking skills such as; their views on the value of identifying assumptions, detecting bias, comparing and contrasting texts and checking the author (s). Exploring their thoughts on this type of pedagogy and what impact their educational background has on forming these thoughts.

Secondly, the standpoint theory would also be useful in gaining an insight into EAP students' perspective on critical analysis of media messages on the topic of fake news which included foreign stories, specifically from the student's home country, from an international perspective. Specifically focusing on EAP students' derogatory representation of their minority community portrayed in the international media. Examining this representation, would according to Paulo Freire (as cited Elas, 1975 p.75) literacy allow students to become critically aware of the social reality in which they live, to be 'critically conscious'. This emancipatory progressive education ethos, meshes with the standpoint theory in that this theory's logic is that certain discoveries should be controversial (Harding, 2004). This emancipatory progressive education ethos will inform my study in an effort to emancipate the EAL/D students, to raise their CML about issues that affect their social sphere. The students' perspectives of how their home country and/or issue is represented in the media, which could be the Western media, is a tenet of the CML framework **Q4. Politics of Representation - Media messages and the medium through which they travel always have a bias and support and/or challenge dominant hierarchies of power, privilege, and pleasure (**Kellner & Share, 2019). And, in the fake news reading checklist it is explored through **Q4. Who do you think is advantaged and disadvantaged?** As previously mentioned, the students were tasked with finding and analysing a fake news post on social media, and as expected they chose news stories that they were interested in and in most cases had a cultural connection. This was exhibited in their choices to select news stories that were relevant and/or happening in their countries, which in most cases were either reported by Western media outlets. This presented the opportunity for the students to analyse how their chosen news stories could be read differently, as in if there could be alternative perspectives.

3.5.5. Theoretical lens – practice architectures

In understanding these EAP students and the ELICOS teacher's experiences in tackling CML tasks in the classroom, a thorough understanding of the entire social practice is necessary. Practices like raising student's critical literacy skills in the area of fake news social media messages are held in place by preconditions that enable and constrain some kinds of action at the expense of others (Kemmis & Grootenboer, 2008; Schatzki, 1996, 2002, 2016). Kemmis and Grootenboer (2008, p. 57) refer to these preconditions as 'practice architectures', which identifies the intricate social patterns of 'saying, doing and relating' that enable and constrain

each new interaction, exploring the intricate characteristics of their practices. By describing the conditions of CML in ELICOS schools in terms of 'practice architectures', the aim of the study was to explore ways the teaching and the learning of CML are enabled and constrained not only by the professional practice knowledge of the ELICOS teachers and EAP students but also by the social conditions under which this form of literacy is taught.

Design-based research is well suited to collecting the 'saying, doing and relating' data of the aforementioned practice architectures because DBR researchers acknowledge that the educational interventions are shaped and delivered by the values of the key participants (e.g., students and teachers) and the broader communities (e.g., schools, districts) in which they are situated (Berland, 2011). Even though DBR researchers might design the intervention before the invention has been implemented, variations are expected to occur in the classrooms based on how students behave, what goals are developed in the classroom community, and how practice is adapted and evolves rather than being prescribed or delimited by the original design of the intervention (Berland, 2011). In other words, the research results are connected with both the design and the implementation process as well as the setting of the study being conducted (Wang & Hannafin, 2005). This study captured the doings, sayings and relatings during the educational interventions by conducting student focus groups and teacher semi-structured interviews of a qualitative nature. The qualitative style of interviews for data collection aligns with DBR researchers in that they (DBR researchers) are also very sensitive to context, they do so but also try to design and evaluate an intervention as Jen (et al. 2015) explain.

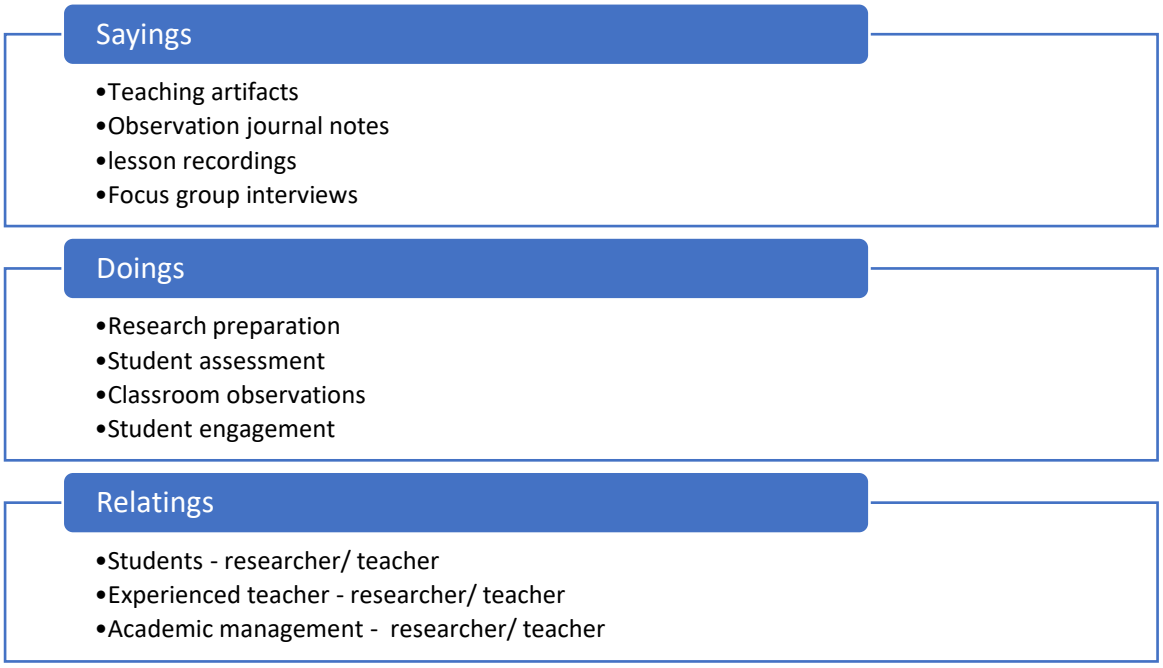
In addition to seeking to gain a thorough understanding of the research context, and gathering input from the practitioners/participants, these DBR researchers also recognise their impact they bring to the research. As Barab and Squire (2004, p.2) state design-based researchers 'bring agendas to their work', which interact with student's agendas and other stakeholders. These agendas captured through sayings, doings and relatings all 'hang together' according to Hemmings et al., (2013), these factors make practice architectures more suitable in education settings for understanding the everyday educational context and nature of learning for which this study was aiming to explore.

3.6. Data collection

This section will outline how data collection and data analysis in the research project is viewed through the theoretical lens of Practice Architectures (Kemmis & Grootenboer, 2008; Schatzki, 1996, 2002, 2016). The Practice Architectures data collection lenses are grouped into three categories (see Table 3), and accompanying descriptions are in the following sub-chapters Sayings 3.5.1 Doings 3.5.2 and Relatings 3.5.3.

Table 3

Practice Architectures data types



Note. This table demonstrates the Practice Architectures data collection lenses grouped into three categories.

3.6.1. Sayings

Sayings' from Tracie were collected as data from her teacher artifacts (such as previous assignments, lesson plans, assessment designs, magazines, and movie posters). My 'sayings' were collected from my journal notes and written records, video footage of lessons in which I taught; and audio recordings of informal discussions, planning/reflecting meetings, and formal interviews. Students 'sayings' derived from data which were collected from observations, interviews, audio and video recordings of their class work, and informal discussions. Participants spoke while engaged in the practice and in formal interviews, feedback sessions, discussions, and planning/reflecting meetings about their practice.

3.6.2. Doings

Tracie's 'doings' included: research; preparation and student assessment; observations of ELICOS and High School lessons (previous work site); discussions with other participants; recording CML immersion activities; compiling field notes; and teaching students. My 'doings' involved: research and preparation; observing activities in the classroom; conducting interviews with participants; engaging in discussions with other participants; teaching students through CML activities; and collecting and storing data. The students' 'doings' took the form of participation in fake news introduction activities, CML activities, fake news response activities; informal discussions and focus group interviews.

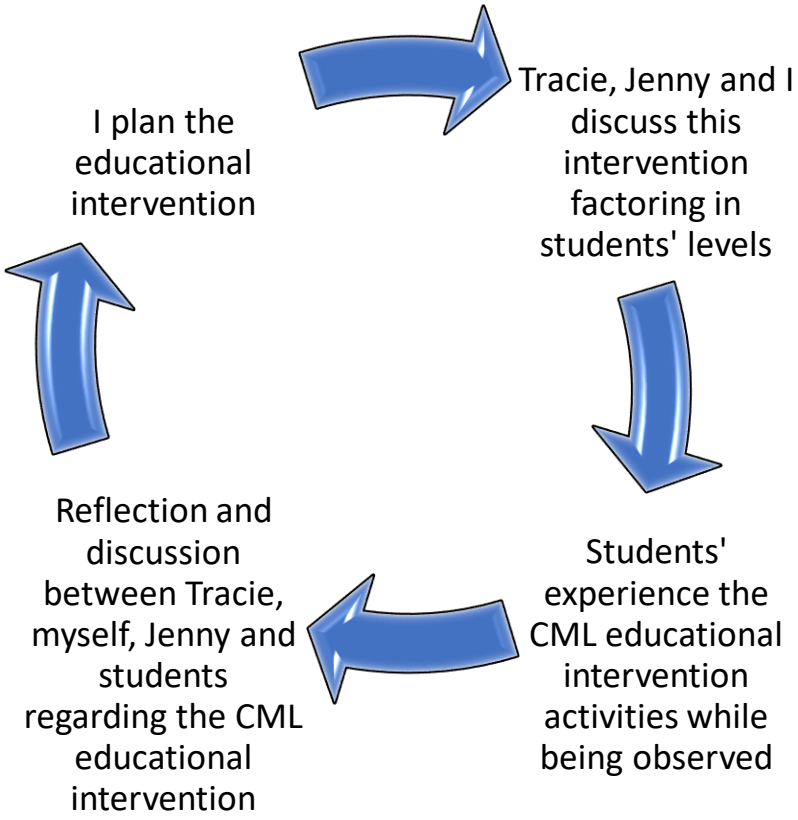
3.6.3. Relatings

The 'relatings' were based on the relationships between the participants which occurred simultaneously in a complex pattern of interactivity, this interactivity is described by Jen et al. (2015) as a continual interaction between practitioners and researchers throughout the entire research process. Operationalised in this study it was between principals, academic managers, teachers and students, this pattern or flow of interactivity can be see in figure below (see Figure 1).

The separating of these strands of connectivity for analysis purposes is an academic device, rather than a true reflection of the situation. Discussion in this research project was based on the understanding that these relationships function as an interdependent social web at the research site. Figure two demonstrates the roles of each participant, and how they functioned in an interdependent cycle.

Figure 1

Roles of each participant and how they function in a cycle



3.7. Phases in Design-Based Research

The design-based experiment approach was proposed due to the lack of meaningful impact that educational researchers were having on the act of education according to Anderson and Shattuck (2012). More specifically, DBR researchers (Juuti & Lavonen, 2006; Juuti et al., 2016) criticise the accuracy of the findings obtained from single (quasi-) experimental research designs favouring a multiple experiment DBR design to be used in education. The DBR research design involves researchers designing/examining more than one invention (Jen et al. 2015). With DBR's systematic, flexible, and iterative review, analysis, design, development, and implementation, based upon collaboration among researchers and practitioners in real-world settings it is argued to be more suitable in educational research settings (Wang & Hannafin, 2005). Further, this design allows researchers to evaluate their designs both before and after use, promoting careful, constant evaluation for each iteration so that improvements can be made (Armstrong, 2022). This study proposed a three-stage DBR iteration process (see Table 2), where a review and reflection of the sequential stages were devised to lead to the identification of reusable design principles for CML in an ELICOS class that successfully allows EAP students to meet the curriculum requirements. The model adheres to Plomp's

(2013) and Goff and Getenet's (2017) suggestions for design-based research proposals in doctoral studies by including three main stages consisting of the preliminary phase, the prototyping phase, and the assessment/reflective phase (see Table 2).

Table 2

Phases of design-based research mapped against elements of the research design

Phase	Element	Comments
Phase 1: Analysis of practical problems by researchers in collaboration.	Consultation with teachers and students	
Development of solutions informed by existing design principles and technical innovations	Research questions	These questions are ongoing, with additions and updates to be expected
	Literate review	
	CML theoretical framework	
	Description of the proposed intervention	Compose critical reading checklist and multimodal tasks
Phase 2: Iterative cycles of testing and refinement of solutions in practice	Implementation of intervention (First iteration)	Student and teacher interviews Teaching experiment
	Participants	Collect evidence of student learning (Audio + video recording)
	Data collection	
	Data analysis	Field notes
	Implementation of intervention	
	Second and further iterations	Product evaluation
	Participants	
	Data collection	
	Data analysis	

		Compare data on student's actual learning on different tasks (critical reading of text)
Phase 3: Reflection to produce 'design principles' and enhance solution implementation	Design principles Designed artefact Professional development	Semester CML curriculum that details the necessary support EAP students need to be critical of media text

Note. This table demonstrates the research protocol utilised in this study, which followed a three-stage design-based research iteration process based on Goff and Getenet's (2017) suggestions for design-based research proposals in doctoral studies. This model was produced by Goff and Getenet in 2017, summarising the three common stages of design-based research process. From *'Design-based research in doctoral studies: Adding a new dimension to doctoral research*," by W. Goff and S. Getenet, 2017, International Journal of Doctoral Studies, p. 171.

As Bakker, and van Eerde (2015), explain each iteration stage allows the researcher to improve the predictive power across subsequent teaching experiments which are termed iterations of interventions. It is evident to see that having multiple applications of educational implementations, followed by assessment and reflections would be appropriate in this scenario of a relatively new teaching pedagogy and with some students who were not familiar with this form of critical inquiry in formal education.

3.7.1. First phase

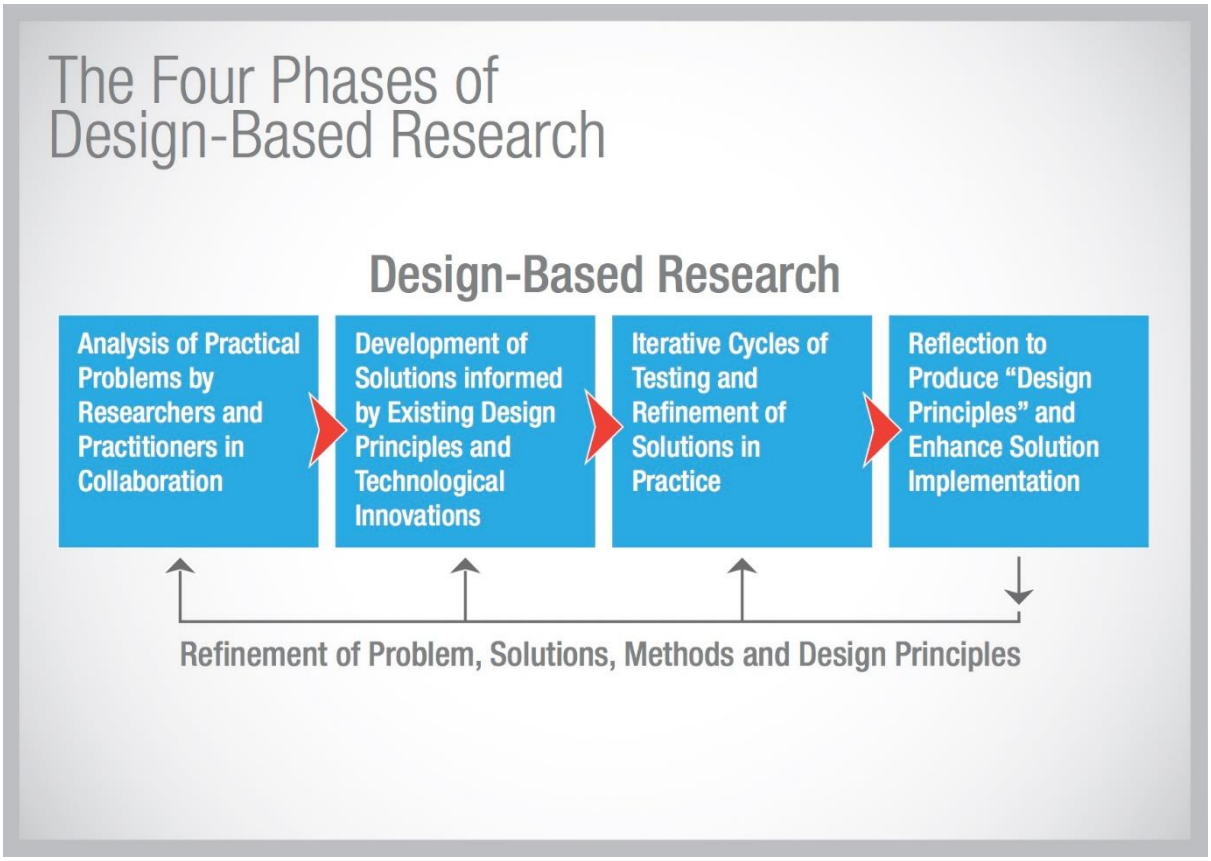
The overall purpose of the initial phase was to conceive, build and test the CML educational intervention. This was undertaken with the teacher/researcher and with the support designers (Tracie and Jenny) in workshops with the objective to compile lesson plans and educational materials. The first phase, or what is also referred to as the conceiving part of the phase in the study involved planning the lesson plans and educational materials to make it engaging for the students. This phase involves imagining a solution and analysing whether it will work according to Easterday et al. (2014). One solution which this study sought to seek was how the

CML framework could be implemented into a user-friendly form for the students and perhaps other teachers in the future.

This initial stage of the research also involved understanding the empirical merit of CML educational secondary sources, the models of learning and identifying design principles to implement in the course. This can be reflected in the **Development of solutions informed by existing design principles and technological innovations** (see Figure 1) advocated by Reeves (2006). The preliminary phase, which acted as a theoretical and empirical foundation for the whole study, was informed by a preliminary CML framework. This framework was adapted from Kellner and Share (2019) who formed the framework by reviewing relevant literature on the subject of CML and obtaining empirical data through documentary analysis of 52 documents (see Table 1). This framework was intended to be used in this study's educational interventions, however, Kellner and Share's (2019) CML framework needed to be refined into something to be used in the classroom, the alterations made to the CML framework occurred after consultation with practitioners in the field was made in the workshops.

Figure 2

Reeve's Design-based research approach phases



Note. This model was produced by Reeves in 2006, summarising the four common stages of design-based research process. From "Design research from a technology perspective," by T. Reeves, 2006, *Educational design research,* p. 71. Copyright 2006 by Routledge.

These consultations with other practitioners occurred before the iteration cycles had begun and were all about building a design that was ready to implement. This design is fluid because as Easterday et al. (2014) argued DBR phases can be designed to achieve a goal however the design is never completely finished. Moreover, in this phase, the designers have not committed to implementing the design in a given medium, but rather create a non-functional, symbolic or graphical representation that allows the designer to conceptually analyse the solution by determining the components of the design and how they might work together.

3.7.2. Second phase

The next phase which DBR researchers Reeves (2006), Easterday et al. (2014) Bakker and van Eerde (2015, p.17) term the 'prototyping phase' involves introducing the design to participants

and gaining an insight into the effectiveness. Operationalised in this study was the concept of critically analysing fake news in social media to the EAP students, who may not have been familiar with this concept or form of examination in a formal education setting. Prescribing to the inoculation education theory, the Fox News story about social distancing ("'Ingraham Angle' on There was no real scientific basis for social distancing," 2020), was used to test the proposed CML framework capabilities in the classroom. The fake news reading checklist was the design tool being tested and refined based on the participants (students, participating teacher and academic manager) during the educational interventions, it was a constant educational tool added to different content ranging from the teacher-led fake news example Fox News story on COVID-19 restrictions and student-sourced content taken from various social media platforms. As this educational tool was used throughout the interventions it was refined, after each educational intervention the tool was edited or as it underwent what Herrington (et al., 2007) term 'iterations'. Bakker and van Eerde (2015) argued that each iteration stage of DBR allows the researcher to improve the predictive power across subsequent teaching experiments, which are termed iterations of interventions.

3.7.3. Third Phase

Cumulation of the educational interventions was followed by the assessment/reflective phase, which reviewed and reflected on the effectiveness of adapting content from the CML framework sequential stages, leading to an empirically tested fake news reading checklist that could be reused by EAP students to meet possible ELICOS curriculum requirements.

3.8. Importance of conducting iterations

Refining and empirically testing such a framework requires cycles of testing, evaluation, and refinement. These cannot be conducted within an experimental design framework that is restricted to only one phase of intervention. Juuti et al. (2016) criticised the accuracy of the findings obtained from quasi-experimental research designs, instead favouring DBR design to be used in education. They argue DBR is advantageous because DBR involves systematic, flexible and potentially multiple intervention sessions, followed by iterative review, analysis, design, development and implementation. It is based upon collaboration among researchers and practitioners in a real-world setting and is suitable in educational research settings (McKenney & Reeves, 2014; Wang & Hannafin, 2005). In design-based research, the main

paradigms are first designed as problem-solving to design as reflection-in-action (Kennedy-Clark, 2015). According to Plomp (2007), design-based research is 'like all systematic educational and instructional design processes – therefore cyclical in character: analysis, design, evaluation and revision activities are iterated until a satisfying balance between ideas ('the intended') and realisation has been achieved' (p.13). The multiple intervention sessions, followed by iterative reviews with the teacher/researcher and participating teacher allowed the CML framework to be analysed and implemented into a more classroom-friendly form for students which was the fake news reading checklist. DBR's systematic and flexible design process was highly appropriate for refining the CML framework into a classroom friendly tool. This CML framework, which is quite theoretical was empirically tested at the participating school and transformed into the more (EAP) student-friendly fake news reading checklist, favouring DBR multiple interviews and iteration reviews to make it effective. A single experimental research design perhaps would not have been as effective as it was evident to see from the classroom interventions that transforming the CML framework into a classroom tool needed multiple sessions to make it ready for student use. Further, being an exploratory qualitative study that analyses narratives and reflections rather than numerical results, DBR was a more appropriate research design. These aforementioned reflections and analyses of narratives among the researchers and practitioners were suitable for constructing a CML curriculum.

Through DBR, my study designed principles and empirically tested classroom materials through the exploration of critical media literacy using fake news, documenting ELOICOS teachers' understanding of CML and recording EAP student's experience using the fake news reading checklist. Building inductively like qualitative researchers who build their patterns, categories, and themes from the bottom up by organizing the data into increasingly more abstract units of information (Somekh & Lewin, 2011). Design-based research is poised as a 'methodological toolkit' by Barab and Squire (2004, p.2) for producing new theories and practices that can potentially impact learning and teaching, which is important for this study which is intended to impact the ways of teaching and learning of CML for EAP learners. This research method or paradigm has the potential to bridge the gap between theory and educational practice, by generating theories about domain-specific learning to support learning (McKenney & Reeves, 2014; Van den Akker et al., 2006). The several intervention sessions, followed by iterative reviews made by the teacher/researcher in consultation with the participant teacher allowed for the CML framework to be analysed and implemented into a more classroom

friendly form for students which was the fake news reading checklist. The gap between theory and educational practice was evident to see with the need for the theoretically dense CML framework needing to be refined into a domain specific form for fake news stories on social media. Design-based research is also said to be suitable for addressing complex educational problems that should be dealt with in a holistic way (Plomp & Nieveen, 2007). Fostering CML among EAP students has been discussed as being a complex educational challenge, in which a holistic understanding of these learners is necessary due to their inability to verify fake news, and share without checking accuracy yet wanting to cover fake news topics in formal education.

3.9. Tangible outcomes

Another distinctive feature of this research methodology is its research aims to produce a tangible outcome. The DBR researcher's aim is to produce meaningful and effective educational products tailored for a specific context that can be transferred and adapted (Barab & Squire, 2004). Furthermore, as Bell (2004) explained, the range of DBR educational products can be quite broad for example the development and refinement of a semester-long curriculum and/or instructional techniques for a particular subject or the development of learning technologies or software. As previously mentioned CML, as an educational pedagogy is still in its infancy in the United States of America (Kellner & Share, 2019), and similarly most teachers (78%) cited in a survey conducted in Australia stated that they need more support and resources, adding they would need specific CML content to 'guide staff/students through the process' (Notley et al., 2017). Therefore, DBR research methodology with its focus on creating educational products, in this study instructional techniques for CML skills in detecting fake news on social media, is an appropriate research methodology given the aforementioned lack of pre-established teaching instructions and teaching resources in this field of education.

3.10. Similarities and differences to action research

In terms of connecting theory to practice, action research is closely related to DBR according to Bielaczyc and Collins (2007). And, this paragraph will explain the similarities and differences of action research to DBR, and explain why DBR is more appropriate for the purposes of this study. A continual argument presented by DBR researchers such as Järvinen (2005) and Juuti and Lavonen (2012) has been whether DBR is actually the same as action

research, which also aims to bridge the gap between research and practice in education (Somekh & Lewin, 2011). This study prefaces DBR but also implemented a classroom action research design that somewhat prescribes to action research. The students were the focus of this study, with the aim of exploring ways to best equip them to gather CML skills, for which working alongside the teachers was necessary. Action research gives primacy to teachers' self-understandings and judgments in the practical setting (Kemmis et al., 2013), which this study certainly focused on in classroom interventions. Moreover, this study implemented a plan of action, namely testing the effectiveness of the CML framework on EAP students; which is another area that is adopted from action research. As Creswell and Creswell (2017) state, the purpose of action research is to gather information about, and subsequently improve, the ways teacher-researchers operate in their particular educational setting, their teaching, and their student learning. What differentiates DBR from action research is the focus on the evolution of design principles where the design is conceived not just to 'meet local needs, but also to advance a theoretical agenda, to uncover, explore, and confirm theoretical relationships' (Barab & Squire, 2004, p. 5). In keeping with DBR, this study sought to not only refine a design intervention toward improving practice, but also to refine theory, which is a key factor in DBR according to Bielaczyc and Collins (2007) and construct an intervention program that could be incorporated into an ELICOS curriculum.

3.11. Translanguaging

Another aspect of the ELICOS curriculum this study refined was the inclusion of the student's native language to add to the educational benefit of the intervention tasks. I adopted and prescribed to translanguaging learning techniques in this study, by encouraging the EAP students to explain their chosen text using First Language (L1) words and/or cultural themes in their fake news social media post analysis. Translanguaging is the 'act performed by bilinguals accessing different linguistic features, to maximize communicative potential' (Garcia & Lin, 2017, p. 140). By prescribing to this language-learning technique, it fulfilled two important criteria. First, it acknowledges and honours the multilingual students' full linguistic repertoire. As Hesson et al. (2014, pg.1) state translanguaging is a multilingual speaker's 'flexible use of their complex linguistic resources to make meaning of their lives and their complex worlds'. Moreover, it can contribute to a classroom environment that recognises

and legitimatises students' unique linguistic and cultural identities, by allowing EAP students to access their L1 resources and their cultural knowledge.

Second, it expanded the typical ELICOS stance on English only in the classroom status quo which typically focuses on a single language. Translanguaging, incorporating students' native language use in the classroom can facilitate deeper learning of the topic. In the educational intervention sessions, after the students were familiarised with the concept of fake news on social media and subsequent analysis of the teacher-chosen fake news post, the students were tasked with finding an example of fake news on social media to analyse themselves. This, student-led task of the students selecting a fake news post on social media that could be in their native language was an appropriate option given the multilingual nature of the EAP class, which typically includes a culturally and linguistically diverse range of international students (Wilson, 2016). This language teaching theory is appropriate for this study in that the EAP students allowing L1 resources could provide them with the potential to fulfil the CML tasks, increasing EAL/D students' chances to access the curriculum, translanguaging can aid these students' comprehension by using all the linguistic resources at their disposal to understand the likely theoretical dense critical literacy concepts in CML.

The students were given the option to select a fake news post from a foreign news source, preferably in their mother language in their chosen fake news analysis and fake news response activities. Being an EAP class, obviously the analysis and response tasks were in English. However, key words and phrases that the author (s) used in the fake news response were translated into English, both in terms of meaning and cultural implications associated with those words. Operationalised in this study, the students who choose a fake news post in a language other than English were tasked with translating **Q2 What language (words, phrases, images, symbols) does the author use to persuade the audience? Q2 How does the news language indicate the author's perspective?** from the fake news reading checklist.

3.12. The decision to examine fake news posts in social media

This section provides a rationale why fake news was chosen as the tool to apply and measure CML skills. The evolution of media literacy into critical media literacy is an educational response to fake news according to Buckingham (2019) who proposes that teaching media in a 'post-truth' age namely fake news and media bias challenges previously established media

literacy teaching methods. Proposing that previously held media literacy pedagogies are insufficient, and what is needed is a broader notion of media literacy, which is based on critical thinking about the economic, ideological, and cultural dimensions of media (Buckingham, 2019). An argument could be made that Buckingham is, proposing that CML is more adapted to rising to that educational challenge to combat fake news, and that previously well-established media literacy needs to be expanded. This transition of media literacy for competence in a post-truth era and fake news era is what we can perhaps learn from this evolution from media literacy into critical media literacy. As Buckingham (2019) alludes to the dissemination of fake news on social media has caused media literacy to evolve into critical media literacy to combat this.

A study conducted by Kumar and Refaei (2017) sampled similarly aged participants; second-year students at an open-access college in the US who were around the same age and received about the same amount of schooling as the EAP student's participants in the current study. Age and level of education of the participant students are important factors in studies conducting education interventions in critical pedagogy. An online survey directed at Indonesian internet users (n = 396) found that age and level of education were two prominent factors in determining 'the ability to recognise false information on social media' (Khana & Idris, 2019, p. 1), highlighting the relevance of comparing studies with similarly aged and level of education participants. The research aims were to promote students' critical thinking, and similarly, the study operationalised an authoritative source on critical thinking to provide a framework to analyse student acquisition of the learning intervention. Both studies, this doctoral study and Kumar and Refaei's study sought to apply critical thinking skills to analyse, synthesise, interpret, and evaluate ideas, information, situations, and texts on important social issues namely human rights and the proliferation of fake news. The Kumar and Refaei (2017) study highlighted the importance of basing the critical literacy criteria research on authoritative sources, namely theoretical frameworks. Their study successfully utilised the education intervention because it was premised on a recent and credible source of critical literacy namely the Washington State University (WSU) guide on critical thinking. The current study similarly used and adapted a framework of critical pedagogy, namely the CML framework, partially based on Kumar and Refaei's success in applying a critical literacy guide in the form of the WSU guide.

Kumar and Refaei selected key areas of critical thinking from the WSU Guide on critical thinking (Condon & Kelly-Riley, 2004, p. 59):

- Identification of a problem or issue
- Establishment of a clear perspective on the issue
- Recognition of alternative perspectives
- Location of the issue within an appropriate context(s)
- Identification and evaluation of evidence
- Recognition of fundamental assumptions implicit or stated by the representation of an issue
- Assessment and implications and potential conclusions

There are certain similarities between the WSU Guide on critical thinking and the CML framework (see Appendix 2). Firstly, the 'recognition of alternative perspectives' (Condon & Kelly-Riley, 2004, p.59) is similar to **Q3's 'How could this text be understood differently?**' (Kellner & Share, 2019). Both are questioning how individuals and groups can understand media messages differently and/or similarly depending on multiple contextual factors which examine audience and positionality. Secondly, 'identification and evaluation of evidence' (Condon & Kelly-Riley, 2004, p.59), is similar to Kellner and Share's (2019) framework in **Q2 'How was this text constructed and delivered/accessed?'**. Both critical literacy frameworks identified the credibility of the source and analysed the evidence the author uses to inform the readers. The Kumar and Refaei study illustrated the importance of basing critical literacy educational interventions with university aged students on an authoritative theoretical framework. The WSU guide on critical thinking was consulted and key critical literacy criteria namely 'recognition of alternative perspectives' and 'identification and evaluation of evidence' were utilised successfully into a critical literacy educational intervention. This successful transformation of an authoritative theoretical framework of critical literacy for effective classroom materials gave me the impetus to replicate for this study, and signifies the importance of students using critical pedagogy to base educational materials on authoritative theoretical frameworks.

The Kumar and Refaei (2017) study displayed the importance of student selection where students could select any human rights issue that piqued their interest, which the researchers reported fostered engagement on the issue of human rights and allowed them (the students) to think critically on the importance of this social issue. Further, having a topic, of social significance was not only engaging as a critical pedagogical task but also gave students direction and parameters in an area they could research. The students had a clear path of exploration and researchers could control the educational invention program. Similar findings from Ranieri and Fabbro's (2016), and Locke and Cleary's (2011) studies also claimed that student engagement in critical literacy tasks was achieved by allowing students to select the topic of analysis. These findings add to the argument to design critical pedagogy interventions in class that allow student selection. This successful application of student selection gave me the impetus for this study to similarly allow the students to select their own example of fake news in social media which gave them direction and parameters within CML in which they could independently research.

The studies differ in terms of the data collection and analysis, Kumar and Refaei examined sixty (60) research participants' writing samples of two writing compositions where students were tasked with writing a letter to the editor and a white paper (an in-depth report or guide about a specific topic and the problems that surround it. It is meant to educate readers and help them to understand and solve an issue) on a human rights issue they thought is important and needed to be defended. This is a clear strength of the study by having a large sample group, the qualitative observation could draw on the behaviour and activities of many students at the research site. Whereas the current study only had access to six (6) students from an in-tact class. The use of the two distinctive writing tasks seemed appropriate for the Kumar and Refaei study because their study was more focused on academic writing; namely designing opportunities to write for a variety of audiences that require different types of writing. Initially, this form of writing assessment (letter to the editor and white paper) was selected for the current study to observe students' understanding of CML in a comprehensive academic writing form of assessment. However, with students' knowledge and use of social media a multimodal form of data collection seemed more appropriate. Appling writing tasks to analyse fake news examples on social media could be considered a rather dated solution to a modern form of media communication. A more modern form of CML skills is tasking students with analysing, identifying and producing a response to fake news on social media.

Also, constructing a social media response, for example, a visual Tweet (or retweet) is a text for several different audiences which is a more suitable task to display CML skills. Critical media literacy as Funk et al. (2016) state goes beyond understanding, analysing, and evaluating media messages, by proposing that students engage with media texts when they create their own meanings and messages. A limitation of the critical literacy writing tasks used in the Kumar and Refaei study is that those real-world writing tasks, letter to editor and white letter, were not used in response to an editor at a media source or formal white letter to convince an audience on the importance of the social issue in a forum or convention. It is unclear, but it seems these writing tasks were used for in-class educational study purposes only, whereas they could have reached a wider audience if they were posted online. As the New London Group (1996) advocated the responsibility of literacy educators is to help students participate in productive critiquing, both as readers and writers, while engaging with their world "ensuring that all students benefit from learning in ways that allow them to participate fully in public, community, and economic life" (p. 60). The research of the Kumar and Refaei study had its strengths of constructing real-life writing tasks, however with no real-life application. The topic of fake news on social media is perhaps best suited to allowing students to test their newly acquired CML skills by generating a response, albeit for educational purposes only, to fully encapsulate these forms of media literacy fully to participate in online community life.

There is a limitation in educational research when students submit work for the sake of the research without sharing this task with the real outside world, which is why this doctoral study set out to include production of media text in the research design. RQ4 Can DBR research support students' learning of critical literacy and the media to enable them to become critical consumers and producers of media texts? Using social media as a platform to examine critical media literacy was deemed a better fit and is an under-researched area. About 10 years ago researchers (Greenhow et al., 2009; de Lange, 2011), put the call out for research focusing on concrete examples of how students use Web 2.0 tools in and out of schools and this call has been answered by numerous studies using social media in educational contexts (Faizi et al., 2015; Nandhini, 2016; Bingimlas, 2017). However, most of these studies (Faizi et al., 2015; Nandhini, 2016) were limited in the media applications they used, with Edmodo being an educational social media application designed to be used in private classrooms closely monitored by teachers and even parents which share certain characteristics with other microblogging social media applications in that it allows users (students) to share short messages, images or links. But that is where the similarities end because these microblogging

attributes of the social media application are shared within the confines of the particular classroom or educational setting with limited external social community range and depth. Moreover, in the Bingimlas (2017) study, as the case with Wikipedia, it is not technically a social media platform where users can post content. The limitation of these aforementioned studies (Faizi et al., 2015; Nandhini, 2016; Bingimlas, 2017) were that the chosen social media applications were not Web 2.0 tools that facilitated social interaction in the online community there was no option to share content with the (outside) larger social community.

This call is complicated, by school settings that limit students' interaction/engagement with the world outside of the classroom either through written restrictions and browser blockers, or the intense focus on standards, scripted curricula, and regimes of testing in the classroom (Greenhow & Lewin, 2016). The limitation of using a closed-community social media (such as Edmodo and Wikipedia) research design in a classroom intervention program is that it is not an authentic replication of social media, in the sense that data collection and production of web 2.0 tools, namely producing social media posts are not being shared with multiple online audiences. This is a problem because it fails to capture the 'sharing behaviour' of teenagers with social media which is crucial for engagement and also it is a crucial aspect of fake news because this is how fake news stories circulate according to Herrero-Diz et al. (2020). There was no such social media restrictions placed on this study, the students were allowed to select any microblogging social media application they wanted to facilitate the engagement of sharing behaviour and fully examine all aspects namely the sharing behaviour of fake news in social media.

The research problem of teenagers consuming and sharing fake news on social media is a two-folded problem. Firstly, it is problem as previously mentioned that this demographic age group has difficultly in spotting and verifying fake news (Notley et al., 2017; Herrero-Diz et al., 2020). Secondly, it is a problem because, as the scientific community and international bodies are beginning to point out, that fake news is circulating mainly on the mobile phones of adolescents (National Institute of Cybersecurity (INCIBE) & Office of Internet Security (OSI), 2019). What is more alarming 'If a piece of content attracts their attention, they do not hesitate to share it, sometimes en masse, without pausing to assess whether the information is reliable. Often, they spread it even knowing that it is not (INCIBE & OSI, 2019). The aim of this study is not to stem the problem of the proliferation of fake news itself, but rather focus on that adolescents believe it with no scepticism and to provide an educational response to counter

that. However, it is difficult to ignore that this demographic is the main people circulating fakes news, and this lack of hesitation to share unreliable information resonates with the earlier mentioned theories by Weller (2016) that we are at an age of 'unenlightenment' and adds strength to Spelic's (2018) claim that young learners are 'incurious' about checking the authenticity of the news. The research design of the current study responded to this call of examining Web 2.0 in an unrestricted social media environment analysing Twitter, Facebook, and Weibo posts that vitally consider this sample group's sharing behaviour. The issues of students having difficulty in spotting and verifying fake news and adolescents being the most common culprits of sharing fake news on social media are significant issues raised in the field of social media education. These issues were all incorporated into the guiding questions in the student focus group interviews.

A study in a United States high school responded to this call of using web 2.0 tools namely the social networking application Twitter, which is an actual microblogging social media application capable of reaching mass social users and audiences. The study conducted by Saunders et al. (2017) examined and critically analysed a misleading advertising message disguised as an inspirational message. The study's purpose was for High School students to practice critical media literacy in a real-life setting, namely examining online misinformation vernacular in the form of Tweets as opposed to formal academic English. This study provided the context for the current study to select social media, specifically Twitter rather than a restricted social media platform like Edmodo or Wiki, because as Saunders et al. (2017) found the students were willing to participate in the study and were engaged in the analysis of the series of Tweets citing relevance to their lives. Additionally, they enjoyed analysing fake news on Twitter because they are familiar with the social media platform and could understand the educational merit of including this form of media analyse in a formal education setting. Twitter not only appeals to the student demographic and researchers of social media in education due to its sharing behaviour potential but also because it is a popular provider of news. The Pew Research Center data from 2015 showed 63 per cent of Facebook and Twitter users said they obtained news through these social networks (Kalsnes & Larsson, 2018; Lichterman 2016). Moreover, Ju et al. (2014) add that Facebook might be the more popular social media application, but Twitter is more widely used as a source of news. In particular, Twitter has been identified as a source of breaking news, with 59 per cent of Twitter users following it for breaking news, compared with 31 per cent of Facebook users (Lichterman 2016; McDougall

et al., 2018). This research methodology also responded to the call of examining Web 2.0. The strength of the Saunders et al., study was that it selected a prominent social media application, namely Twitter, and analysed an authentic social media post. Twitter, being a popular source of news media made it relevant to this study, and suitable for replication.

The Saunders study finding that the students were engaged in analysing a fake news post on social media because they could see the relevance to their lives, further validates Notley's et al. (2017) survey findings that students in the 16-20 age bracket are interested in covering news topics in class, given that they see the relevance to their lives. The finding also challenges Spelic's (2017) argument that young learners are 'incurious' about checking the authenticity of news to a certain extent because the students in Saunders et al. (2017) study were curious to follow the disingenuous fake news Tweets. The class followed the Tweets of US entrepreneur Kash Shaikh (#besombody), who spoke of the importance of identifying and going after your dreams. Similarities between the Saunders study and this doctoral study are that the researchers/teachers conducted in-class research examining the responses to actual real-life social media posts on fake news. The Saunders study differs from the current study in that my study allowed students to select fake news posts on any given social media platform (such as Weibo, WeChat, Twitter etc), whereas in the Saunders study the researchers and teachers chose a story or series of Tweets with the (#besombody) account. The advantage to the educators choosing the topic was that it could provide an easily examinable example of fake news, being a clear and blatant example of fake news in which a rich classroom analysis could be undertaken.

The teachers/researcher in this study added value to the teaching of CML, specifically exposing fake news on social media by providing a purposefully chosen fake news story suitable for critical analysis. As a result, the students in the Saunders study could correctly identify that #BeSomebody was a feel-good message meant to inspire the youth, but was actually a company seeking to advertise to this youth target market. Meaning the students could correctly identify the type of person who created this fake news, even examined the emotive language and intent, and speculated on who was advantaged and disadvantaged by this Tweet blog. The usefulness of the Saunders study is evident to see in the students' successful ability to deconstruct the misinformation in the #besombody Tweets. This successful educational intervention has clear ramifications in the CML teaching pedagogy field by providing evidence that fake news can

be analysed using CML learning theories. These CML characteristics were seemingly identical to Kellner and Share's CML framework. And, of relevance to teachers looking to emulate the successful acquisition of those CML skills the questions acted as guiding questions leading students to comprehension of the Tweet's validity.

Carefully selecting a fake news example in social media inspired me to replicate this in my study. That is why this study used a carefully sequenced fake news introductory lesson plan to familiarise the EAP students with what fake news generally looks like and who creates it. After corresponding with Tracie, the participant teacher, at the ELICOS school, we selected the 'Fox News story – No scientific basis for social distancing' ("'Ingraham Angle' on There was no real scientific basis for social distancing," 2020) for similar reasons, it clearly was fake and after classroom analysis, students could discover its lack of truthfulness. This analysis conducted an exploration, rather than a series of guiding questions as in the case of the fake news reading checklist. The Saunders study gave me the impetus to design a series of sequenced questions that could be scaffolded for EAP students, perhaps the absence of this was a limitation of the Saunders study.

Classroom-based research study design employed in the Saunders (et al., 2017) study provided a lot of affordances for the current study. This doctorate study replicated the Saunders study by also carefully choosing a fake news story, and analysing it with a focus on formulating a response to the fake news story to debunk it. The type of classroom invention approach successfully utilised by the researchers/teachers in the Saunders study somewhat prescribes to the 'Inoculation Theory'. This inoculation approach to media education was proposed by Crompton (2013) to inoculate for example against a virus whereby students are exposed to a weakened form of disinformation. Then when exposed to disinformation at a later date, the inoculation will provide them with the necessary counter-arguments to dismiss the disinformation (McDougall et al., 2018). In other words, based on critical thinking, the core principle is to prepare students for exposure to potential disinformation by introducing them to the logical fallacies that are commonplace in disinformation. This educational approach was not fully utilised in the Saunders study, because even the teacher-led classroom example of the (#besombody) Tweets was a solid example of fake news and one in which a critical media analysis could be achieved. These recently honed CML skills could have been consolidated further by tasking the students to find a fake news story by themselves to analyse and represents a limitation of the study.

Although according to Lewandowsky et al. (2017), inoculation programmes only need two elements: (1) they contain an explicit warning of an impending threat, and (2) there is a refutation of an anticipated argument. The refutation exposes and counters the imminent fallacy (Cook et al., 2017). This inoculation theory criterion was operationalised in the Saunders study where the class, via the teacher's Twitter account critiqued the beesombody movement Tweets. However, a limitation listed by the researchers in the Saunders study was that they could not post a social media response on Twitter to the besombody blog due to the deemed ethical constraints and potential real-world ramifications. As the researchers in the Saunders study stated teachers must also be mindful that this participation can cause an unanticipated reaction, such as retaliation in the form of cyber bullying. As devastating as these online repercussions might be, it seems a missed opportunity, whereby students can at least produce a social media post in response to the fake news for in-class discussion at least. This limitation of the Saunders study gave me the idea for the students in my class to not only find a fake news post on social media but produce a response. Not letting the students produce a response to such fake news is a limitation because anaylsing a social media post, particularly on a platform like Twitter where there is potential to share or comment could be argued is not fully participating in this form of media. A prominent responsibility of literacy educators is to help students participate in productive critiquing, both as readers and writers, while engaging with their world. This reinforces research by the New London Group (1996) that envisioned a literacy pedagogy 'ensuring that all students benefit from learning in ways that allow them to participate fully in public, community, and economic life' (p. 60). The research of the Saunders study had its strengths of examining real life Tweets, however, the topic of fake news on social media is perhaps best suited to allowing students to test their newly acquired CML skills by generating a response albeit for educational purposes only to fully encapsulate these forms of media literacy fully participate online community life.

3.13. Importance of producing a fake news response

Another feature added to the educational intervention to increase the educational benefit to the students was the inclusion of a fake news response to their chosen fake news posts. For students to get the entire benefit out of CML educational invention programs they need to produce a social media response. Critical media literacy as Funk et al. (2016) stated goes beyond

understanding, analysing, and evaluating media messages, by proposing that students engage with media texts when they create their own meanings and messages. Producing media is also a vital component in CML, empirical evidence from recent studies (Navera et al., 2019; Ranieri & Fabbro, 2016) corroborate Funk et al. (2016) claims, that students became engaged in the CML content when they can create a media message.

This study analysed the multimodal nature of literacy drawing from the CML framework (see Appendix 2), specifically drawing from **Q2 Each medium has its own language with specific grammar and semantics** which is posing the question how was this text constructed and delivered/accessed. Therefore, assigning a multimodal task utilises this form of literacy to the fullest. Through producing a multimodal media message, the students could learn multiple semiotic systems, such as such visual, linguistic and actionable messages which are differently organised and established meaning-making resources (Kress & Van Leeuwen, 2001). In addition to analysing multimodal aspects of languages and semiotics, creating a multimodal media message also represents students' ability to synthesize information for their readers as they present their perspectives on the topic (Kumar & Refaei, 2017). They needed to examine the possible perspectives on the topic as well as consider their own response to the topic. As part of this process, students needed to be able to evaluate the evidence used by the various perspectives to support their positions.

3.14. Importance of social media

Another consideration for the participants was their attraction to social media which was chosen as the most appropriate form of media to examine fake news. Social media is the most appropriate platform to analyse fake news because it is both relevant and engaging to the research participants. Social media texts, according to Deng, Sinha, and Zhao (2016), are currently the largest source of public opinion. Social media is defined by Alvermann (2017, p.336) as the modern-day public square, which contains 'crowd-sourced wisdom'. The most popular online activity for young Australians (91%) aged 15-19 years old is using Social Networking Sites (SNS), therefore it is no surprise that including a social media task was implemented to foster engagement in this educational intervention. Moreover, in terms of news consumption, social media was found in Notley's (2017) survey to be the second most common source of viewing news by teenagers in Australia at (41%) behind television at (46%). Further, as previously mentioned the 'sharing behaviour' of teenagers with social media which is crucial

for engagement and also it is a crucial aspect of fake news because this is how fake news stories circulate (Herrero-Diz et al., 2020). The sharing behaviour on social media among young adults is a focus of researchers and teachers in the field of CML because this is a pivotal feature of social media. This is in part because as the scientific community and international bodies are beginning to point out, that fake news is circulating mainly on the mobile phones of adolescents (National Institute of Cybersecurity (INCIBE) & Office of Internet Security (OSI), 2019). Therefore, it is vital to incorporate the sharing nature of adolescents in a study of fake news on social media.

As previously mentioned CML is a form of literacy that is heralded as an educational response that expands the notion of literacy to include different forms of mass communication, popular culture, and new technologies (Kellner & Share, 2019). This makes this form of literacy seemingly specifically tailored to tackling misinformation on social media. The CML framework and task of producing a multimodal social media message fits appropriately into this study, allowing teachers and students to analyse and depict aspects of this framework curriculum into a fake news social media message response. Highlighting the importance of creating/ producing media messages, this study assigned a multimodal task to students after the completion of the CML analysis-oriented activities (see Table 3). This sequencing decision is in part a replication of Ranieri and Fabbro's (2016) study, which found students became 'truly interested' in the critical media analysis-oriented activities if they were given the option to recreate a media message which allowed them to reflect on their own experience as readers/viewers. Drawing from the **'politics of representation'** section in the CML framework (see Table 1) namely the **'values, points of view, and ideologies that are represented or missing from the chosen text or influenced by the medium'** was incorporated fully by assigning the students with the fake news response task that allows to them analyse said values, points of view etc in their response. In other words, having a task such as the fake news social media response task allows these students fully absorb the CML criteria of values, points of view, and ideologies by having to recreate it in the response albeit in a pilot form which may or may not be actually posted on social media.

While the study employed a critical reading checklist and multimodal production task aimed at improving the aforementioned literacy skills, CML is the integral and meaningful phenomena being studied. As van den Akker et al. (2006) confer DBR researchers consider specific objects and processes in specific contexts but do not emphasise such isolated variables,

rather the central phenomenon is the focus of the study. The ability to identify credible and reliable information and the ability to critically assign value to media information is the central focus of this study. Design-based research is well suited to analysing social media messages because the intervention's overarching goal is to develop a professional teaching practice (Bell, 2004; Lewis et al., 2006).

Table 3

In-class educational intervention protocol

Lesson	Lesson aim	Education/news source
7 types of people who create and share fake news	Familiarise students with fake news and the type of people who share it	BBC News
No scientific benefit to social distancing	Familiarise students with fake news	Fox News
Students' fake news analysis	Observe students' CML skills, rest fake news reading checklist and apply inoculation theory	Varied
Students' fake news response	Observe students' CML skills, rest fake news reading checklist and apply inoculation theory	Varied

Note. Lesson plans conducted by the author in the educational interventions on May 2020.

3.15. Inoculation theory

Another goal of the study was to facilitate the students' independent ability to verify fake news on social media. The current study replicated a carefully chosen fake news story (Fox News), and analysed it with a focus on formulating a response to the fake news story to debunk it. This was in part a replication of the Saunders (et al., 2017) study which similarly analysed a purposely chosen (by the teacher) fake news story on Twitter, then as a class they formulated a rebuttal in the form of Tweet. This research study design provided a lot of affordances for the

current study, in that it was an attempt at an inoculation educational theory. This inoculation approach to media education was proposed by Crompton (2013) to inoculate for example against a virus whereby students are exposed to a weakened form of disinformation. Then when exposed to disinformation at a later date, the inoculation will provide them with the necessary counter-arguments to dismiss the disinformation (McDougall et al., 2018). In other words, based on critical thinking, the core principle is to prepare students for exposure to potential disinformation by introducing them to the logical fallacies that are commonplace in disinformation. This educational approach was not fully utilised in the Saunders study, because the teacher-led classroom example of the (#besombody) Tweets was a solid example of fake news and one in which a critical media analysis could be achieved. However, these recently honed CML skills used in critical analysis of the Tweets could have been consolidated further by tasking the students to find a fake news story by themselves to analyse which is perhaps a limitation of the study.

Inoculation programmes tend to consist of two main elements: (1) they contain an explicit warning of an impending threat, and; (2) there is a refutation of an anticipated argument. The refutation exposes and counters the imminent fallacy (Cook et al., 2017). These two elements were operationalised in the study when presenting to the students the scientifically dubious Fox News ("'Ingraham Angle' on There was no real scientific basis for social distancing," 2020) story about social distancing, and subsequent analysis (using the fake news reading checklist) to verify the fallacy of the misinformed scientific claims about social distancing. A vital element in this inoculation theory, which was missing from the Saunders study, is to apply these newly acquired CML skills to dismiss disinformation sourced by the students in a formal education setting. Applying the criteria which McDougall (et al., 2018) assert is crucial to this theory, by exposing disinformation at a later date to fully practice this inoculation educational technique to see if it will provide students with the necessary counter-arguments to dismiss the disinformation.

3.16. Research protocols

During the iteration sessions, the fake news reading checklist covering the aforementioned CML framework steps was tested and refined plus three data collection tools: the teacher interview notes, classroom field notes and student focus group notes (see Table 4). The field notes fulfilled the purpose of documenting and reflecting on the process, particularly the learning situations that occurred and the inhibitors and enablers that arose in the course of the

lessons. Keeping field notes is recommended by researchers Creswell (2013), Somekh and Lewin (2011) in qualitative research as a means of documenting, which is necessary to provide a rich context for analysis. Moreover, in DBR there is primacy for understanding the contextual situation to fulfil research validity (Anderson and Shattuck, 2012; Armstrong, 2022; Barab & Squire, 2004; Hemmings et al., 2013). Operationalised in this study, the fieldnotes functioned in collecting the teachers' and researchers' evaluations about the CML framework in stages of being implemented in the classroom and their (teachers and students) suggestions were documented to improve the educational activity.

The fake news reading checklist was used repeatably, or as what is termed 'iterations' in design-based research (Armstrong, 2022). These iterations according to DBR researchers increases the effectiveness of the research tool and improve the educational product, which after the iterative cycles becomes tailored for the specific context which can be transferred and adapted (Barab & Squire, 2004). The fake news reading checklist was transferred and adapted in the study in the following ways; first to anaylse the Fox News post and secondly, as a guide for the students to analyse their selected fake news post on social media. After the students had selected and analysed their chosen fake news story (using the fake news reading checklist), this checklist was also used as a product evaluation checklist, whereby the teacher-researcher checked to see how in-depth the student analysis was, to see if the students had missed any points in their analysis. Using the checklist as a product evaluation form was inspired by Ranieri and Fabbro's (2016) study, which successfully utilised a product evaluation form aimed at assessing the quality of multimodal media products (e.g. videos, photo collages, dioramas, etc.) created by the high school students.

Table 4

Research data collection methods

Research questions	Data collection tools	Type of data
1) What do ELICOS know and do when teaching EAP students to critically analyse media articles?	Teacher interviews	Teaching insights Adjustment to the CML framework Construction of the fake news reading checklist

2) What are the inhibitors and enablers for the teaching of critical literacy and perspective of the media?	Fake news reading checklist Student focus groups	Learning results Processes of learning and participation Adjustment to the CML framework
3) Can DBR support students' learning of critical literacy and the media to enable them to become critical consumers and producers of media texts?	Field notes Fake news reading checklist	Researcher and practitioner reflection Redesign DBR iteration Learning results Processes of learning and participation
4) What specific aspects of critical reading of media texts tasks and social media production tasks lead to effective student work?	Field notes Product evaluation form	Learning results Processes of learning and participation Adjustment to the CML framework
5) Do media education activities enable students' critical understanding and production of fake news on social media practices?		Learning results Processes of learning and participation

Note. Data was collected by the author during the study in April and May 2020.

3.17. Research participants

This study was a classroom observational study and CML educational intervention of an advanced EAP class within a private ELICOS school, the ELICOS sector as a whole offers various English intense programs for international students varying from brief study abroad courses, general English or vocational English programs to EAP courses which are specifically aimed at gearing non-native English students whom could be categorised in Australia as English as an Additional Language/Dialect (EAL/D) ready for tertiary (university or TAFE) entry in an English-speaking country.

The study used a convenience sampling technique, taking participants from an intact EAP class from an ELICOS private language school in Queensland. Convenience sampling is a non-random sampling technique; where participants are selected for availability, accessibility and or the willingness to volunteer (Dörnyei, 2007). These regularly scheduled classes are accessible, convenient and perhaps as a result the students were more willing to volunteer in the proposed research because there was no additional time commitment required of them to participate in the study. Whereas random sampling would require a time commitment from the participants, which could have restricted the participant numbers (Rosenthal & Rosnow, 1991). Convenience sampling from researchers or cooperating practitioners' institutions is the

most common type of sampling in DBR studies according to Herrington, McKenney, Reeves and Oliver (2007). Therefore, it was chosen as the most appropriate form of participant sampling, because it was convenient and ensured the best possibility for securing participants.

This study purposefully selected the site, The White Rock private ELICOS school in Queensland and individuals (EAP students) to best help the researcher best understand the problem, prescribing to Creswell's (2014) criteria for purposive sampling research methodology. In addition, the 'setting', where the research took place was purposely chosen adhering to Miles et al. (1994) research design criteria aspects of qualitative research. The setting of an EAP class as opposed to a mainstream university class was also purposely chosen. Considering Notley's (et al., 2017) finding that Australian adolescents struggle in verifying news stories, the participants could easily be first-ear university students chosen to analyse their exposure to fake news and how they develop the necessary CML skills. However, EAP students, specifically EAP students with an educational background in Asia are perhaps even more in need of these skills to successfully transition into Australian universities considering the lack of previous exposure to critical pedagogy they have received in formal education (Wilson, 2016).

A limitation in the research to date is that the experiences of EAP students in an ELICOS class are generally not well documented in the literature a similar statement is made by Alford (2011) for EAL/D students in subject English class. At a broader level, the interface between EAP students, CML and fake news also suffers a paucity of published research. Considering all of the aforementioned factors, this study purposely focused on ELICOS teachers and their perceptions of CML activities among their EAP students.

The participants this study purposely chose were five (5) students, who as previously mentioned are in an EAP class, meaning at a minimum that they are likely to have received a minimum of 2 years of ELICOS and /or English as a Foreign Language (EFL) lessons in their home country and then promoted to the EAP class after that. Therefore, the students might have conversational proficiency in SAE which usually takes 2 to 3 years, but not have reached academic competency in a second language which takes 5 to 7 years according to Clifford et al. (2014). The target population I wanted to focus on is the older/more academically competent EAP students who have already (successfully) transitioned into EAP class and now are dealing with higher order skills in English, namely critical media literacy. In qualitative studies, the

choice of participants always relates to the purpose or goals of the study, and are usually individuals who reflect the characteristics or are influenced by the issues being considered by the investigation. In terms of numbers, this study is not concerned with a large number of participants as typically found in quantitative studies according to Somekh and Lewin (2011). In keeping with a qualitative research design, more specifically phenomenology research which usually involves drawing from a small sample size that prioritises an in-depth understanding of phenomena over trends among a large sample, five participants were chosen (Creswell, 2014; Wilson, 2015). This study was interested in identifying themes emerging from educational interventions to make generalisations on how particular phenomenon on CML and fake news on social media is experienced by EAP students. For this study, what was most important was the quality of the data, not the number of participants. The phenomenological research participant's design was suitable with the data collection tools, of semi-structured interviews and focus group interviews in combination with thematic analysis.

3.18. Participant teacher

I had a previous colleague at the private language school, a senior teacher at the school who was familiar with my teaching practice and research interests. She too had experience in teaching critical pedagogy and an interest in critical media literacy.

Pseudonyms were used to de-identify all participants and the location of the research site. I have used the pseudonym, 'White Rock Language School' to refer to the school in which this research project was conducted. The participating general English teacher, Tracie, was a good match for this investigation due to her interest in critical media literacy and enthusiasm towards being involved in my research project. The participants in this research project were: the participating General English Teacher (Tracie); the English for Academic Purposes Teacher (myself); the EAP students at White Rock Language School;

The roles of the participants during the project are outlined as follows:

 The EAP Teacher (myself) was responsible for planning the educational interventions, preparing, teaching, as well as guiding and reporting the research; teaching at the research site— four days a week Mondays to Thursdays. I also engaged in planning and reflecting discussions with Tracie; liaising with the language school's academic manager, principal and other staff as needed; and collecting and recording data.

 The General English Teacher (Tracie) participated in the ongoing participating teacher interviews, educational intervention lesson plans and classroom materials (fake news reading checklist). She taught full time, Mondays to Thursdays (in her class), and also participated in planning and reflecting discussions with me, liaising with the school, and keeping a journal. She has a vast educational background as a secondary school English teacher for 21 years and an EILCOS teacher for 16 years. With a graduate diploma in teaching and a Master of Arts in TESOL, her research and teaching interests are in critical literacy.

 The academic manager (Jennie) who was a former ELICOS teacher at White Rock Language School and the industry for 15 years, participated in the research as a critical friend who gave input on the equational intervention. She also holds a Master of Arts in TESOL

 EAP students were responsible for fulfilling the usual expectations of the school and engaging in the research project activities.

3.19. Ethical considerations

To address the ethical considerations of this study, I acknowledge the twin role of researcher and teacher, and how this fluid and personal relationship with the research participants (students/teachers) meets ethical concerns. All data collection has been completed in accordance with the ethical standards provided by the Human Research Ethics Committee at the University Southern Queensland —Reference Number (H20REA028). The relevant approvals and consent forms can be found in Appendix A. The explanation of the methodology used in the research project, supported by the relevant ethical standards, provides the basis for reporting the Design Based Research iterations which follow. To preserve confidentiality and maintain the anonymity of the participants and the research site, pseudonyms have been used.

3.20. Critical reading checklist

To answer the research question **RQ5 Does fake news media education activities enable students' critical understanding and production of media practices?** a critical reading checklist (fake news reading checklist) was constructed drawing from the CML framework (see Appendix B). The design of this checklist also fulfils the students 'text analyst' literacy skills, as Luke and Freebody (1999) describe these skills evaluate the particular choices made

by the author within the text. Operationalised in this study, the students were tasked with analysing the literary, informative and especially persuasive texts to comprehend how language and pictures were used, to analyse misinformation in social media posts. As Winch, Johnston, March, Ljungdahl, and Holliday (2014) contend, to be critical of texts involves searching for the hidden assumptions and biases in a text, which Janks (2013) adds involves teaching students how to examine texts the semiotic choices made by the author (s). These text analyst skills also fulfil an aspect of senior the English as an Additional Language or Dialect Curriculum (ACARA, 2014) aims to develop students 'critical analysis skills' (ACARA, 2014 Rationale and Aims) by exploring how 'language choices shape meaning and influence audiences' (Unit 2). By including social media posts from different countries as the frame of investigation, the critical reading checklist also attempted to fulfil another aspect of the 'critical analysis skills' aims in the Senior English as an Additional Language or Dialect Curriculum (ACARA, 2014) of 'identifying and analysing attitudes, values and culturally based assumptions within texts' (Unit 3). The inclusion of a foreign cultural aspect, particularly from the students' perspective is a topic, which was also explored in my study to widen culturally based assumptions within texts.

The critical reading checklist purposely covered another aspect of Luke and Freebody's (1990, 1999) 'text analyst' skills, which entails analysing the particular choices made by the author within the text. The students were tasked with analysing the literary, informative and especially persuasive texts to comprehend how language and pictures are used, to represent misinformation in the media. As Winch (et al., 2014) add being critical of texts involves searching for the hidden assumptions and biases in a text and considering whether the text is written from a certain perspective, Janks' (2013) adds this involves teaching students how to examine texts and the semiotic choices that go into their construction. These text critic skills also fulfil an aspect of senior the English as an Additional Language or Dialect Curriculum (ACARA, 2014) aims to develop students' "critical analysis skills" (ACARA, 2014 Rationale and Aims) by exploring the ways in which "language choices shape meaning and influence audiences" (Unit 2).

A critical reading checklist and student samples of fake news posts selected by students and multimodal fake news responses were collected throughout the semester. However, this data was not analysed in an (quasi) experiment for example comparing two conditions pre and post-

test, rather DBR experiments use educational materials or ways of teaching that are emergent and adjustable (Bakker & van Eerde, 2015).

Figure 3

Fake news reading checklist

1. Look at the headline

Does the headline uses excessive punctuation or capital letters, what grabs your attention?

2 Question the publisher/ author

Google search, who are they? Are they a credible source?

What claims does the author make?

What evidence does the author use?

What language (words, phrases, images, symbols) does the author use to persuade the audience?

How does the news language indicate the author's perspective?

3. What do other news sources say about this story?

4. Who do you think is advantaged and disadvantaged?

5. Why do you think this person created or shared this fake news story? What values, ideas or message are they trying to spread?

6. What type of person created or shared this fake news story?

Type	**Tick box**	**Why**
Politician		
Celebrity		
Conspiracy theorist		
Scammer		
Insider		
Relative		
Joker		

3.21. Semi-structured teacher interviews

To answer the research questions **RQ 1 'What do ELICOS teachers know and do when teaching EAP students to critically analyse media articles?'** and **RQ2 'What are the inhibitors and enablers for the teaching of critical literacy and perspective of fake news in the media?'** was collected through conducting interviews, collecting field notes, and the audio and video recordings of class activities. Answering my research questions requires drawing inferences from what respondents say and attempting to find themes through semi-structured in-depth qualitative interviews (Creswell 2011).

Answering my qualitative research questions involves gathering no numerical data and compiling no statistics to analyse them. This data was not analysed in an (quasi) experiment for example comparing two conditions pre and post-test, DBR experiments use educational materials or ways of teaching that are emergent and adjustable (Bakker & van Eerde, 2015). Instead, this analysis required drawing inferences from what respondents said and attempting to find causal links in such themes through semi-structured in-depth qualitative interviews (Creswell 2011). The emergent research questions (see Appendix D) were seeking to explain the ELICOS teachers' understanding of CML and the importance of EAP students receiving effective pedagogy to gain this form of literacy. This was aimed at eliciting a social understanding of the students' views about how their or their chosen foreign community is represented in the media and how CML is necessary to deconstruct this message. Creswell (2014) states broad and general questions can allow the researcher to construct meanings of a social situation. Open-ended questions are more suited to qualitative research method approaches, allowing the respondents to give a free response (Somekh & Lewin, 2011) where researchers can explore interpretations and draw conclusions in the study (Creswell 2014). Closed-ended questions are more suited to quantitative research methods approaches with predetermined categories seeking numerical data, which would not be expedient in answering the research questions.

Understanding the classroom settings, social and psychological atmosphere, students' motivation, attitudes towards learning fake news topics and students' experiences on social media, is not only a tenet of qualitative research, but also DBR according to Juuti and Lavonen (2012). Wang and Hannafin (2005), add that DBR requires researchers to collaborate

intimately with participants to achieve theoretical and pragmatic goals to effectively bring about educational changes. It is evident to see that qualitative research designs are best suited for constructing a rich, detailed description of this educational setting which is anticipated will explore a social understanding of the students' views about how their or their chosen minority community is represented in the media and how CML is necessary to deconstruct this message.

The semi-structured interviews were a direct replication of Bakker and van Eerde's (2015) DBR study into exploring the impression and implementation of statistics education. Their study, which conducted one-to-four-minute interviews with teachers and students during the lessons; was operationalised to find out what statistics meant to students and teachers and what constituted effective pedagogy in this subject. The data collection format seems suitable for replication for this study in that both studies intended to collect data from the practitioners involved in the subject, exploring the subject's image and effectiveness of pedagogy within a classroom.

To avoid researcher bias in the analysis the interview was audiotaped, transcribed (Creswell, 2014) and coded for easy data analysis. This process involved writing a word to represent a category, which could be used to bracket the chunks of data (Rossman & Rallis, 2012). And for further ease of data analysis colour-coded using 'saying', 'doings' and 'relatings' to frame the research design. Keeping the interview transcripts were used for fidelity by returning the transcripts to interviewees to check the contents are true replication of the interview. Creswell (2014, pg.254) refers to this process as 'member checking', as the process that allows informants to add, make changes to their recorded statements or even delete the information. This procedure took the form of a follow-up interview, and to avoid reader fatigue, the interview transcripts were not in raw form but polished and even coded with themes, site descriptions and major findings (Creswell, 2014). As Kemmis and Grootenboer (2008) and Kemmis and Heikkinen (2012) add member checking is particularly useful for triangulating themes from the interviews against the theory of 'practice architectures'.

3.22. Focus groups

Before and after the CML intervention sessions, pre and post-student focus group interviews were conducted. The purpose of these group interviews with the students was to allow the

teacher/researcher to ask questions or as McIntyre-Mills et al. (2011) state to 'enquire' about the effectiveness of educational programs. Evaluating the effectiveness of this CML educational invention answers the study's **RQ 2. What are the inhibitors and enablers for the teaching of critical literacy and perspective of fake news in the media?** from the student's perspective. According to Creswell (2019), focus groups are advantageous when the interaction among interviewees will likely yield the best information and when interviewees are similar and cooperative with each other. This style of data collection is appropriate in this study because all the students, who are the interviewees, received similar amounts of formal English training and were all interested in pursuing ongoing tertiary education. Moreover, they were all given the same fake news educational intervention and tasked with the CML fake news tasks. By utilising a focus group, the student interviewees would likely see themselves as being placed in a similar position and cooperate with others. Cooperation among the participants was an important factor in selecting data collection methods because as Creswell (2019) states focus groups are useful for collecting information on individuals who are hesitant to provide information, this proved to be the case with the student participants at first being reluctant to critique the classroom materials used. As a result, this data collection method of conducting a focus group provided a setting for the students to feel comfortable in voicing their candid views of the course materials which was beneficial because of the previously mentioned DBR design that relied on multiple iterations sessions to refine the fake news reading checklist.

Another appealing aspect of focus groups is the affordances of providing a safe place to discuss sensitive topics. According to Creswell (2019), focus groups are useful when individuals are hesitant to provide information. As previously, mentioned Middle-East Asian EAP students can be a marginalised group in academia, with an assumed lack of critical thinking skills. According to Janks (2013) critical literacy works from four dimensions: power, diversity, access and design/redesign, the focus group interviews were designed to explore such dimensions and how they relate to EAP students analysing fake news messages in the media. EAP students who are a foreign student segment, can be marginalised in terms of how their culture is represented in social media messages. Discussions in the focus groups about power dynamics between author/audience namely holding a foreign culture in contempt, plus the social status of the person making the argument and to whom or what they are creating a media statement were discussed.

Fake news and applying CML skills to identify it was the main focus of the educational invention however raising the student's awareness of how fake news can condone or even perpetuate racial discrimination is also an area of interest. Data collected from focus groups differs from interviews according to Schostak (2005), in that focus groups can bring together multiple views and spaces between views can be explored. The focus group direction also touched upon the promotion of racial discrimination through various forms of practices that authors and/or media organizations employ. Specifically, the study examined intentional forms of discrimination which Kohler-Hausmann (2011) classifies as actions/ communications that separate and contrast people in the 'us' and 'other' groups. According to Raneri and Fabbro (2016), CML can enable the development of critical reading and/or viewing skills that question derogative and essentialist media representations of the Other. Their study selected a similarly aged sample group of students (aged 13-19) in several European countries aimed at strengthening their understanding of how media can contribute and be utilized to contest discrimination. There are similarities in their analysis of media content, namely applying an analysis using five modules analysing media narratives, political discourses and semiotics in their focus group. The CML framework my study implemented bears resemblances to this five-point module style of analysis, examining six conceptual understandings. A key finding in Raneri and Fabbro's study was that the majority of students were not used to talking about discrimination in school and, even less, to taking a public position about discrimination through original media productions or remixes of existing multimedia content. They found the focus group interview dynamic to be a comfortable, non-threating safe place to discuss the sensitive issue of discrimination. This lack of familiarity with covering discrimination in class and taking a public position about discrimination reinforced my impetus for pursuing this topic in CML studies. Discrimination in social media is also a concern among Australian teenagers according to findings from Notley's et al. (2017) survey, in which 38% of respondents felt the treatment of people from different races and ethnic backgrounds have been treated unfairly as opposed to 33% who feel they are treated fairly in the media.

The standpoint theory meshes nicely in with a focus group form of data collection on two levels. Firstly, assuming this group is marginalized the standpoint theory operates from the perspective of marginalised groups focusing on their experiences being exposed to dominant social institutions and their ideologies (Wilson, 2016). This group of Chinese (specifically Mainland China and Hong Kong) EAP learners as previously discussed are placed in a Western ideological formal education setting and have expectations to develop their critical literacy

skills. Secondly, the standpoint theory is appropriate because this theory is more about the creation of groups' consciousnesses than about shifts in the consciousnesses of individuals. As previously established these students see themselves as peers due to being in similar educational situations which Brannen and Pattman (2005) and Creswell (2019) note can produce a shared understanding and perhaps reach a consensus using a group dynamic. This would be particularly advantageous in capturing the inhibitors and enablers facing EAP students in their CML acquisition Also, in answering this question **RQ4 4. What specific aspects of critical reading of media texts tasks and social media production tasks lead to effective student work?** The study utilised the standpoint theory in the focus group articulating the importance of a group's experience, of a distinctive kind of collective consciousness, which can be achieved through the group's struggles to gain the kind of knowledge that they need for their educational intervention tasks.

A final note on the appropriateness of using a focus group form of data collection is that it was well suited to gathering the type of data from a group perspective, a small number of general questions and a low number of participants in this study. As previously mentioned, the research participants were taken from an in-tact class with five (5) students, which was suitable because according to Barbour (2014) because focus group studies generally employ either convenience sampling which is not concerned so much with gathering a representative sample of the target population, rather gathering social process and their ideas, to bring together multiple views (Brown, 2015). A challenge this form of data collection presents is when the interviewer loses control of the interview discussion due to a large group size or not having prepared interview questions (Somekh and Lewin, 2011). The protocol that this research project employed during the data collection was not expanding the focus group size above five (5) participants and having general questions aimed at eliciting responses from participants.

3.23. Summary

This chapter has explained my research epistemology as being that of a pragmatic researcher applying qualitative research methods to Design-based research. This methodology have been refined to adapt to a problem-orientated research design, suitability to technology-enhanced learning environments, classroom practices understanding theoretical foundations, standpoint theory and practice architectures. Practice architectures has been presented as the foundation for the theoretical lens of interactive practice to describe the interconnections between the separate but intertwined patterns of sayings, doings and relatings. Ethical considerations have

been provided, along with details regarding the DBR research design: the DBR phases, iterative cycles, elements and educational tool production; data collection methods; and the analytical framework used to provide reliability and verification. Particular information has been provided relating to the selection of analysing fake news on social media, as the challenges and opportunities which this form of classroom analysis presents in an educational setting.

CHAPTER 4: FINDINGS

4.1. Introduction

In this chapter I will report on the findings from Phase 1: the pre-educational intervention workshops, Phase 2: the educational interventions conducted and Phase 3: the reflections from these educational interventions. Each of the three study phases will be presented in DBR research stages prescribing to Reeves' phases model; 'analysis of practical problems by researchers in collaboration; iterative cycles of testing and refinement of solutions in practice and reflection to produce design principles and enhance solution implementation' (Reeves, 2016, pp. 56-57). The initial phase will be discussed through the theoretical lens of Practice Architectures, using 'sayings' to capture the language used by the participants and the ideas they expressed; 'doings' capturing the physical activities and work and 'relatings' to capture the social space of power and solidarity (Kemmis & Grootenboer, 2008; Schatzki, 1996, 2002, 2016). These analytical constructs will be used to explain the aspects which operate within the practices at the research site. The second phase documented findings from the educational interventions, describing how the classroom materials were tested, namely how the fake news reading checklist was used iteratively and the educational findings. This phase was followed by the reflection phase, discussing the findings from the exit interview focus group session with the students. The findings in this phase were used to discuss the overall effectiveness of the educational program from the student's perspective.

4.2. Initial phase

Design-based research phases have been utilised in this study in three stages. In this part of the chapter, I will report on the first stage of the research project, the initial phase: Analysis of practical problems by researchers in collaboration, to develop solutions informed by existing design principles and technical innovations (see Table 2). Also, in this part of the chapter, I will discuss: the purpose of the initial phase; the theoretical lens; data collection tools; reporting of preliminary information gathering; and reporting the introduction of CML learning and teaching. The duration of this stage was planned to take one month and occurred in part at the research site with the participants and partly via video calls using a Voice over Internet Protocol (VoIP) program. The switch from on-campus to online was due to COVID-19 restrictions placed on Queensland schools, with the state government recommending that, if possible, schools deliver lessons online to avoid the transmission of the disease.

4.2.1. Purpose of the first phase

The purpose of this beginning phase was to gather preliminary information before the CML educational intervention. In Design-based research, the purpose of the first phase is to focus on the topic and scope of the project (Easterday et al., 2014), and to gather preliminary information regarding the research context, specifically to determine the constraints and scale of the project. The first step aimed to design the critical media literacy activities in a way that could provide answers to the study's research questions (which will be explained in this chapter). Also, early on in Design-based Research, the initial phase covers understanding learners, domain and existing solutions (Easterday et al., 2014). Doing this helped determine the focus of the topic and scope of the project. Reeves (2006) refers to this process as the **Analysis of practical problems by researchers in collaboration** (see figure 1), with Tracie's role being the teacher/researcher whom I was in collaboration with.

Understanding the domain and existing solutions was achieved in the literature review section and consolidated with discussions with the participating teacher (Tracie) reviewing secondary sources on CML: analysing materials and online materials similar to or related to fake news educational classroom principles. This stage of the research involved understanding the empirical merit of the CML educational secondary sources, the models of learning and identifying design principles to implement in the course, which adheres to the **Development of solutions informed by existing design principles and technological innovations** (see figure 1) advocated by Reeves (2006). In the workshops Tracie and I discussed the educational merit and utility of the CML framework developed by Kellner and Share (2019), considering how the guiding questions and topics from this framework could be utilised into a series of classroom materials (See Table 1). Also, the workshops served the purpose of sourcing appropriate educational materials to introduce the concept of fake news to the students, reviewing the *BBC* educational resource *The seven types of people who start and spread fake news* (Spring, 2020) as an educational source designed to familiarise students with the concept of who creates and shares fake news. Then, we discussed what would be an appropriate fake news story, finding and selecting from *Fox News* to introduce the students to this concept, discussing what would be the best mode of teaching/learning to analyse this sample fake news story to introduce to the students this topic of analysis, determining that a media inoculation educational theory would be most appropriate.

Another purpose of the first phase was to conceive, build and test the CML educational intervention. The planned implementation of the CML educational intervention occurred in this phase with workshops with Tracie and I detailing the specifics of the lesson plans and educational materials. The conceiving part of the phase in the study involved planning the lesson plans and educational materials to allow them to grasp this concept (fake news in social media) in keeping with educational inoculation theory tenets to a sufficient enough level for the students to be able to identify and analyse a fake news story independently while making it engaging for the students. As Easterday et al. (2014) state this phase involves imagining a solution and analysing whether it will work. The workshops with Tracie and consultations with Jenny focused on determining how best to introduce fake news to the students in an engaging way considering the student's educational history, which most students not being exposed to critical pedagogy, and discussing what was feasible in the time frame of the semester/study. This phase in DBR, before iteration cycles have begun, is about building a design that is ready to implement; but as Easterday et al. (2014) state DBR phases can be designed to achieve a goal however the design is never completely finished. That means in this sense the designer has not committed to implementing the design in an outline or roadmap that allows the designer to conceptually analyse the components and how they might work together. This was the case with this study, whereby the design of the educational intervention encompassing all the materials was selected due to their suitability and numerous editions were made during the intervention sessions and with further consultations with Tracie and Jenny, which is in line with design-based research.

4.2.2. Purpose of practice architectures

To recognise the scope of the project, plus fully understand the learners and the learning domain a thorough understanding of the entire social practice was necessary, encompassing the whole human action as opposed to simply theory and classroom observations. Practices like how to achieve the intended goal of instilling CML skills in EAP students and making the educational intervention meaningful are held in place by preconditions that enable and constrain some kinds of action at the expense of others (Kemmis & Grootenboer, 2008; Schatzki, 1996, 2002, 2016). Kemmis and Grootenboer (2008, p. 57) refer to these preconditions as 'practice architectures', which identify the intricate social patterns of 'saying, doing and relating' that enable and constrain each new interaction, giving familiar practices their characteristics. The sayings were the language used by the participants (teacher/ researcher, participating teacher and faculty) and the ideas they expressed. The doings were the psychomotor substance which emerged

through the medium of activity and work, which specifically entailed the versatility of the CML educational activities; the fake news reading checklist used as a form of fake news analysis as a class, independent fake news analysis; and as a product evaluation tool for student presentations for a fake news social media response. And, the 'relatings' were seeking to explore the relationships between the participants which occurred simultaneously in a complex pattern of interactivity. By describing the conditions of CML in ELICOS schools in terms of 'practice architectures', the study documented ways the teaching and the learning of CML are enabled and constrained not only by the professional practice knowledge of the ELICOS teachers and EAP students but also by the social conditions under which this form of literacy is taught.

4.2.3. Reporting on initial phase findings

Sayings

The following 'sayings' demonstrate the language used by the co-operating teacher Tracie and the ideas she expressed. Her comments were taken from the initial interviews before commencing the educational intervention sessions in this doctoral study. The interview questions were designed to reveal her knowledge and experience of CML, her views on critical media literacy educational content, fake news, and her aspirations for the research project. She described how she felt at the outset of this research project:

> I have an interest in critical media literacy…. even though I haven't heard of that term, I found critical literacy an interesting topic at uni, Griffith University at the time when I was studying (referring to her Arts/Education bachelor degree) it was an emerging form of education in the 90s, was when this form education really became prominent (Tracie, 19th June 2020).

The CML experiences Tracie had in formal education revealed her interest in this form of literacy as both a student and teacher. It suggests a possible reason why she was willing to participate in this study and devote her expert time to assisting in the classroom interventions.

> It's sort of what I do now in classes, even though I haven't heard of that term (referring to CML) it seems to take from critical literacy (Tracie, 19th June 2020).

Tracie's comments in this section are in response to RQ1, in terms of what is known by ELICOS teachers about critically analysing media articles in class and if so, what they do in class to teach that content. Her unfamiliarity with the term CML was not an indication of her incorporating CML practices in her class. Her reaction to the concept of CML reflects two

claims made by Kellner and Share (2019). Firstly, that CML is an emerging form of literacy and perhaps unknown by educators. And, secondly that CML is based on critical thinking foundations.

The CML experiences Tracie had as a teacher revealed how in the ELICOS sector, CML is undervalued.

> There was a bit in the curriculum about that (referring to CML in the Australian national curriculum)… but none in the ELICOS curriculum I've seen. But, I bring in my own stuff to cover that (Tracie, 19th June 2020).

This comment identifies a potential inhibitor, addressing the study's research question (RQ2) of what are the inhibitors (and enablers) for teaching CML of fake news in social media, for the following reasons. The reported scarcity of CML content in the national curriculum and its absence in the ELICOS curriculum by Tracie could be considered an inhibitor to teachers in those respective educational fields. The reason being that due to the unavailability of this teaching content, it would make it harder to incorporate this form of literacy in the classroom. The ELICOS curriculum which is referred to as the ELICOS standards were developed by the Australian Government and state and territory governments in consultation with the ELICOS sector (Department of Education, 2022). Likewise, The Australian Curriculum in mainstream education is designed to help all young Australians to become successful learners, confident and creative individuals, and active and informed citizens (ACARA, 2019). A point of difference between the curricula is that the ELICOS standards are solely or mostly concerned with English language instruction, whereas the national curriculum encompasses learning skills and 'creativity'. Tracie's comment adds weight to Wilson's (2016) claim that CML in EAP programs are an afterthought. It is evident to see that if CML was more valuable in the ELICOS sector it would be included in the curriculum.

An important aspect of the research which motivated Tracie to participate in the research was her impression of adolescents' inability to view the media critically, something she felt was missing from their academic and civic skills.

> They are not really digital natives……more like digital interlopers….yes they multitask and use the internet. But struggle in finding a newsworthy source of information (Tracie, 19th June 2020)

When asked further about her aspirations for the research project, Tracie expanded following on from her comments made in the initial phase about students not fitting into

their ‘digital natives ’demographic category label, adding they are more like ‘digital interlopers’. Digital natives is a phrase first coined by Prensky (2001) as those people who were born into the digital world, with new technology and have been characterized by their familiarity with and confidence in using them. Applied, in the educational context, the usage of the term digital natives has come to mean they surrounded their lives with digital communication technology (Gallardo-Echenique et al., 2015). With relevance to this study, the term is used to describe people who are digital communication technology users who are proficient in sending, receiving, and processing information (Novak, 2019). Whereas, Tracie claims students are more like digital interlopers, a seemingly original term she used to describe a person processing media information who perhaps has grown up with digital communication, namely social media, but is not familiar and confident enough to find a newsworthy source of information.

Her goals to address this issue were to;

> To equip the students…EAP students that is with enough skills to check what is fake news….to give them the confidence to spot it (Tracie, 11th April 2020).

This comment from Tracie reflects other researchers (Herrero-Diz et al., 2020; Notley et al., 2017) assertions that this demographic age group have difficulty in spotting and verifying fake news. Tracie’s term for this student demographic as ‘digital interlopers’ bears a remarkable resemblance to Schulten’s (2015) term “digital naïves”. Both Schulten and Tracie were using it in the same way to refer to teenagers who do not question the credibility of the information they consume and as a result are not as media savvy as perhaps as society perceives them. The problem which this creates is that EAP students, and potentially high-school students also in this adolescent age bracket, exhibit the traits which cause the proliferation of fake news being disseminated online; namely the sharing of fake news posts on social media (Badillo, 2019; Middaugh, 2019; Wardle & Derakhshan, 2017). The Herrero-Diz (et al., 2020) research results underline this problem of students who do not possess CML skills that teenagers were unable to verify the credibility of false information and were the main social media users sharing this misinformation. Tracie’s lack of confidence in EAP students through classroom observations potentially suggests that there this also a problem with EAP students in Australia failing to process news online and possibly sending/sharing it on social media.

In discussions with Tracie about her experience with critical literacy in the curriculum. She revealed the lack of critical literacy in formal education in the Australian formal educational setting is an inhibitor to this form of literacy being more widely adopted in Australian classrooms.

> The structure of the national curriculum there isn't enough – no room for kids to think, it's important for them to get a good mark in a standardised test. Not allowing for much movement and authenticity of incorporating critical literacy tasks (Tracie, 11th April 2020).

Tracie's remarks reflect the opposing prerogative of testing students which results in less time being devoted to achieving critical media literacy aims. If teachers have to follow the national curriculum in their syllabi, which prioritises standardised testing targets then is a reasonable argument to make that less time would be devoted to including critical literacy tasks. Zooming into the ELICOS sector, Tracie's comments reveal that this area of the educational industry is even more lacking of critical literacy content in the curriculum.

> Not much teacher training in critical literacy either…..it's not a priority in teacher training anymore…..and in ELICOS it's almost non-existent (Tracie, 11th April 2020).

This comment also identifies a potential inhibitor, of more relevance to this study in the ELICOS sector. Addressing the study's research question (RQ2) on what are the inhibitors (and enablers) for teaching CML of fakes news in social media, the absence of critical literacy in the ELICOS curriculum could be considered an inhibitor to teachers in those respective educational fields. The reason being that due to the unavailability of this teaching content it would make it harder to incorporate this form of literacy in the classroom. Tracie's remark supports Wilson's (2016) claim that CML in EAP programs are an afterthought. It is evident to see that if CML was more valuable in the ELICOS sector it would be included more predominately in teacher training.

A concern that Tracie and I share is the preoccupation with functional language in ELICOS, as opposed to understanding the ideational meaning that language also brings with it. This lack of teacher training in critical literacy and the dominance of functional language proficiency in ELICOS all inhibit teaching critical literacy. These two barriers identified in the findings of this study respond to this study's research question of discovering inhibitors for teaching of critical literacy and perspective of fake news in the media.

> Yes…..I agree… there is not much room in the syllabus to cover, more advanced… or should I say higher order thinking. Language is power (Tracie, 11th April 2020).

The comments made by Tracie about teachers not being able to cover more advanced language in class, and her quote that 'language is power' refers to her understanding of the politics of language. This is something Pennycook (2021, p.101) is also concerned about, that the EAP curriculum has a neutral stance towards language, for which she terms the 'practice of pragmatism'. Which is preventing teachers and students of EAP from engaging in the politics of language learning. This is not a surprising finding from Tracie because historically English language courses have been designed to only help students communicate (Crookes & Lehner, 1998). And, there is still an ongoing ideology of pragmatism and neutrality in English language courses according to Abednia and Izadinia, (2013) and Kumagai and Iwasaki, (2011). Expanding this pragmatic and neutral view of language for solely communication purposes adopted in the EAP curriculum to adding the power of language could expand the notion of literacy to analysing how language is used in the world. This inclusion of how language is a source of power expands students' literacy prescribing to Paulo Freire's (as cited in Elas, 1975) notion of literacy, whereby literacy teaches learners to not only be able to read and write but be aware and even critical of the oppressive forces they might face. Examining this representation, would according to Paulo Freire (as cited in Elas, 1975 p.54) expand the notion of literacy allowing students to become critically aware of the social reality in which they live, to be 'critically conscious'. Both Tracie and shared this emancipatory progressive education ethos CML educational interventions analysing language used as power was an effort to incorporate such a Freire style critical pedagogy in the attempts to emancipate the EAL/D students, to expand their notion and range of literacies.

In terms of the study the study's research question (RQ1) What do ELICOS teachers know and do when teaching EAP students to critically analyse media articles?, Tracie discussed what she does in terms of critically analysing media in class. Tracie responded that she uses a variety of different types of critical literacy tasks, aimed at developing students' critical thinking in her classes. One of which was a visual analysis of the front covers of classroom texts (books, magazines, movie covers, fashion magazine etc.) analysing what the students bring to the text themselves as in what their impressions are. According to Tracie critical literacy is;

> It's (referring to critical literacy) what students bring with them to a text, not what the author wants the reader to think (Tracie, 11th April 2020).

This form of critical literacy encapsulates a non-rationalist view of critical literacy. For Janks (2002) critical literacy is a rationalist activity that does not sufficiently analyse the non-rationalist contributions that readers bring with them to tasks and texts. Tracie seeks to explore the socio-cultural aspects of her multicultural class by doing a semiotic analysis of magazines covers. Describing the analysis specifically focusing on heteronormative representations in society, by deconstructing the front cover of popular magazine covers and movie posters in her English classes.

> We looked at magazine covers and how these digital representations of gender are….. it worked well into covering controversial issues, binary genders and where that comes from and how much that is reinforced in everyday magazines, this could be used to branch off into other issues. They (referring to the students) didn't realise they had a strong opinion….. until they did (Tracie, 11th April 2020).

Tracie also mentioned how she does a visual analysis of movie posters in response to the study's question (RQ1) regarding if she did anything in her classes related to critical media literacy. She explained;

> I do something similar (referring to critical media literacy) in my EAP preparations classes (high-level General English class), we examine what is culturally embedded in movie posters. We'll do a visual analysis of the front cover, for example. Looking at sort of how your position is to respond and what's something prior knowledge and experience. Stuff that a person brings with them whenever they interact with the text and then they always respond surprisingly well (Tracie, 11th April 2020).

She went on to explain;

> I look at what a person brings with them. It's because critical literacy is their reading of the text, not somebody telling you what the reading is. Yeah, so let's say that you don't say what? What do you think? The author. Yeah. What's the author's message? Yeah. Do that. Then what they're reading of the text (Tracie, 11th April 2020).

This finding from Tracie is similar to Janks (2002) who studied the various multicultural investments that her South African students brought with them to the analysis of popular advertising texts. Tracie reported that she was more interested in examining what the

students bring to a text, adopting a non-rationalist approach to critical literacy, the activities that she used also contained rationalist forms of critical literacy for the following reasons. The activity of analysing the images of movie posters examines teaching students how to examine texts which encapsulate Janks' (2013) critical literacy to analyse the semiotic choices made by the author the Janks' (2013). This is because sociocultural aspects aside, the student's responses are intuitively based on the image (s) selected by the author of the movie poster. Further, Tracie's digital representations of gender magazine covers exercise reflects Winch et al. (2014) recommendation in critical literacy classroom activity to teach students to be critical of texts involves searching for the hidden assumptions and bias in a text (Winch et al., 2014). Whereas, my study was based more on a critical rationalist perspective as Parton and Bailey's (2008) stated where students create an environment of critical thinking and reading of the values portrayed by the author. However, of relevance to this study her activities were not specifically targeting CML, this form of critical pedagogy displays critical thinking of the media, questioning the authors' intention, and while not being applied in a social media context the similar semiotics and politics of representation are present and are also incorporate in this study's analysis fake news in social media.

In her ten plus years of teaching in the ELICOS sector, namely General English and EAP, critical literacy tasks Tracie described her students' CML ability as the following;

> Really, amazing….sometimes digitally we don't know how literate they are but they are actually capable of being literate….when given the opportunity (Tracie, 11th April 2020).

Tracie recognised the importance of language in critical literacy tasks in terms of comprehension of critical literacy and in terms of how language can represent power.

> That's one thing I really liked about teaching critical literacy is that …. we were teaching the kids the metalanguage to use so they could talk about like um… discursive practices or they could talk about the ideological stance of what language to use … they actually had … it gave them the ability to analyse or express themselves. Which is really quite cool, especially when you see them using and understand what

> they are saying. It was sort of demystifying for them because language is power. Elevating their language development (Tracie, 11th April2020).

Tracie comments reflect how rewarding she found teaching critical literacy was in her classes, adding that from her observations the students similarly found it rewarding and that they found it benefited them by developing their civil voice.

The sayings gathered from the initial teacher interview helped to establish the DBR intervention with the students in the following ways. Firstly, Tracie's unfamiliarity with the term CML confirmed what the literature (Kellner & Share, 2019) says about the status of this form of literacy, that it is relatively new and unknown among teachers and by extension as a teaching/learning pedagogy. What Tracie observed in the students she taught confirmed also what the literature (Notley et al., 2017; Herrero-Diz et al., 2020) says about adolescents (in) ability to critically analyse media. But also, her comments gave signs of positivity for their engagement and their ability to gain CML skills with her comments about students' appreciation/discovery with developing their civil voice.

What largely impacted the CML educational material design in this study was Tracie's account of her CML task design. Her accounts of how she incorporates CML tasks in class revealed her views on the purpose of critical literacy as being a rationalist. However, she still incorporated aspects of a rationalist perspective of critical literacy. Despite claiming she was interested in analysing what the students brought to a text, which prescribe to the non-rationalist perspective on critical literacy, the task description of the text deconstruction/semiotic analysis of popular magazine covers reflects a non-rationalist perspective of critical literacy. In particular, the digital representations of gender in the media progressed into analysing heteronormative representations in society and even further branched off into analysing further issues. This example of the topic/theme progressing through analytical questions, building into what seems a rich understanding of gender representations in media to society gave positivity for my study to do the same but with fake news. Also, her accounts that the media analysis activities she conducted in her classes woke something in her students, about the reflections that they did not realise they had a strong opinion (referring to the heteronormative semiotic analysis of texts), which gave me impetus and motivation to evoke a similar reaction among the students participating in this study.

Doings

Analysing Tracie's movie poster visual analysis which explored socio-cultural factors, brought an interesting multicultural factor. The activity was designed by giving the students movie posters with the movie title obstructed, and then she asked the students to give the movie a title. Tracie reported that the student's titles varied and the students were surprised at other's title suggestions. Additionally, they never would have thought of giving that title. These title choices seemingly reflect their worldview which is shaped by their culture which made it an engaging activity for the students. A comparison between the varying student-chosen titles displays critical thinking of multicultural representations and how a title is culturally embedded. This was contrasted with the actual movie title where students could compare the author's intent and how different texts can be read differently, and examine the importance of what readers bring with them to a text that is culturally embedded. The final part of the activity concluded with revealing the actual movie title, for example, the Hollywood movie title which typically represented a Western cultural disposition. The class, who were mostly from mixed Asian backgrounds (China, Hong Kong, South Korea and Vietnam) could see the varying cultural inputs which shaped the student's title choices and how this contrasted with the author's intent. The overall aim of the activity was to explore how texts can be read differently depending on cultural backgrounds, illustrating the importance of what people bring to a text.

Being the teacher/researcher, I was privy to accessing the students before the educational intervention was conceived. Therefore, I was able to observe, conduct informal interviews and record notes in the in-tact class. This allowed me to initially identify what were going to be the likely inhibitors and enablers during the proposed study. During this time, I noticed both a desire and reluctance among the students, to cover fake news and ways to identify it in class. It was reassuring that all students claimed to know what fake news meant and stated they viewed several recent examples in social media. The students' comments reaffirm the numerous education social media researchers (Herrero-Diz et al., 2020; Kurasawa 2018; Newman et al., 2019) assertion that adolescents consume their news mostly on social media where they are potentially exposed to a large amount of fake news. The Herrero-Diz (et al., 2020) study found that Spanish adolescents were exposed to a large amount of misinformation on WhatsApp. Moreover, several media scholars (McDougall et al., 2018; Zezulkova, 2015) claim that students in Secondary school education in Europe are increasingly at risk of being exposed to increasing volumes of misinformation. Kurasawa, who holds the York research

chair in Global Digital Citizenship, and is in the Department of Sociology at York University, claims social media can be 'information poison making it difficult to determine fact from falsehood' (Kurasawa, 2018, p.87). Adding that Facebook, Twitter, Instagram and Snapchat incentivise attention-grabbing misinformation and inaccurate scoops.

The students stated their desire to cover CML tasks in class. This was displayed in their comments that they have been exposed to a lot of fake news. Jess stated she has seen a lot of fake news on health advice, which suggests her frustration at having to filter through a large amount of fake news to find genuine health news on social media. Ivan's statement that 'if we don't check fake news, then fake news wins' (Ivan, 25th May 2020), seemingly indicates he values the educational response to the harmful proliferation of fake news on social media. And, others simply mentioning that they have been exposed to fake news on social media tends to suggest that they see this as a problem that needs to be addressed. However, some students questioned the relevancy of the study, namely Lucas, who stated he already knows how to spot fake news on social media, therefore we (the class) do not need to undertake this topic in class. In addition to initially questioning the relevancy of the study, another student, Jess questioned the importance of the study concerned about the educational intervention taking precious time away from the syllabus aims to prepare for English proficiency tests required for entering their ongoing tertiary educational institutions. This student resistance reflects Wilson's (2016) and Masuda's (2012) sentiments that EAP syllabi are dominated by proficiency tests. Although after several discussions presenting the case that this CML educational intervention is worthy of class time because they would require critical thinking skills in their first-year university class in the future and any exposure to critical pedagogy would help them to prepare for this they were persuaded. This was achieved by showing university-level course descriptions that contained either 'critical thinking' or 'critical literacy' skills in the prerequisites, these educational skills are what critical media literacy is founded upon Kellner and Share (2019) After being presented with this evidence the students were more amenable to this educational intervention program.

Another key influence on certain student's reluctance to cover CML content in the classroom could have been due to the factor that they haven't been previously exposed to this type of pedagogy in the past. They held certain expectations of what an EAP course entails, namely preparing and ultimately achieving a desirable score on an English proficiency test and taking time away from this goal was seen as a distraction. It was an important stage in the study to

gauge any potential issues with the students by covering fake in social media, which could be considered radical content and quite a deviation from normal EAP classroom practices. Pre-study informal discussions with students are a tenet of DBR according to Brown et al. (2016) research practices to ensure the 'sustainability' and 'scalability' of the study. Their study similarly held pre-study phase informal discussions with the primary school students, about their potentially stressful transition into secondary school, likewise in this study, the pre-study informal discussions were particularly useful in providing an opportunity to discuss with certain students namely Jess and Allen (as mentioned above) about their reservations in participating in the study.

Relatings

Before conducting the study, I had a great deal of respect for Tracie. Both as a colleague, teacher and researcher, she has an active profile in the professional development area of ELICOS teaching and was invaluable in her role in my study as a critical friend of the educational intervention. To begin with, my role was that of the new EAP teacher/researcher who was in charge of the EAP course. This was my first year at the White Rock Language School, I had 6 years' experience in Japan in similar EAP capacities, however, Tracie had previously taught the EAP course, general English and year 9 + 10 English classes in Australian secondary schools. Tracie had a wealth of knowledge and experience in this domain.

Tracie taught the highest-level General English course, where if the students passed, they either entered an Australian secondary college or progressed into the EAP class. Therefore, Tracie was familiar with most of the students in my class having previously taught them the year/ semester before. Those who had been in Tracie's class during the previous year (which was the majority) showed a greater tendency towards active engagement and a more joyful demeanour in their learning.

> Those students are a lively bunch… full of questions…I think they'll do well in those fake news activities (Tracie, 12th April 2020)

What became apparent was the relationships with the students at the research site were influenced by their educational backgrounds and learning identities. They were influenced

by a Chinese educational predilection to view the teacher's role as the teacher-as-instructor model of learning. Wan et al. (2011) explain there is a cultural tendency in China where the teacher takes on a lecturing role, imparting knowledge and students are expected to memorise that knowledge provided by their teacher. This relationship between the students and teachers contrasts with the remarkedly different Western style critical pedagogy employed in the critical media literacy educational intervention program where the teacher played more of a facilitator role, encouraging the students to question and challenge inequalities (Wan et al., 2011). The EAP students had a different perspective on learning and teaching and were a bit hesitant to deviate from the English proficiency test-dominated syllabus which was anticipated to be an inhibitor for the critical pedagogical planned educational interventions. The students participating in this study were exposed to critical teaching pedagogy by being taught to read, analyse and decode media texts (Kellner & Share, 2019), by considering the way the viewer is positioned, identifying values and emotions the text appeals to, examining the information the creator has included and omitted (Kellner & Share, 2007). An example of this is displayed in the fake news reading checklist design, which consisted of a series of deductive questions aimed at eliciting critical media knowledge from the students.

However, students who were in Tracie's class in the previous semester/year seemed more receptive to CML tasks even despite their aforementioned educational backgrounds and learning identities. As previously mentioned, Tracie has an educational background in critical literacy, and is an advocate of critical thinking about the media so we could relate to students taking more of an active role in class and having a similar approach to these CML activities with the teacher providing more of a facilitator approach.

To fulfil the University of Southern Queensland's ethics application, I met with the academic manager and principal to explain the educational benefit to the schools' stakeholders my study intended to bring. Discussions before the commencement of my study and before the initial phase revealed the academic manager's experience as an EAP teacher in the ELICOS sector. She could understand the importance of fostering CML skills among EAP students, that these skills are vital appreciating the fact that they will be exposed to critical pedagogy in their ongoing educational intuitions and recognising the merit of the CML educational invention could bring to them in their online social media domain. Jenny, the academic manager, showed her interest in the study, and willingness to also be a critical

friend requesting to be included (in a limited capacity) in the design of the fake news educational intervention. She made herself available on numerous occasions during the study to be consulted about the participants of the educational intervention program. Offering her opinion and advice on aspects of the educational materials and lesson plans.

4.2.4. Purpose of the second phase

The purpose of the second phase was to conduct workshops with Tracie the participating teacher and also to get the thoughts of Jenny the academic manager. This phase is referred to as the 'build phase' by Easterday (et al., 2014, p.320), whereby designers implement the solution. The specific purpose of the fake news CML intervention initial workshop was to utilise the collective wisdom of the CML framework criteria/theories into something that could be used in the classroom, moreover a classroom with EAP students for whom English was not their first language.

Pre-intervention workshops

The theoretical and empirical foundation for the whole study was informed by a preliminary CML framework; constructed by Kellner and Share (2019) who reviewed relevant literature and obtained empirical data through a documentary analysis of 52 documents on critical media literacy (see table 5). This CML framework, which is quite theoretical being a development from the aforementioned documentary analysis needed to be refined into something usable in a classroom, moreover usable for EAP students whom English is not their first language and for (Asian) students for whom possibly did not have an educational background with critical pedagogy. Further on in this section, will explain how the CML framework's conceptual understanding questions were re-worded incorporating The Australian Curriculum, Assessment and Reporting Authority (ACARA) to be comprehensible for this student segment.

The first step in the pre-intervention workshops was to shape the CML framework into a classroom tool.

Tracie's comments about the CML framework revealed the density of the document analysis and further echoed the need for it to be reformulated into a classroom tool that EAP teachers could use for their EAP students.

> This looks like a regurgitation of other authors – Not really ready to implement into a classroom yet… well in not in this form at least (Tracie, 11th April 2020).

Tracie's comments were quite poignant. She made an accurate observation that the CML framework was a 'regurgitation of other authors', because as previously mentioned it was formulated from a documentary analysis of 52 documents. Also, it was 'not really ready to be implemented into the classroom', this was in reference to the conceptual understanding questions. These questions written by Kellner and Share (2019) are succinct summaries of the CML concepts; however, these questions appear to have been written to enable educational researchers and teachers to be better able to comprehend these CML theoretical dense concepts. And a reasonable argument could be made the readers would not be the end users namely the students in class.

Although through workshops, multiple intervention sessions, followed by iterative reviews with the teacher/researcher and participating teacher allowed the CML framework to be analysed and implemented into a more classroom-friendly form for students and which was tailored specifically for the topic of fake news. Part of making this CML framework suitable for end users was aligning the wording of the fake news reading checklist to the Australian curriculum. The result of the workshops was to merge the CML language specifically into analysing fake news which also could meet the curriculum levels. The aim of the workshops, namely the design of incorporating the CML framework into a classroom-friendly task which could lead to effective student work addresses the study's research question (RQ4) of exploring what specific aspects of critical reading of media texts tasks and social media production tasks lead to effective student work?

Table 5

The Critical Media Literacy Framework

Conceptual Understandings	Questions
1. Social Constructivism All information is co-constructed by individuals and/or groups of people who make choices within social contexts.	WHO are all the possible people who made choices that helped create this text?

2. Languages / Semiotics Each medium has its own language with specific grammar and semantics.	HOW was this text constructed and delivered/accessed?
3. Audience / Positionality Individuals and groups understand media messages similarly and/or differently depending on multiple contextual factors.	HOW could this text be understood differently?
4. Politics of Representation Media messages and the medium through which they travel always have a bias and support and/or challenge dominant hierarchies of power, privilege, and pleasure.	WHAT values, points of view, and ideologies are represented or missing from this text or influenced by the medium?
5. Production / Institutions All media texts have a purpose (often commercial or governmental) that is shaped by the creators and/or systems within which they operate.	WHY was this text created and/or shared?
6. Social & Environmental Justice Media culture is a terrain of struggle that perpetuates or challenges positive and/or negative ideas about people, groups, and issues; it is never neutral.	WHOM does this text advantage and/or disadvantage?

Note. Reprinted from *The critical media literacy guide: Engaging media and transforming education* by D. Kellner and J. Share, 2019

In the section below the bold text is the language that was used in the fake news reading checklist, it will explain where this language was taken, namely the CML framework and participant student input, and why. And, the underlined text is expansion questions that were designed to build comprehension of the sub-topic, by building on the initial questions. The language was mostly taken from the CML framework, ACARA and the participant students' reactions and input.

Fake News Reading Checklist Version 1 – This was the first version of the fake news reading checklist because it was before conducting the educational interventions, where input was received from the students which subsequently resulted in editions.

1. Look at the headline adapted from Kellner and Share's (2019) Critical Media Literacy framework.

2. Languages / Semiotics Each medium has its own language with specific grammar and semantics.	HOW was this text constructed and delivered/accessed?

Does the headline use excessive punctuation or capital letters, what grabs your attention?

This wording integrates Level 6 (Years 9 and 10) critical and creative thinking to 'Evaluate procedures and outcomes evaluate the effectiveness of ideas, products and performances and implement courses of action to achieve desired outcomes against criteria they have identified' ACARA (n.d.)

2 Question the publisher/ author adapted from

5. Production / Institutions All media texts have a purpose (often commercial or governmental) that is shaped by the creators and/or systems within which they operate.	WHY was this text created and/or shared?

What claims does the author make?

What evidence does the author use?

How does the news language indicate the author's perspective?

This wording integrates Level 6 (Years 9 and 10) critical and creative thinking to - **Identify and clarify information and ideas** clarify complex information and ideas drawn from a range of sources and **Organise and process information** critically analyse independently sourced information to determine bias and reliability ACARA (n.d.).

3. What do other news sources say about this story? Adapted from

3. Audience / Positionality	HOW could this text be understood differently?

Individuals and groups understand media messages similarly and/or differently depending on multiple contextual factors.	

This wording integrates Level 6 (Years 9 and 10) critical and creative thinking to 'Consider alternatives speculate on creative options to modify ideas when circumstances change' ACARA (n.d.)

4. Who do you think is advantaged and disadvantaged? Adapted from

6. Social & Environmental Justice Media culture is a terrain of struggle that perpetuates or challenges positive and/or negative ideas about people, groups, and issues; it is never neutral.	WHOM does this text advantage and/or disadvantage?

This wording integrates Level 6 (Years 9 and 10) critical and creative thinking **to Think about thinking (metacognition)** give reasons to support their thinking, and address opposing viewpoints and possible weaknesses in their positions ACARA (n.d.)

5. Why do you think this person created or shared this fake news story? What values, ideas or message are they trying to spread? Adapted from

5. Production / Institutions All media texts have a purpose (often commercial or governmental) that is shaped by the creators and/or systems within which they operate.	WHY was this text created and/or shared?

This question utilised the curriculum aims to **Draw conclusions and design a course of action** using logical and abstract thinking to analyse and synthesise complex information to inform a course of action Level 6 (Years 9 and 10) critical and creative thinking ACARA (n.d.)

6. What type of person created or shared this fake news story? This was not adapted from the CML framework, rather it was used to consolidate the early stages of the educational intervention's lesson aim of analysing what type of people create and share fakes news on social media

Type	Tick box	Why
Politician		
Celebrity		
Conspiracy theorist		
Scammer		
Insider		
Relative		
Joker		

Questions (which appear in the right-hand column) of the CML framework were reworded into a comprehensible form for EAL/D students **WHY was this text created and/or shared?** Edited into **Look at the headline**, and sub-questions **Does the headline use excessive punctuation or capital letters, what grabs your attention?** aimed at eliciting an understanding of the subthemes were added to reinforce and consolidate understanding of the individual concept (s). This focused on the students' needs to dissect the sub-theme of the language with specific grammar and semantics used to grab reader's attention in fake news stores. The guiding questions acted as a scaffolding technique offering shorter, more simply worded questions to highlight tropes of this sub-theme (Kelly & Brower, 2016).

Also, for brevity's sake, the six critical media literacy phenomena which appear in the left-hand column for example; Social Constructivism, Languages/Semiotics, Audience/Positionality etc were omitted following Jenny's input.

> It seems the fake news reading checklist's purpose is for more understanding fake news and not so much for understanding the theory of critical media literacy. So…..it's better … in my opinion to leave that out and let the students concentrate on the topic at hand (referring to fake news) (Jenny, 3rd June 2020).

The six critical media literacy criteria as previously mentioned were theoretical themes crucial to the concept of CML and derived from scholars in the field of educational media literacy. As such it is a reasonable argument to make that they are more relevant to researchers and/or

educators than students who are more concerned with gaining the literacy and maybe not the theoretical roots of the pedagogy.

The gap between theory and educational practice was evident to see in Tracie's and Jennie's comments, with the need for the theoretically dense CML framework needing to be refined into a domain-specific form for fake news stories on social media. Wilson (2016) stated that Australian education values critical thinking skills as an asset to their school/program, and gaining these critical skills are essential to the student's success in higher education. The fake news reading checklist criteria of identifying assumptions, detecting bias, checking the author etc, was modelled on the Critical Media Literacy Framework (Kellner & Share, 2019). This CML framework was transformed into the fake news reading checklist to provide these EAP students with a critical reading tool to hone their critical thinking/reading skills which were designed to pique their interest in CML and expose them to critical pedagogy practices they would likely encounter in Australian universities after they graduate from the EAP course.

In keeping with DBR iterations this was the first version of the fake news reading checklist, with subsequent revisions to follow once it was trailed on the students in the ongoing education interventions. Bakker and van Eerde (2015) argued that each iteration stage of DBR allows the researcher (s) to improve the predictive power across subsequent teaching experiments, which are termed iterations of interventions. The pre-educational workshops were effective in designing a more student-friendly fake news reading checklist, even though it hadn't been tested on the students which could be argued as the most important factor, the DBR first phase did allow the initial design to be workshopped into something ready to use for EAP students.

1.1.1 Introducing the concept of fake news

Before the commencement of the first CML educational intervention, the workshop focused on how to effectively introduce the concept of fake news to this student segment, namely Chinese Asian EAP students. It was unknown at this stage of the educational intervention if the students were familiar with this form of media deception and the conventions that these social media users use. The vocabulary roles used by the educational resource the BBC Video 7 types of people who create and share fake news were predicted to be known by the students, and in the educational intervention sessions it was revealed that they were mostly known by

the students. That is except for the 'joker' profile which needed to be explained because it was culturally embedded.

Politician
Celebrity
Conspiracy theorist
Scammer
Insider
Relative
Joker

These common types of people are used by the author a BBC disinformation and social media correspondent Mariana Spring in the educational video (Spring, 2020) to introduce the topic of fake news and to help the students make critical text-to-self connections (Keene & Zimmermann, 1997) fulling a scaffolding aspect, relating the readings to their personal experiences to access prior knowledge. The activity aimed was to use the common types of people in society which was previously known by the students to the move to unknown, which were how those people operate in the context of creating and sharing fake news. Tracie was confident that the vocabulary used in this educational resource would indeed activate some prior knowledge among the participant students.

> I am sure the students would be able to identify these types of people, and relate it to the… to incorporate it into their worldview. Not to mention theme of Coronavirus could spark their interest (Tracie, 5th June 2020).

The utility of the identifying and categorising vocabulary used in the BBC video 'The seven most common types of people who create and share fake news about COVID' was discussed between Tracie, Jennie and I to not only be useful to follow the BBC educational video to fulfil the task for that introductory lesson but also could be incorporated into the fake news reading checklist (see Appendix C). The vocabulary list consisting of 'politician, celebrity, conspiracy theorist, scammer, insider, relative and joker' was operationalised into the fake news reading checklist because this vocabulary could activate prior knowledge of those society members

which was a functional use of language to understand who the common people who are involved in fake news creation on social media. This practice of incorporating the language was informed by the functional model of language for developing understandings of the world and interacting with others (Cusworth, 1994). The aim was to design the fake news reading checklist, and the education intervention to allow EAP students to understand the world of fake news in social media the first step in the process was to allow the students to speculate what type of person created the fake news message before a more in-depth analysis could be undertaken.

The lesson plan was designed to build on prior and ongoing knowledge of the current experiences with fake news in social media and it aligns with the Australian Curriculum: English (ACARA, n.d.) rationale by asserting that young Australians become informed citizens when they learn to analyse and understand the world around them (ACARA, n.d.). As Derewianka and Jones (2009) state when students build up the field knowledge of their experiences, they can use language to express and develop ideas to represent their world. The aim of incorporating this language was to consolidate knowledge of fake news and give the students functional language to be able to speak about this topic with competency and confidence.

Figure 4

BBC Trending : The seven types of people who start and spread viral information

BBC Home News Sport More Menu

BBC Trending

Coronavirus: The seven types of people who start and spread viral misinformation

By Marianna Spring
Specialist disinformation reporter

4 May 2020

Who starts viral misinformation... and who spreads it?

Conspiracy theories, misinformation and speculation about coronavirus have flooded social media. But who starts these rumours? And who spreads them?

We've investigated hundreds of misleading stories during the pandemic. It's given us an idea about who is behind misinformation - and what motivates them. Here are seven types of people who start and spread falsehoods:

Coronavirus_ The
seven types of peop

1.1.2 Conceiving and applying the fake news inoculation

The pre-educational intervention DBR workshop sessions allowed me to design and refine the sample fake news story (Fox News) that could prescribe to the educational inoculation theory, allowing the students to comprehend the topic and to act as a model for them to replicate further in the educational intervention sessions. Prescribing to DBR research parameters the prototyping phase is the phase where researchers design concepts that they intend to use on users (Goff & Getenet, 2017) and it is the phase where refining and validating steps of the research are undertaken.

As previously explained the educational inoculation approach according to Crompton (2013) to media education is a process that proposes that if students are exposed to a weakened form of the (virus) media topic (operationalised in this study of fake news in social media) then when the students are tasked with finding and analysing fake news examples themselves they will have the necessary CML skills to accurately dissect a fake news example of their own in class. Tracie was very supportive of the proposal to include the inoculation theory application in the educational intervention stating;

> When introducing something…. like that fake news story from Fox News or anything new in class especially if it has a critical literacy element is to not lead them, it's a guided discovery….so they can ultimately do it themselves (Tracie, 17th May 2020)

The aim of this prototyping phase aimed to find, through workshop discussions with Tracie, was to find a suitable weakened form of fake news on social media to use in an EAP class. The media educational theory acts similar to a medical inoculation procedure in that a weakened form of a stimulus is used to strengthen the body which in this case, fake news media knowledge (Goff & Getenet, 2017). The educational approach was reasonably effective with most students benefitting from the weakened and obvious example of fake news in social media, and were able to find and analyse an example of their own which is discussed further in the educational intervention sessions. Tasked with finding an easy way to identify example

of a fake news story that would be suitable to be incorporated into a media educational inoculation theory in class the topic of discussion with Tracie went to unreliable media news sources to be used for educational purposes. Upon discussing a suitable fake news source to inoculate this topic with the students, Tracie commented;

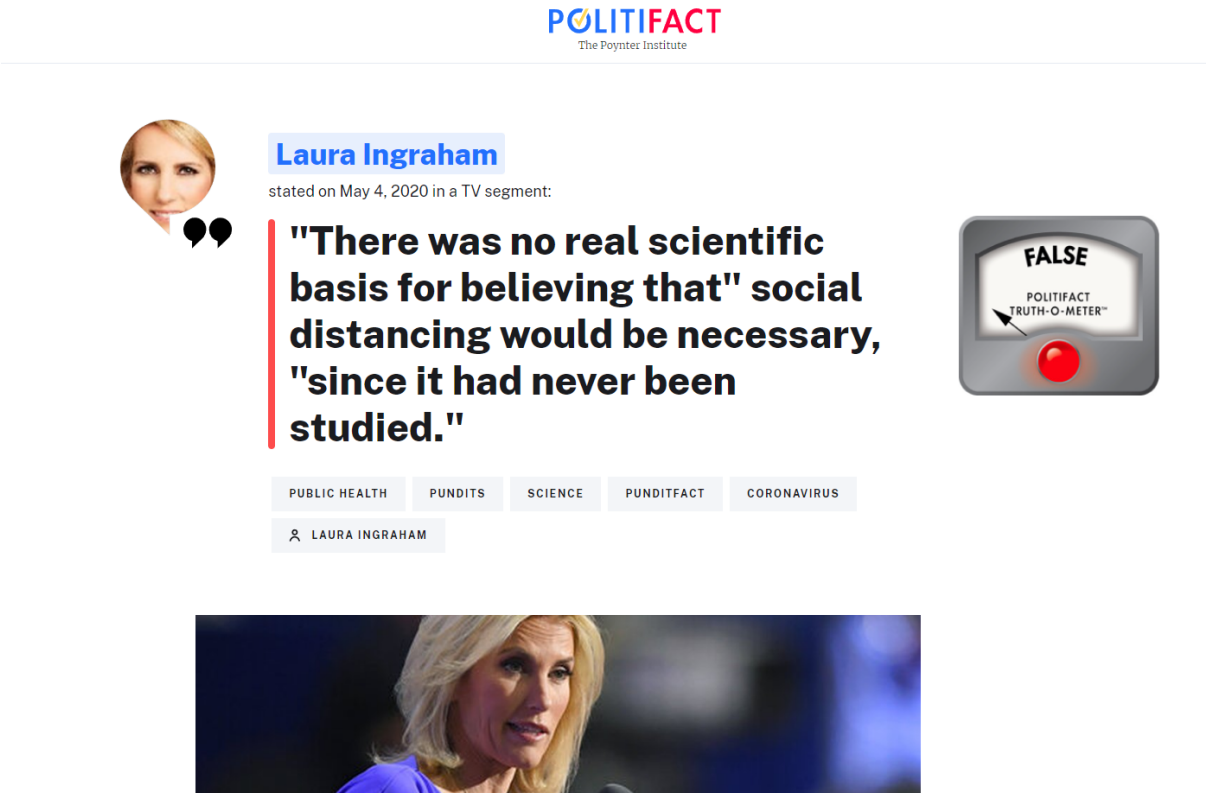
> Just look at anything from Fox News (Tracie, 17 May 2020).

Fox News certainly has a reputation for producing fake news, a recent survey conducted in the United States of America found that the majority of Americans commented that Fox News was the most likely news source to publish fake news (Estepa, 2017). Moreover, PolitiFact.com the fact-checking journalism website commonly features fake news stories from Fox News. As a result, this news broadcasting company (Fox News) was chosen because it could provide an easily verifiable fake news story that could be turned into a lesson suitable that could be carefully sequenced and scaffolded into an inculcation lesson for the EAP students.

At the time of the study's educational intervention, the COVID-19 pandemic was receiving a lot of attention in the media. More specifically how various national governments were responding to handling the pandemic dominated the news. Therefore, a fake news story that questioned the scientific validity of social distancing was deemed relevant being a current topic. Because of the far-reaching impact COVID-19 had on Australians, and the world to a greater extent, made it a topic which the students could easily recognise and this aided to the scaffolding of this process in class. As West et al. (2017) state scaffolding is using a bridge to build upon what students already know to arrive at something they do not know, which in this study utilised in the concept of identifying and analysing fake news techniques.

Figure 5

Fox News – There was no real scientific basis for believing that social distancing would be necessary since it had never been studied



There are several reasons why the fact-checking website PolitiFact was chosen to be used in the educational interventions. PolitiFact is owned by the nonprofit Poynter Institute for Media Studies, this functions fully as a not-for-profit national news organisation which makes it ideal for non-bias impartial news stories reviews. PolitiFact displays news stories that have been run through PunditFact, a site devoted to fact-checking and then the given news story is allocated a 'truth-o-meter' rating clearly labelling to the reader level of misinformation contained in the story (see figure 5). This visual display, namely the 'truth-o-meter' is easily located on the top right corner of each story, along with excerpts from the news source which registered misinformation from the PunditFact fact-checking program is easy to locate for the readers. This carefully identified and laid out structure highlighting typical fallacies commonplace in fake news stories typically found in social media covers the essential criteria of McDougall's (et al., 2018) media inoculation theory checklist in providing a weakened form of

disinformation. That exposure to disinformation acted as an inoculation in the educational intervention sessions, whereby at a later date providing the students with the necessary counter-arguments to dismiss the disinformation that they similarly found in their examples of fake news stories on social media.

1.1.3 Social media response

Following on from the study's intention to apply the educational inculcation theory aspect of students gaining the benefit of being exposed to the weakened form of fake news allowing them to easily spot fake news in social media. The next step in honing the students' CML skills was for them to fully utilise their newly acquired CML skills by producing a social media response to their chosen fake news story and the following section outlines the workshop findings on how this could be activated in the classroom.

Tracie's sentiment on gaining the full educational merit of CML reflected other prominent critical media literacy researchers such as Funk et al. (2016), Navera et al. (2019) and Ranieri and Fabbro (2016); that for students to get the entire benefit out of CML educational invention programs they need to produce a social media response. Specifically, CML skills go beyond understanding, analysing, and evaluating media messages, by proposing that students engage with media texts when they create their meanings and messages. In workshop conversations with Tracie, she iterated;

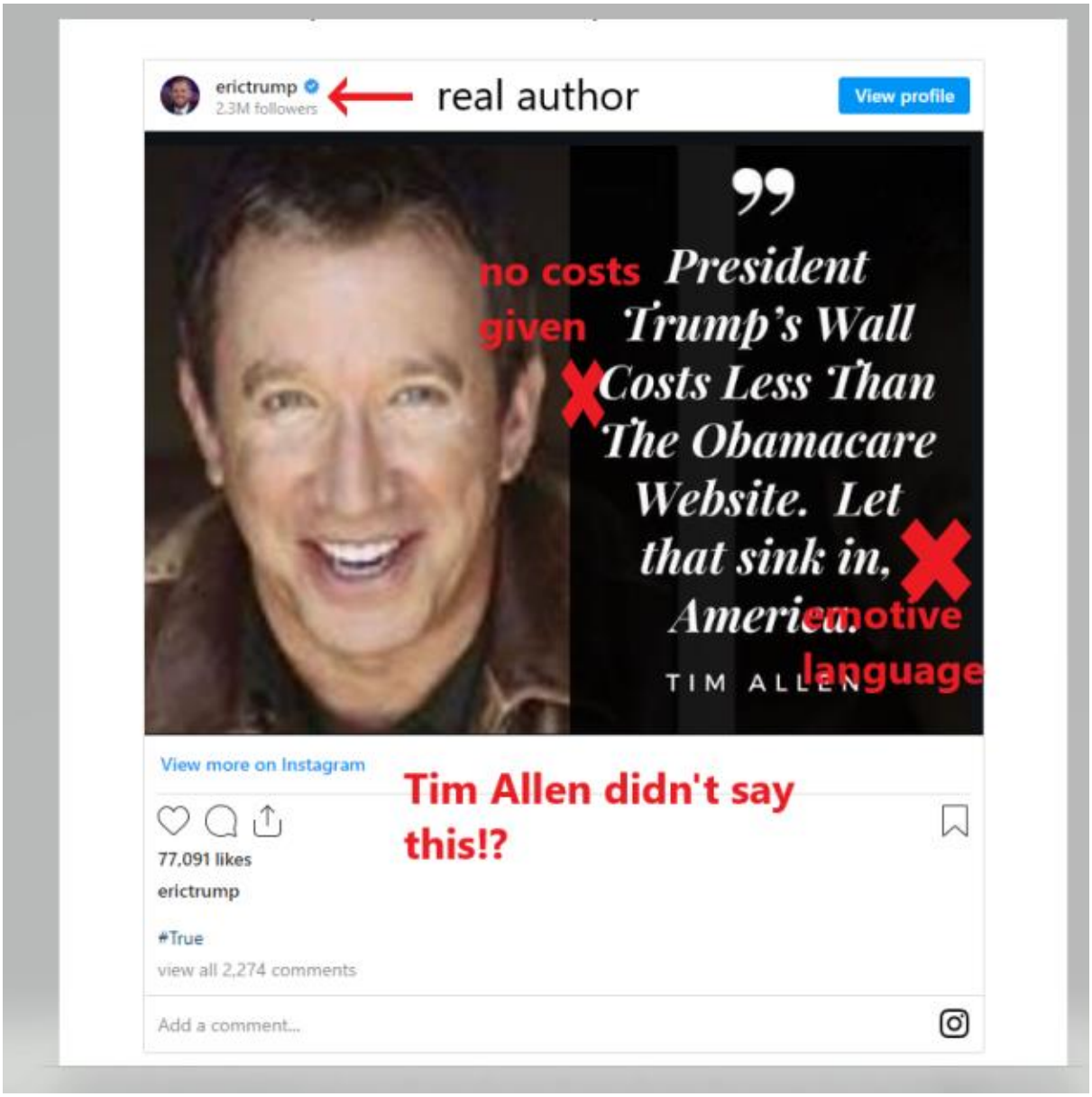
> Having the students produce something (referring to a social media response to fake news) ….is showing their understanding of how to deconstruct media articles in an analytical sense (Tracie, 17th May 2020)

As previously mentioned, allowing the students to produce a response to a fake news story is a benefit because there is potential to share or comment which is fully participating in this form of media (Herrero-Diz et al., 2020). The study's purpose was for EAP students to practice critical media literacy in a real-life setting, similar to the study conducted by Saunders et al. (2017) which examined and critically analysed a misleading advertising message in social media via the Social Networking Site (SNS) Twitter and produce a response, albeit through the teacher's Twitter account. The social media response task needed to be work-shopped with the ELICOS and specialist EAP teachers and even modified for the class-level requirements. It

was identified in the workshops that it needed to be something that visually identifies the critical misleading aspects of the original social media response and speculates on the author's intentions, the criteria of this response activity were to identify the initial social media response as fake news and visually label why it is fake. An example of this task completed by Ivan is displayed in figure (6).

Figure 6

Eric Trump – fake news Twitter post



Also, in accompanying this social media response an oral/visual presentation displaying this social media response was deemed an appropriate display of the newly acquired CML skills by

the students in this study. The presentation outlined the social media responses' key points of misinformation along with the fake news reading checklist as a running sheet to guide the students in points to cover in their presentations. The fake news reading checklist also acted as a presentation evaluation form, in that the audience (students and teacher/researcher) could evaluate the effectiveness of the presentation against the reading checklist sheet.

1.2 Reporting on the second phase findings

In this section, I will report on the CML educational interventions which followed the initial phase which was presented in the previous chapter. The iterations were operationalised in this study as CML education interventions using fake news, and the fake news reading checklist was used multiple times during these sessions. In DBR the design of the tests is not carried out in a linear sequence but rather iteratively, testing, and re-designing gradually evolving in the interventions (Easterday et al., 2014). Borrowing from action research, the DBR iterations were aimed at subsequently improving the ways the particular educational setting operates, their teaching, and their student learning (Creswell & Creswell, 2017).

1.2.1 Purpose of the second phase

The purpose of this phase of the study was to test the educational interventions through iteration cycles and reflections. A strength of DBR as opposed to experimental research testing is that it provides the designer with feedback about the success of the design and the validity of the theoretical propositions. It tells the designer whether the design has achieved its practical and theoretical goals (Easterday et al., 2014). Testing the educational interventions' effectiveness in this part of the study aimed to provide an answer to the study's research question about (RQ4) What specific aspects of critical reading of media texts tasks and social media production tasks lead to effective student work in the classroom.

Intervention 1

What was apparent at the beginning of the focus group discussions was the student's popularity of social media, for which there was a group consensus that they regularly use social media applications.

> All students mentioned social media use on their media devices and this consumed at least 2 to 3 hours of their day on various sites (25th May 2020).

This comment represents a precursor to the appropriateness of the study revolving around analysing fake news on social media. Moreover, it identifies an enabler to students realising the value of CML skills to mastering media literacy skills. The student's unanimity about their reported number of hours in a day on social media reflects other studies' findings which reported similar daily usage amounts of 3 hours a day on social media (Social Buddy, 2020).

Following on from this finding was the establishment of social media being used as a news source. Moreover, it was reported that news posts, articles, headlines etc were mostly viewed on social media sites by the students.

The first lesson began with gauging the students' level of knowledge of what fake news is by directly asking them what fake news is, and if have they seen it on social media.

> All students knew what fake news meant and stated they knew of several recent examples in social media. That is not surprising given their age and digital capabilities which are assumed being international students who regularly communicate with family and friends overseas online and need to navigate the language school's online platform to submit assignments etc. (25th May 2020).

I pressed the students where they have seen it on social media in an attempt to activate schema on the topic of fake news. Schema is activating students' background knowledge to put the potentially new concept being covered in class a context and educators use this to facilitate students in interpreting and connecting new information to their existing knowledge (Cross, 1999). As the concept of fake news might have been new, the students could be taking in new knowledge therefore they would need to connect it to other things that they know or have experienced. Since they have likely seen fake news on social media previously this seemed like a good place to start.

> The students mentioned they have seen fake news on common Chinese social media sites such as Weibo and WeChat in addition to Twitter (25th May 2020).

The comments below from the students in the class indicated that there seemed to be a group consensus that covering the topic of fake news on social media was a worthy use of class time. Moreover, there was a general interest from all students regarding the importance to combat

fake news, as the overarching goal of critical media literacy was to resist and rebut misinformation.

> If we don't check fake news, then fake news wins (Ivan, 25th May 2020)

The students struggled with the notion of what types of people create and/or share fake news, and this required quite a lot of scaffolding to complete the task.

> They appeared to have no difficulty understanding where they have seen fake news on social media, as in the social media applications or websites i.e. Weibo, WeChat, Twitter etc. But they struggled to answer the question of who creates and shares fake news on social media. (25th May 2020)

After further prodding on this question and giving students more time to think about this concept they came up with a few examples.

> People who want to be famous … political (Jess, 25th May 2020)
> Official people or business people (Ivan, 25th May 2020)
> Internet people who want to create problems (Allen, 25th May 2020)

The rationale for pursuing this line of questioning was that before students can become proficient in spotting fake news on social media platforms, first I wanted to build up their knowledge of the types of people who typically start and spread fake news (e.g. politicians, celebrities etc.). I used the BBC video (Spring, 2020) on the seven most common types of people who create and share fake news about COVID to facilitate their prior knowledge on the types of people who typically start and spread fake news. The aim was to provide a starting point to grasp the concept of fake news, and the common types of people who create and share them. To give the students an idea about who is behind misinformation and what motivates them. The purpose was to ascertain students' knowledge and deficiencies of misinformation. The video detailed the seven types of people who start and spread falsehoods: BBC's seven types of people who start and spread fake news (e.g. politician, celebrity, conspiracy theorist, scammer, insider, relative, joker).

> Students predicted some common types of people namely 'famous person' (sic), 'political' (sic), 'official' and 'business person' and could even speculate on their motivations 'people who want to be famous' (Allen). And, this activity provided the

basis for my use to cover more of an in-depth analysis further on in the educational intervention (i.e. fake news reading checklist)

After the students became familiar with the common types of people who start and spread fake news (e.g. politician, celebrity, etc) through the BBC video to further consolidate their understanding of the topic the students were tasked with providing descriptions and examples of these types of people.

Figure 7

Students' classwork sample – common types of people who create and spread fake news

Type	**Students written descriptions**	**Students examples cited**
Politician	the people in charge	Created by USA scientist to kill Asians - by Bill Gates
Celebrity	who has thousands of followers	
conspiracy theorist	people who think that nothing is as it seems. For example that 5G caused Corona virus, Corona virus is not real	Created by USA scientist to kill Asians - by Bill Gates
scammer	looking to make money such as bank account	
insider	professionals -doctor , hospital worker	Doctors told females workers to cut hair to prevent spread of COVID 19
relative	they just wanna spread information just in case'	
joker	who share some funny posts, and people believe that.	Online contact a COVID 19 person you will give you the virus

Google docs classroom activity 25/05/2020

Using extension tasks such as 'students written descriptions' and 'students examples cited' (see Figure 7) was used to further contextualise knowledge around these types of people. Extension tasks in a language learning context can make the learning more meaningful, as they give learners a chance to personalise language and understand the context (Gao & Ma, 2021). Most students engaged very positively in the activity and could generate descriptions and examples which aimed to build their competence in this area. The overarching aim of this activity was to further activate student's schema, in other words, their background knowledge

of this potentially new concept to facilitate students in interpreting and connecting new information to their existing knowledge (Cross, 1999).

> Most students engaged positively in the expansion activity, coming up with clear descriptions of the type of people (insider = professionals – doctors, hospital workers etc) and the recent examples of fake news generated from these perpetrators (doctors told female workers to cut hair to prevent the spread of COVID 19). Also, they offered speculations as to why these people might release such fake stories and the possible motivations behind them. There was also a lively discussion about the bizarre fanciful stories, leading to a great deal of laughter on some of the more ridiculous stories (May 25).

As we progressed through the fake news reading checklist completing the comprehension questions I observed a steady improvement in the student's ability to grasp the concept of fake news, which was not apparent to all the students at first, and to further critically analyse the author's intentions and/or agenda. Introducing and using the vocabulary on 'the seven most common types of people who create and share fake news about COVID' for the extension tasks incorporates Kellner and Share's (2019) CML framework theory of social constructivism first tenet of CML to question (Q1) who are all the possible people who made choices that helped create this text? Also, the question about the author's intentions/agenda incorporates Kellner and Share's (2019) CML framework theory that all media texts have a purpose that is shaped by the creators incorporating the fifth tenet of CML to question (Q5) WHY was this text created and/or shared? The aim was to get the students thinking about author's intention early on in the educational interventions so as to make them more comfortable with this style of critical analysis.

Intervention 2

In keeping with the first element of the inoculation educational principles the students were also explicitly warned that this was a fake news story (Lewandowsky et al., 2017). The purpose was to familiarise the students with what a typical fake news story looks like on social media, the fake news article was purposely chosen as a suitable story to inoculate the students by displaying the typical conventions that author's use in social media, one of which is the language choices in the headline.

In an attempt to highlight the deliberate language used by the author in the Laura Ingraham Fox News fake news story, the intervention began with only showing the students the title of the fake news story only to highlight the specific language used by the author.

> Fake news study sample - Fox News Laura Ingraham "There is no real scientific basis for social distancing"

This activity aimed to build upon what the students already knew about the critical analysis language in media, namely who typically creates and/or spreads fake news and why. This was not overtly explained to the students, rather it was the intention to draw the language choices made in the headline prescribing to educational constructivists principals of showing students an example and seeing if they can notice the didactic intention rather than explicitly labelling the learning intentions. Clements and Battista (1990) argue that student knowledge is actively created not passed down from the teacher. Similarly, Tobias and Duffy (2009) champion Piaget's theory that children acquire concepts by constructing them from the inside not from the outside. The educational invention to eventually foster student's independent CML skills, and constructivism could facilitate this skill development through a constructivists educational principle of inquiry based on teacher facilitation rather than telling students the learning intentions encourages students to become autonomous and self-motivated (Panasuk & Lewis, 2012).

> The question posed to the students was 'What do you think of this title'? was taken directly from the fake news reading checklist. Most students found this aspect of the task very challenging and were unable to produce any real response to the question that provided an analysis of the language used by the author. So, I explained what the wording means 'what grabs your attention' when reading this, for example, the word choice (26th May 2020).

The language used in the fake news reading checklist *What do you think of this title* was too vague, the students did not understand that the activity aimed to analyse the language choices made by the author. Re-phrasing of the question wording was needed to aid these EAP students' comprehension. The fake news reading checklist was edited, namely the wording of the *What do you think of this title?* to *Look at the headline* and followed up with more explicit instructions in the form of follow-up questions *Does the headline use excessive punctuation or capital letters, what grabs your attention?* This was the first version of the fake news reading checklist and it was edited to make further editions based on classroom use and reactions from

the students. This is in keeping with the DBR iteration process according to Bakker and van Eerde (2015) where each iteration stage of DBR allows the researcher to improve the predictive power across subsequent teaching experiments.

> Further scaffolding was needed to effectively analyse the deliberate language choices made in the headline by the author for the students. A more direct line of questioning was used *What do you think of the word choice of no?* This enabled students to understand why the deliberate wording of 'no' was used by the author (26th May 2020).

The scaffolding focused on the author's word choice of 'no', and an extension of this 'no scientific benefit', which represents a leading statement. As Swan (2005) explains a leading statement makes an open-ended or attention-grabbing statement to influence a person to think a certain way or do something. A common use of leading statements in social media is to persuade people of the author's opinion according to Szurawitzki (2012). The students could recognise the deliberate use by the author's usage of the word choice 'no' in the headline to directly influence the readers to think in a certain way.

> The word choice of "no" is wrong, and makes us (referring to readers) think something that is not right, that is false (Allen, 26th May 2020)

Also, the students were able to speculate further on the impact of the leading statement in the context of the COVID-19 pandemic response taken by America, and by extension, the world is that the author's attempt to discredit America's health restrictions on maintaining social distancing. After analysis of the headline, specifically the wording chosen by the author to use 'there is no real scientific basis for social distancing' the students responded;

> This heading is making a statement against science (sic), science has proved social distancing works (Ivan, 26th May 2020)

The next step in analysing the fake news story was to critically analyse the author by (Q2) questioning the publisher/author by utilising study's educational materials the fake news reading checklist. The students were tasked with researching the *FOX News* anchor Laura Anne Ingraham, specifically her credibility. The activity aimed was to analyse another tenet of Kellner and Share's (2019) critical media literacy framework topic about the production and

or institution (s) of a media text of (Q5) why was this text created and/or shared? The attention given to analysing the production and institution has the objective to instil critical analysis of the creators and/systems in which they operate, that all media texts have a purpose according to Kellner and Share (2019).

Figure 8

Fox News –the 'experts' strike again

The preliminary line of questioning in the fake news reading checklist to (Q2) Question the author was designed in the prototyping phase of the research design, to prepare students for further examination of the creators and/systems in which they operate. What was found once this question was trailed in class is that, it was anticipated that further guiding questions and follow-up questions were going to be needed to scaffold this CML sub-theme such as (Q2.1) doing a Google search, who are they? Are they a credible source?

The students directly answered this question of who are they with basic information such as 'she is a woman' and 'her middle name is Anne' (Jess, 26th May 2020). The teacher/researcher's follow up question of 'What is her job?' was able to focus their attention more on exploring the credibility of her initial claims mentioned in the headline that 'There is no real scientific basis for social distancing'. This was branched out to include Q2.2 Are they a credible source? This focused line of questioning allowed the students to evaluate the TV promoter Laura Ingraham's credibility in making a health / scientific claim.

> She is a TV presenter talking about the scientific effect…effectiveness of social distancing as is he/she a teacher (referring to a professional or knowledgeable person) (Ray, 26th May 2020).

The deduction that she is a TV presenter, not a scientist or a health official allowed the students to categorise her as a non-authoritative figure and as a result making an unfounded claim.

> She is not official, she is not an expert (Lucas, 26th May 2020)

The correct identification and subsequent realisation of misinformation in Ingraham's message after a carefully sequenced educational intervention are similar to Saunders' et al. (2017) findings. Whereby, the students (in the Saunders' study) could similarly correctly identify the Twitter company seeking to advertise to the youth market whilst pretending to be a genuine influencer. In the student's research they also discovered the truthfulness of the broadcasting corporation Fox News.

> Fox News makes a lot of fake news (Ray, 26th May 2020)

As discussed in the pre-invention workshops it was desirable that students discover that Fox News is a questionable news company themselves, and can find this out through their research representing a successful application of the inoculation educational theory. The aim of that exercise in researching the publisher of the news story facilitates CML knowledge in familiarising the EAP students with those who generally create fake news stories. The goal was to question production and or institution which related the fake news story and to familiarise students with common fake news producers such as Fox News. Fulling Kellner and Share's (2019) critical media literacy framework aspect of identifying the production and or institution (s) the creators and/systems in which they operate. And, also fulfilling the criteria of the inoculation programmes including the first element of an easily recognisable fake news source, in the form of Fox News, to expose students to in order be able to recognise similar news sources in the future (Lewandowsky et al., 2017)

The next part of the fake news reading checklist activity involved searching for (Q2.2) What claims does the author make? and (Q2.3) What evidence does the author use? (see fake news reading checklist). As previously mentioned the fake news story was taken from the news website PolitiFact, in the original edited form with clearly identified and labelled sections indicating to readers the false claims this version was not used in class. The reason being, in keeping with the lesson's aim of being constructivist allowing students to construct knowledge themselves rather than passively be taught the students were exposed to the raw fake news story in video format before being shown the PolitiFact version.

> The students struggled to find the answers to the questions with only viewing/listening to the video form of the news story, so I gave them the audio transcript. This allowed the students to isolate sections of the news broadcast that they needed to complete the task. (26th May 2020)

In response to the fake news reading checklists question (Q2.2) What claims does the author make? the students could find in the transcript the claims that the TV presenter made.

> Not necessary (in response to social distancing) (Lucas, 26th May 2020)
>
> The Europe affected case keep growing up after lockdown (sic) (Jess, 26th May 2020)

The students were able to examine the arguments made by the presenter Laura Ingraham claiming social distancing was not effective in controlling the outbreak of COVID-19, and the claim that lockdowns in Western Europe didn't slow down the infection rate.

In response to the fake news reading checklists question (Q2.3) of what evidence does the author use? The students could find the evidence that the TV presenter gave.

> European proof (Allen, 26th May 2020)
>
> University biology (sic) Michael Levitt calling European lockdown a mistake (Jess, 26th May 2020)

Overall, the students were able to find the so-called evidence offered by Laura Ingraham claiming lockdowns were ineffective in controlling the outbreak of COVID-19 in Western Europe.

In response to **Q2.4 What language (words, phrases, images, symbols) does the author use to persuade the audience?** the students somewhat struggled with finding examples in response to this question and needed some scaffolding. After showing the students some examples of persuasive language the students could complete the task more effectively. In answering this question on the reading checklist, the activity aimed to apply critical reading proficiency which as Rubin (1982) states critical reading requires the reader to be able to differentiate between fact and opinion. The following were excerpts of pervasive language (words and phrases) used by Laura Ingraham taken from the news video; which the students could find.

Table 6

Pervasive language in the Fox News video

I think it	probably seemed
would be necessary	we hope
we find no evidence	we provide estimates might not have saved lives

Note. Pervasive language used by Laura Ingraham in Fox News video - No scientific basis to social distancing

And following on from analysing the persuasive language used in the fake news story the next question on the fake news reading checklist asks (Q2.5) How does the news language indicate the author's perspective? The activity aimed to evaluate the ideas presented by authors of texts which is a crucial aspect of critical reading according to Surjosuseno and Watts (1999). The following were excerpts of pervasive language used by Laura Ingraham (see Table 6) taken from the news video; the students speculated on the author's purpose for using these certain pervasive words and phrases. Critical literacy, as Fajardo (2015) argues involves examining various persuasive techniques such as undermining opposing views, using hyperbole, anecdote and exaggeration for emphasis. The use of these language techniques were analysed in the Fox News story as follows;

Laura Ingraham's claim and the language used '*Social distancing has never been studied'* allowed the students to speculate that the author was questioning the rationale of social distancing due to the claimed lack of research conducted. In class we discussed how this is an example of hyperbole, for example, social distancing might not have been studied before which is an exaggeration.

Another excerpt that was analysed in class was the language used by Laura Ingraham in relation to social distancing was '*An infectious disease doc told me last week trying to stop this virus with social distancing is like trying to drive a nail through jello*'. The students could speculate that making light of the situation indicated that the author's perspective is that social distancing is futile. Adding the over simplistic nature of the comparison was aimed a downplaying the social distancing countermeasure. Firstly, the anecdotal evidence used *An infectious disease doc told me last week,* the class examined that this form of persuasive technique uses evidence in the form of stories that people tell about what has happened to them. The use of an anecdotal story language feature was identified in the example of *social distancing is like trying to drive a nail through jello* displaying characteristics of hyperbole because it is an extravagant

exaggeration. This example was determined by the students to be used to undermine America's social distancing rules.

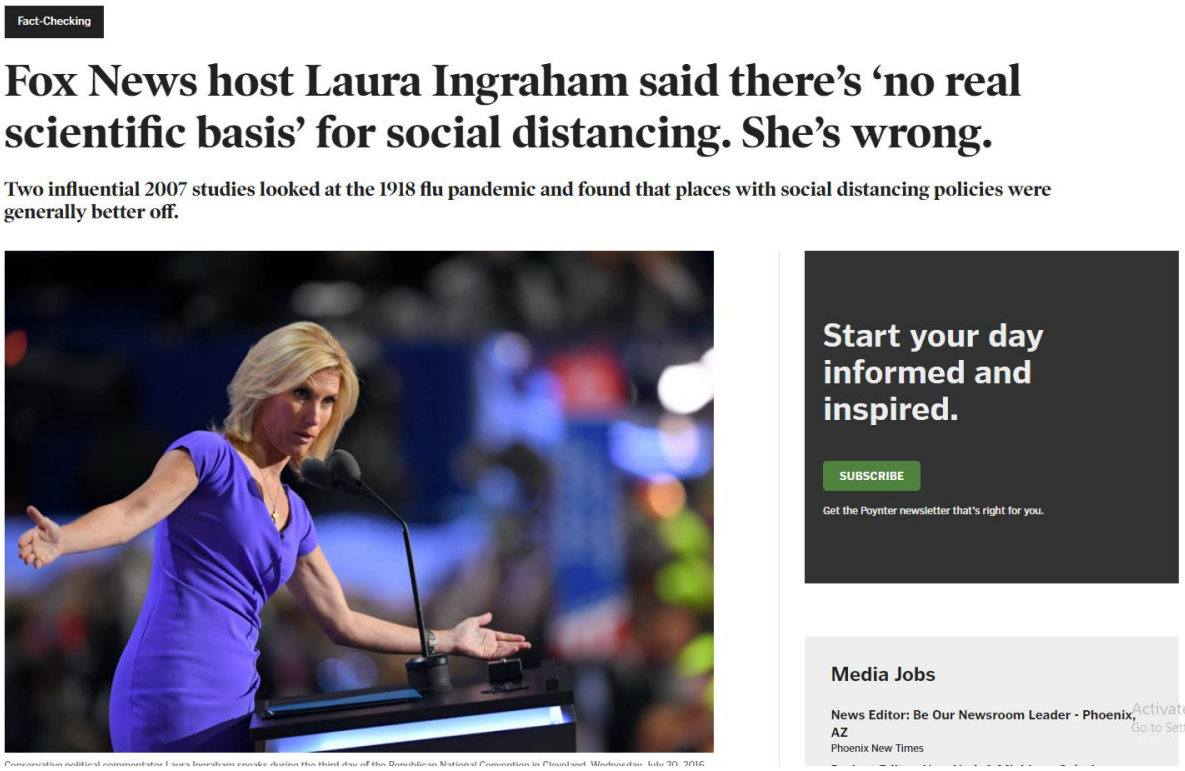
The aim of the fake news reading checklist question (Q2.4) What language (words, phrases, images, symbols) does the author use to persuade the audience? and subsequent activity was used to examine the author's attempt to persuade readers. This question's wording was adapted from Kellner and Share's (2019) Q2 How was this text constructed and delivered/accessed**?** The wording and activity also fulfilled the curriculum aim to **'**Understand how authors often innovate on text structures and play with language features to achieve particular aesthetic, humorous and persuasive purposes and effects' (ACELA1518).

Intervention 3

This intervention began with the class answering the next question in the fake news reading checklist **Q3. What do other news sources say about this story?** This question was also adapted from Kellner and Share's (2019) CML framework, namely **Q3 How could this text be understood differently?** This activity was aimed at firstly verifying the inaccuracies in the news stories, giving proof that it is indeed fake news. As previously mentioned, the learning pedagogy applied in this educational intervention was constructivist, therefore the students were not shown the PolitiFact article which completely detailed the false claims made in the Fox News article. Whereas, the students themselves had to independently verify the accuracy of the claims that Laura Ingraham made, one way to do this was to do a Google search of the news story's title.

> The students could find numerous news articles refuting Laura Ingraham's claims that social distancing is ineffective ranging from historical accounts of social distancing in previous pandemics (see Figure 9) to places elsewhere in the world recording reduced infection rates as a result of implementing social distancing restrictions (27th May 2020).

Figure 9 *Poynter critique of Fox News host claims 'no real scientific basis' to social distancing. She's wrong.*



Searching the same news story from other sites was effective – students could find different perspectives on the story that refuted and provided a rebuttal to Ingraham's arguments (27th May 2020)

The students were able to find multiple news articles online that presented counter-arguments to Ingraham's claim that there was no scientific basis for social distancing such as;

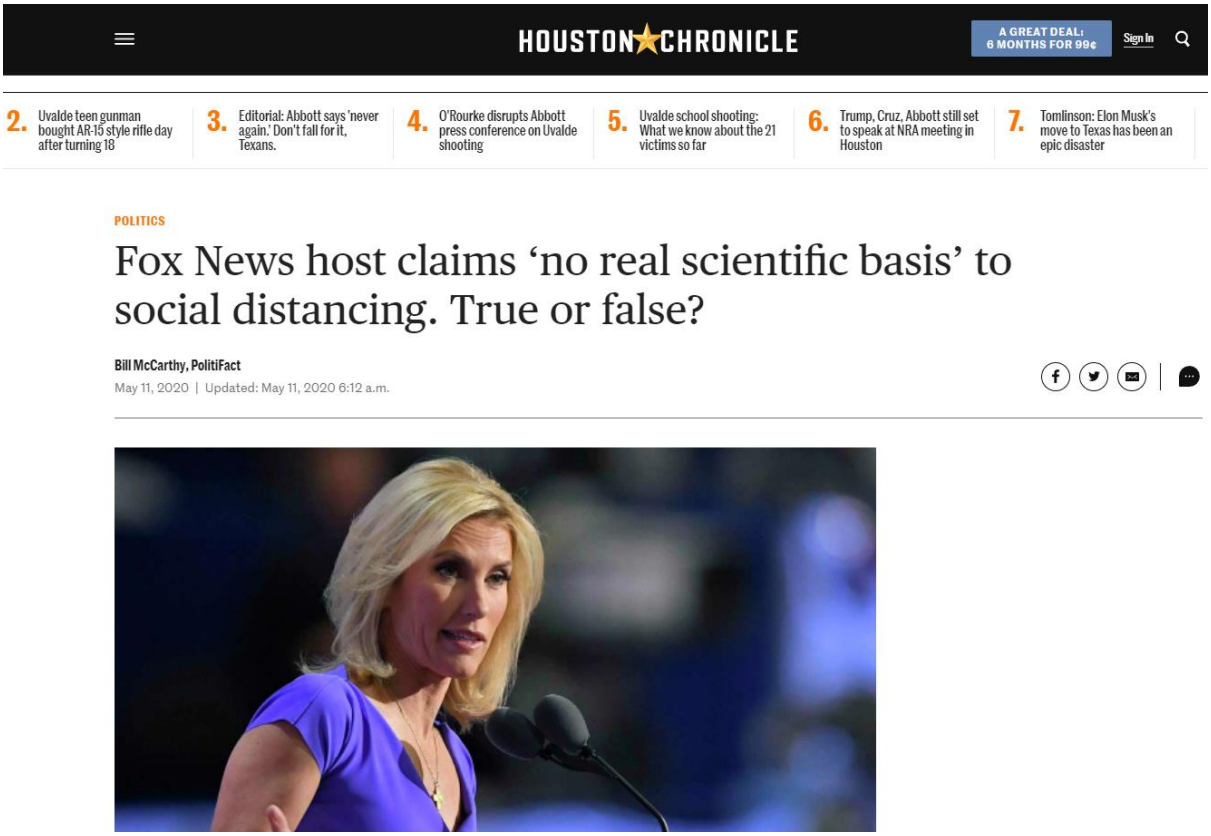
'There's plenty of science behind social distancing. The coronavirus is believed to spread mainly among people in close contact from' taken from the article *Fox News*

host claims 'no real scientific basis' to social distancing. True or false? Houston Chronicle (see Figure 10) found by Jess (27th May 2020)

'Two influential 2007 studies looked at the 1918 influenza pandemic and found that places with layered and sustained social distancing policies were generally better off' taken from the article *Fox News host Laura Ingraham said there's 'no real scientific basis' for social distancing. She's wrong.* Poynter (2020) found by Ivan (27th May 2020)

The purpose of critiquing Laura Ingraham's claims in class was to complete the second aspect of an inoculation programme which is according to Lewandowsky et al. (2017) is to provide a refutation of the analysed argument. The objective of this refutation process is to expose and counter the imminent fallacy (Cook et al., 2017). This education inoculation activity aimed to explicitly rebut false claims made by the author, instilling a method of response to fake news and giving them the tools to in effect protect themselves against being misled by it in the future.

Figure 10 *Houston Chronical critique of Fox News host claims 'no real scientific basis' to social distancing. True or false?*



Only authentic texts were chosen, i.e. from news websites, for class examination not texts from fact-checking websites (PolitiFact.com, AAP FactCheck, Full Fact etc). The rationale for avoiding these useful and effective fact-checking websites prescribes to Khan and Idris' (2019) argument that the goal of media-literate individuals is to make informed decisions on the authenticity of news on social media platforms themselves rather than relying on websites to correct the misinformation, that is a higher form of media literacy.

Next, the class focused on the topic of struggle in society displayed in social media through the study's research question of (Q4) who do you think is advantaged and disadvantaged? According to Kellner and Share (2019, p.19) 'Media culture is a terrain of struggle that perpetuates or challenges positive and/or negative ideas about people, groups, and issues; it is never value-neutral.' In addition to CML skills adapted from Kellner and Share, this question explores 'reasons to support their thinking, and address opposing viewpoints and possible weaknesses in their own positions' ACARA (2014).

Initially, the students struggled to identify who was advantaged and disadvantaged by this fake news story and needed educational scaffolding. For example, explorative questioning of 'Why do you think she said she's against social distancing', 'Why would

someone be against that? Who does social distancing disadvantage? This constructed a conservative big business rhetoric against social distancing interruption to business that Fox News promotes big business interests against social distancing from an economic rationale (27th May 2020).

> Restaurants, owned by businessman rich guy… because they want money to customers to return (Jess, 27th May 2020)
>
> It is the employee or staff that maybe is disadvantage, because they are there (referring to working in a hospitality sector) who could get sick or die (Allen, 27th May 2020)

Table 7

Advantage	Disadvantage
Restaurant Club / Bar owners - money, customers to return	Manager - employees
Business owners	people going back to work

The students could speculate on who is advantaged/advantaged from the creation of this fake news story. This allowed further speculation using the fake news reading checklist question (Q5) Why do you think this person created or shared this fake news story? What values, ideas or messages are they trying to spread? The students speculated on the American political landscape present in the article, that there is a conservative big business rhetoric influenced by the Republican political party interests. Further speculating, this discourse is against social distancing aimed at minimising the government interference with business, namely in this case government from health officials. The students could summarise an advantage/disadvantage divide between owner/worker. With the owner's interest in maintaining revenue, speculating that businesses perhaps big business interests are represented in the Fox News story, and hospitability workers who are in the absence of social distancing rules faced with a greater risk of being exposed to COVID-19.

Finally, the educational intervention ended with completing the analysis of the Fox News story with answering the question from the fake news reading checklist (Q6) What type of person created or shared this fake news story? This question was aimed at consolidating knowledge and understanding from the introductory lesson, familiarising students with the seven most common people who are likely to create and share fake news on social media. Another aim of

this question, which follows the previous question further contextualises the type of person who created and shared fake news stories in sequential order. It is not adapted from Kellner and Share's (2019) framework, rather it was used to consolidate the early stages of the educational intervention's lesson aim of analysing what type of people create and share fake news on social media.

Table 8

Type	Tick box	Why
Politician	✓	Conservative – republican some political message
Celebrity	✓	Fox New news reporter, TV host
Conspiracy theorist		
Scammer		
Insider		
Relative		
Joker		

The students could complete the activity either ticking the politician or celebrity column, or both, and in this case, either could be accurate with Laura Ingraham seemingly occupying both types in the media (see Table 8). The 'why' column allowed the students to consolidate their understanding of the author's intentions and speculate more deeply on what type of person created this fake news story (27th May 2020).

An informal discussion with Tracie discussing her observations of the Fox News fake news story intervention were;

> This was an easy example to give the students because it is blatant and easy to deconstruct. It is easy for the students to take a position (for example in favour of social distancing as a preventative measure against spreading COVID-19). Also, it is clear who is advantaged/disadvantaged because it is clear that there is a power divide between the people who are advantaged (big business, business owners) and disadvantaged (employees, who are being exposed to the pandemic). (27th May 2020)

Intervention 4 + 5

In this part of the CML fake news educational intervention, the students were tasked with finding and analysing a fake news post on social media and presenting their findings in class. The students were instructed to find an original fake news post (not a fact checking website as previously mentioned) on a social media platform of their choice, analyse it using the fake news reading checklist, produce a response and construct a presentation on their findings.

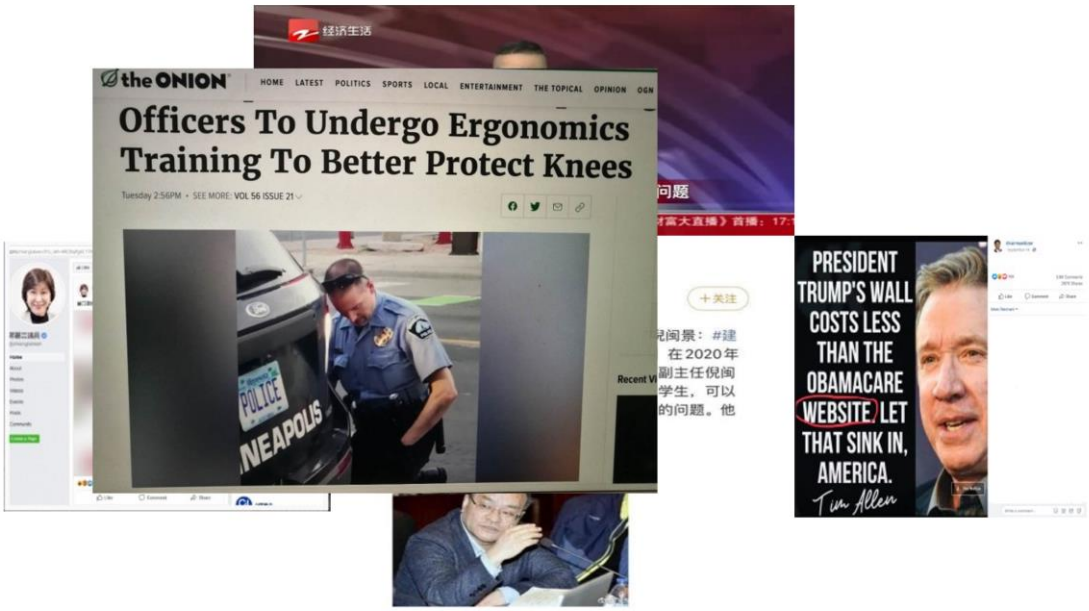
> The students were positively engaged in this task, with visible confidence in their newly acquired CML skills gained from the scaffolded inoculation. It required little to no effort required from the teacher/researcher to aid them in their research and subsequent selection of actual fake news posts (28th May 2020).

However, the students reported that they were fairly inexperienced with independent student-led tasks which required them to research using such academic skills namely; evaluating information, and communicating and sharing information. At first, most of the students seemed somewhat surprised at the independent nature of the task, although this did not affect the task completion.

The students found the following examples of fake news in social media;

1. A hoax that a Government affiliated Chinese medical firm found a cure for COVID 19
2. A Hong Kong senator claims that disposable face masks can be re-used if you steam them
3. A private university in China claims that Chinese students abroad are not safe
4. A false claim that Tim Allen made a statement about the cost of Trump's wall

5. Satirical news article on police violence, even though this is not technically fake news literature argues fake news can be generated from these news sources being passed off as real news



Most of the students could find an example of fake news posted on social media and could complete the fake news reading checklist correctly identifying the false claims and conventions used to present the misinformation. This finding provides a definitive answer to the study's research question (RQ5) Does fake news media education activities enable students' critical understanding and production of media practices? The students were engaged in the task, which was seen through their enthusiasm in presenting their fake news story dissection in class which was met with a great deal of interest and laughter at the absurdities of the various false claims. Three out of the five students chose a fake news story from non-English social media sites such as Weibo, WeChat and Facebook in Hong Kong. The students displayed the full use of the translanaguaging student selection option, to not only choose from a social media site not in English but also explain the keywords or phrases used in these stories to allow them to explain to the audience in more depth and to aide in fully understanding the context in which the language was used (June 1, 2020). The student's usage and preference to use Languages Other Than English (LOTE), and reported depth in added highlights the benefits of translanguaging which provides an answer to the study's research question (RQ4) What specific aspects of critical reading of media texts tasks and social media production tasks lead to effective student work?

4.3. Phase 3 student reflection

4.3.1. Student focus group

The student focus group session was conducted after the educational interventions were completed, to fulfil an exit interview sort of data collection post-educational intervention. More specifically, the purpose of this focus group was to enquire about the effectiveness of the educational program from the student's perspective, which McIntyre-Mills et al. (2011) state focus groups are well suited for. The in-tact class consisting of five students attended the focus group, these participants were all given the same fake news educational intervention and tasked with the same CML fake news tasks. As a result of receiving the same educational instructions, as a result it was anticipated the student interviewees would likely see themselves as being placed in a similar position and cooperate with others in the focus group. Cooperation among the participants was an important factor in selecting data collection methods because as Creswell (2019) states focus groups are useful for collecting information on individuals who might be hesitant to provide information. This data collection method was useful because it was anticipated that the student participants might be reluctant to critique the classroom materials used in the educational intervention.

The study utilised guiding questions to give the teacher/researcher a chance to lead the discussion in the focus group towards the study's themes, and these questions produced the following responses;

Do you feel fake news is relevant in your life?

> I read a lot of fake news and is interesting to find out more about fake news…who creates it and its benefits. So, its important to me (Ivan, 1st June 2020)
>
> Yes - because I'm always checking the news – especially about celebrities. (Allen, 1st June 2020)
>
> There is a lot of fake health news, to do with health diets (Jess, 1st June 2020)

All the students recognised the importance of fake news in their lives, saying they have been exposed to it regularly and find it interesting. Furthermore, the comment from Allen about celebrities and Jess about healthy diets pinpoints this exact relevance in their lives. These comments also reflect the student's engagement in the topic, being able to apply the topic of

fake news to part of their lives arguably gives it more of a purpose to study in formal education. The wording of the question was aimed at gauging the students' interest in fake news and exploring why it is relevant. The question was conceived by Ranieri and Fabbro (2016), and Locke and Cleary (2011) claim that student engagement in CML tasks comes from selecting a text that has relevance to the student's lives.

Do you like covering CML in class?

> It's important… because some people don't have critical thinking…and some people really believe the fake news. My example I found is surprising because so many people thought it was true (referring to people in Hong Kong believing that you can just steam disposable face masks to re-use) (Jess, 1st June 2020)
>
> No - because I know when its fake news, I can clearly spot them so this topic is only a bit important to me (Lucas, 1st June 2020)
>
> If the teacher doesn't cover fake news in class, then the fake news author wins (Ivan, 1st June 2020)

Most students stated they felt it was important to analyse fake news in a formal education setting. These student sentiments challenge Weller's (2016) claim we are in an age of 'unenlightenment' where the youth have a lack of desire for knowledge, and Spelic's (2018) argument that young learners are 'incurious' about checking the authenticity of the news.

The students did not directly state that they were confident or not in spotting fake news, which was a key finding of Notley's (et al., 2017) study of Australians aged 16-20, however, Ivan's comment 'If the teacher doesn't cover fake news in class, then the fake news author wins' seems to highlight the importance of conducting educational interventions on the topic of fake news to combat this social phenomenon.

What do you guys think of the fake news reading checklist?

The students were hesitant to comment on the fake news reading checklist, perhaps because any negative comments made would be interpreted as a criticism of the course. The line of questioning needed be to specified to isolate aspects of the fake news checklist to obtain the desired results for the study. For example, what did you think of this question, and was this easy to understand? Still, there was not much offered by the students, apart from the editions to this checklist that were made during the classes by the teacher in terms of scaffolding based on the students' reactions to completing this task. However, one student (Jess) provided some useful feedback in terms of reading checklist design, suggesting the following;

> Add a description of the types of people who create and spread this fake news (politicians, scammers etc) for our (referring to students) comprehension. (Jess, 1st June 2020)

This comment was taken into consideration, and included in the table format Q6. What type of person created or shared this fake news story? to aid to the student's comprehension.

What aspects of the program did you feel make understanding this topic easier?

First off, the students expressed their appreciation for being allowed the freedom to select a fake news story by themselves. This finding similarly reflects Ranieri and Fabbro's (2016) and Locke and Cleary's (2011) findings of increased student engagement in CL tasks if students are allowed to select the specific topic of analysis.

In more specific terms responding to the study's research question **RQ4. What specific aspects of critical reading of media texts tasks and social media production tasks lead to effective student work?**

> The straight lessons helped me in understanding this class…..its not always easy following these tough topics (referring to critical media literacy) (Allen, 1st June 2020)

When asked to elaborate, Allen's comment did not address the fake news reading checklist per se, it was more a comment about the explicit instruction and scaffolding that attributed to his comprehension of this form of literacy. He commented that the educational intervention helped him understand critical media literacy in more depth seemingly providing an affirmative answer to the study's research question (RQ5) Do fake news media education activities enable students' critical understanding and production of media practices?

> In tests (referring to IELTS tests) there are critical thinking tasks. But, it's only a bit in reading and perhaps writing. But then nothing else in school, I liked the extra classes to help this (Jess, 1st June 2020).

The divide between test preparation and covering critical literacy in the syllabus is evident in Jess's comments. And, there is an argument that her comment suggests that these two competing class activities do not need to compete with each other, rather than critical literacy covered in the CML educational intervention could aid in recognising fake news and the critical literacy skills could also be used for English proficiency test critical content.

How has your culture or country been portrayed in fake news stories?

The students did not offer much of a response to this question in the focus group, perhaps because due to the discomfort of discussing such a personally confronting topic of conversation. Similarly, in Raneri and Fabbro's (2016) study the majority of students were not used to talking about discrimination in school. The focus group dynamic of the line of questioning not being directed at any one person individually was perhaps advantageous.

Being a predominantly Chinese mainland student demographic, I chose to discuss Lucas' fake news story about the hoax that a government affiliated Chinese medical firm found a cure to COVID-19. Specifically, how the students perceived their culture and country's representation. All students conceded the misinformation in this claim and labelled it incorrect government information. However, the students were alarmed at the anti-China sentiment on social media following the COVID-19 outbreak. Commenting that fake news on social media was fuelling this negative image of their country. This admission from the group was likely due to their cooperation being the same or similar country of origin and the cooperative nature of the focus group environment. As mentioned in the introduction, Creswell (2019) argued that focus groups are useful for collecting information about individuals who are hesitant to provide information.

4.3.2. Program reflections – the practice architectures themes that emerged from educational interventions

4.3.3. Sayings

This section will discuss the themes that emerged through the theoretical lens of Practice Architectures sayings. The sayings are the language used by the participants and the ideas, they discussed at the research site. This educational intervention addressed critical pedagogy and metalanguage challenges, it also encouraged higher-order thinking skills; understanding, applying, analysing, evaluating and creating. The 'sayings' expressed by Tracie and I demonstrated perceived advantages to our teaching and professional learning practices. We noted that CML strategies: added to the student's university critical pedagogy preparedness; enriched the ELICOS syllabus with CL components; required ongoing scaffolding for the student's comprehension; could easily allow students' CML understanding and skills to be demonstrated (presentation of fake news response); and could provide ELICOS teachers with a potential range of instructions and assessment.

The students expressed mostly excitement for being involved in the educational interventions and focus group sessions, with very little reluctance to take valuable lesson time away from English proficiency test preparation. This was due to as previously mentioned the nature of the class as an EAP class where the focus is passing the English proficiency test requirements for their future university course (s). They developed key vocabulary associated with people who typically create and share fakes news such as (scammer, relative, joker etc), an understanding of semiotics in fake news posts analysing the fake news stories i.e. the Fox News example developed skills to critically analyse independently sourced information to determine bias and reliability in their own sourced fake news posts, applied critical thinking to consider alternative perspectives, analysis of opposing viewpoints and displayed multimodal skills in creating a social media response. Students indicated that the CML educational intervention had a positive impact on their learning because: they commented they were able to improve their critical media literacy skills; they enjoyed analysing absurd and ridiculous fake news posts; and they helped combat this spread of misinformation by producing a social media response.

4.3.4. Doings

The doings which captured the physical activities and work, which practice architectures academics (Kemmis & Grootenboer, 2008; Schatzki, 1996, 2002, 2016) refer to as psychomotor themes will be discussed in this section. Through informal feedback sessions with students and workshops with Tracie and short discussions with Jenny, the fake news checklist was developed and refined adding to this educational tool's development. Such themes that emerged were the versatility of the CML educational activities; how the fake news reading checklist could be used as a form of fake news analysis as a class, independent fake news analysis; and as a product evaluation tool for student presentations for a fake news social media response. The process involved rewording difficult phrases, deleting superfluous content and adding content such as sub-questions to help scaffold the task for the students.

The focus group interview and informal feedback sessions with the students revealed both a desire and reluctance to cover fake news and ways to identify it in class. The initial hesitance came from their own goal to prepare for English proficiency tests required for entering their

ongoing tertiary education institutions. The reluctance came from students feeling that the fake news analysis was non-related to the usual curriculum activities, and they did not see the intrinsic benefit to possessing CML skills or that CL would likely be an important aspect of their future university studies. In addition to meeting their study targets, their educational history background also attributed to this hesitancy, alluding to the point that they have not previously covered this type of pedagogy in an educational setting. They held certain expectations of what an EAP course should entail, namely preparing and ultimately achieving a desirable score on English proficiency tests and taking time away from this goal was seen as a distraction.

4.3.5. Relatings

Tracie was willing and enthusiastic to provide her vast teaching wisdom gathered from being a senior ELICOS teacher and high school teacher of 14 years. Although she played a pivotal role in the study through interviews and workshops, she was unable to implement a similar fake news critical media literacy style educational intervention in her class despite her aforementioned enthusiasm in the field of critical literacy. Her class is slightly different to an EAP course which prepares students for university entry, the pathway course prepares students planning to go into Australian Secondary schools (Burns, 2014), and as such were subject to different more standardised ongoing educational institute requirements which meant even less time being devoted to teacher supplemented material. Her class required stricter compliance with the high school curriculum; therefore, her syllabus could not allow for lengthy inclusions such as the CML educational intervention in my class.

> The national curriculum for public high schools is all about pilling and pushing as much knowledge as you cram into a semester….ummm school year. It's awful……so that doesn't leave much room for supplementary material from the teacher (Tracie, 3rd June 2020).

However, this did not detract from her involvement in the study and her involvement in being a sounding board and critical friend to the educational intervention in my class. Despite the challenging teaching schedules and ongoing educational institution requirements (high school and university), Tracie was keen to be involved in developing and designing the critical media literacy program in my class. Along with Tracie, the academic manager Jenny (who had 8 years of experience teaching the EAP program) was also willing to be consulted and supportive

of the educational intervention and could see the utility of critical media literacy in the student's educational future. The principal could also see the educational worth of preparing Australian university bound students for critical pedagogy. She was well informed of common Australian university requirements for this form of critical instruction and expectations for students to develop their critical literacy.

In creating a more critical thinking approach to analysis in the classroom, the students who did not have a critical pedagogical educational background such as Allen and Ray became more amenable to critical pedagogy and this style of media dissection. The students became less risk-aversive and were able to hone their higher-order thinking skills associated with CML such as identifying assumptions, detecting bias etc. Among these students there was an observable improvement in confidence in critical media literacy activities, adding to their competence in this field of learning.

4.3.6. Summary

In this chapter I have outlined the findings of the Design-based research educational intervention and referred to the theoretical lens of practice architectures as the framework for reporting, discussing and analysing the collected data. This chapter has reported on the data collected, and categorised it using Reeves' (2006) three phases DBR research model; the initial phase; educational interventions and the reflection phase.

I have explained how the data was collected in the form of the framework practice architectures 'sayings', 'doings', and 'relatings', and used in this structure for reporting the information gathering and classroom implementation of CML to learning and teaching. These analytical constructs were used to explain the aspects which operate within the practices at the research site.

The student focus group interviews used guiding questions to control the direction of the discussion, this allowed a thematic analysis of the student data to identify patterns and themes to develop interpretations of the data. A pattern that emerged from the focus group findings was that all the students reported their exposure to fake news on social media which was expected. Another pattern was that because of their repeated exposure to fake news on social media, they recognised the necessity to better understand this social phenomenon. An

interpretation from the focus group data was that the students recognised the importance of fake news in their lives because they all said they had been exposed to it regularly and found it interesting.

CHAPTER 5: DISCUSSION

5.1. Introduction

This chapter will discuss the major themes which emerged during the study. I will discuss the implications of the findings from the research and how this could potentially impact students in other educational sectors apart from EAP. Furthermore, what do these findings mean for the teaching of CML in a broader sense?

5.2. Inhibitors

5.2.1. Unfamiliarity with critical media literacy

Tracie's unfamiliarity with the term critical media literacy was not a hinderance to her understanding of this form of literacy and evidence of her using it in her own lessons does not represent an inhibitor for teachers in general using CML in class. In other words, unfamiliarity with the term critical media literacy did not constitute an inhibitor to her understanding and applying this form of literacy. Like in Tracie's case, her unfamiliarity did not represent a lack of knowledge about the topic or relevant critical literacy teaching/learning theories that were pertinent to CML Therefore, an argument could be made that other teachers would also be similarly placed. In the initial teacher interview, she was able to connect it immediately to educational pedagogy that uses critical thinking, which reflects Kellner and Share's (2019) claim that CML is based on critical thinking foundations; such as teaching students to question the authors of the text, speculate power structures such as politics of representation and societal injustices for example who is advantaged and disadvantaged.

The term's knowledge among educators is perhaps not an issue for teachers incorporating this form of pedagogy in their classes. That perhaps other educators could easily connect this potentially unknown wording of literacy to their pre-existing critical literacies. When Tracie divulged what she did in terms of CML in her class it included critically analysing media texts (magazine covers, movie posters etc), meaning that she views critical media literacy as a critical or more advanced form of media studies. This delineation of the terms reflects what some scholars namely Ashley (2015) and Dyson (1998) have argued is simply a matter of semantics that the term critical media literacy is unnecessary and that just media literacy is sufficient.

Regardless of the knowledge of the terminology the study found evidence that critical media literacy was being adopted and used in classrooms, Tracie had no shortage of teaching materials (she developed) necessary to help her students critically analyse media texts. This is contrary to Notley's et al. (2017) study finding that most Australian high school teachers (78%) in Australia cited they do not have enough teaching materials to attempt CML tasks, which was why only (24%) surveyed have critically analysed news stories in classroom activities. It would be interesting to conduct more teacher interviews in Australia to see where they are situated in their CML preparedness and make a more comprehensive comparison if knowledge of this term does or does affect its actual use in the classroom.

5.2.2. Lack of teaching materials

Critical media literacy is still considered to be a relatively new pedagogy according to Kellner and Share (2015), and as Kek and Huijser (2011) suggest a possible explanation for why it is not more widely utilised in education is that it is not a well-known teaching method one with established principles, texts or well-known teaching methods. This was displayed in the study's findings with Tracie having to rely on using her materials, which could be due to a lack of CML materials available. This finding resonates with the teachers participating in Notley's et al. (2017) study who reported they needed more support and resources to teach CML.

It was evident to see there was a lack of teaching materials at the commencement of this study. As a result, this formed the research problem of the study as the need for empirically tested CML classroom content from teachers formed the rationale for this study. This lack of teaching materials was fully realised in the initial phase when planning materials for the educational interventions occurred. What was clear from the pre-intervention workshops was the amount of reformulation necessary to transform the CML framework into something that could be used in the classroom, except for the BBC video and the Fox New story from the Politifact website. However, it was important to note that these educational sources were not exactly ready to use in classrooms and fully comprehensible for EAL/D students. These resources however do reflect Kellner and Share's (2015) assertion that critical media pedagogy is in its infancy, and this field of education is starting to produce results. The BBC video, Fox News story from the Politifact website and the fake news reading checklist from the CML framework all required varying levels of revisions made by myself taking on the teacher/researcher role, input from

Tracie and classroom feedback from the students. The rare materials that were available were somewhat limited, and certainly, there was a lack of teaching materials available to expand or extend this topic into a series of lessons.

The conclusions that could be gained from both Tracie and my need to construct and specifically tailor CML material fit for my class re-iterates the lack of CML teaching materials available. An argument could be drawn from this that there is indeed a need for CML classroom material needed, reflecting Notley's et al. (2017) study finding that most teachers (78%) in Australia cited they need more support and resources. Specifically needing more media educational materials specifically CML content to 'guide staff/students through the process', including web links, photocopiable sheets and 'age appropriate' resources would help them guide students according to Notley (et al., 2017 p.6) survey findings. And, this was the main contributing factor why so few Australian high school teachers (24%) surveyed have critically analysed news stories in classroom activities. This lack of CML teaching materials subsequently represents an inhibitor to students receiving quality critical media lessons, moreover the deficit of materials specifically tailored to the EAL/D students' segment. It was an objective of this study to directly respond to this educational deficit and produce empirically tested fake news CML content ready for use by teachers. However, going forward for students, and perhaps moreover EAL/D and/or EAP students, there is a significant need to generate teaching materials to effectively hone this form of literacy in formal education.

5.2.3. Scarcity of critical media literacy aims in curricula

At the national level, for mainstream students, there are some concrete examples of critical media literacy being utilised in the curriculum. A key finding in the study, during the designing of the fake news reading checklist in the workshops, was surprisingly how similar the wording of Kellner and Share's (2019) CML framework questions aligned with the Australian Curriculum. In particular, the 'Critical and Creative Thinking Level 6' aimed at Years 9 and 10 was most similar to the aforementioned CML framework. For example, the section from the CML framework 'How could this text be understood differently' (Kellner & Share, 2019) analyses the same area as 'Consider alternatives speculate on creative options to modify ideas when circumstances change' ACARA (2014). Both these sections are analysing the author's

agenda, with the aim to discover all media texts have a purpose that is formed by the creators and/or systems within which they operate.

The inclusion of CML in the national curriculum is a positive sign for the adoption of CML and the inclusion at the national level specifically indicates that senior high school learners in particular are educationally developed enough to be receptive to this type critical analysis. Of relevance for this study there are several similarities between senior high school students (Years 11 and 12) and EAP students, in that they both are around the same age bracket, mature enough to appreciate this form of critical questioning pedagogy, and both likely to pursue tertiary studies. However, the amalgamation of these two literary sources still needed to be scaffolded with the specific metalanguage required to make it effective in the EAP classroom.

Despite the inclusion of digital media literacy aims in the national curriculum, Tracie argued there was not enough time devoted to achieving these literacy aims in class due to other educational demands.

> The national curriculum for public high schools is all about pilling and pushing as much knowledge as you cram into a semester….ummm school year. It's awful……so that doesn't leave much room for supplementary material from the teacher. And er there is not much teacher training (Tracie, 3rd June 2020)

Tracie's remarks reflect the competing priorities of needing to impart knowledge to the students which resulted in less time being devoted to achieving the aforementioned critical media literacy aims. Tracie provides the perspective from her vast 16-year teaching experience in Australian secondary schools. As rich and detailed as this insight from an individual was in the study it does not tell us at a broader level what Australian teacher's thoughts are.

A more definitive answer to this question as to what is the sentiment across a larger number of teachers in Australian classrooms is offered by Corser et al.'s (2021) online survey findings of 295 Australian teachers and follow-up semi-structured interviews with 20 teachers. Their analysis found that although many teachers see the importance of developing students' literacy about news in media, the curriculum is already crowded and teachers lack access to relevant professional development. This finding identifies the significant challenges and barriers to making this form of literacy more widely available in Australian classrooms. The lack of pertinent professional development is highlighted as a hindrance to covering critical analysis

of news in the media by the teachers participating in Corser's study is supported by Tracie's statement that there is not much critical literacy training in public schools.

Still at the national level, for EAL/D students, there are some positive signs towards CML being incorporated into the curriculum. There is a focus on inclusion for EAL/D students with the Senior English as an Additional Language or Dialect Curriculum (ACARA, 2014) which aims to develop 'critical analysis skills' (ACARA, 2014 Rationale and Aims unit 1). This promising form of inclusion of non-native speakers in the National English Curriculum symbolises a commitment to equity and allows these students to pursue the same academic standards as mainstream students. According to Dobinson and Buchori (2016) the Australian Curriculum, Assessment and Reporting Authority required all mainstream teachers to adapt their pedagogy to the EAL/D language needs of their students, even without any formal language teacher education (Alford & Windeyer, 2014). And, as a result, it is no surprise that mainstream teachers are not well-equipped to deal with the language needs of EAL/D students (Dobinson, 2016).

As discussed above there are limited resources available for EAL/D students in mainstream education and even more scarcity of CML content in the ELICOS sector. There is no mention of 'critical media literacy' or 'media literacy' in the National Standards for ELICOS Standards Legislations (2018), except for the vaguely worded recommendation to 'include access to a range of multimedia, as appropriate'. This point about limited resources is reinforced by Tracie's claim of the absence of critical media content in the ELICOS curricula.

> There was a bit in the curriculum about that (referring to CML in the Australian national curriculum)… but none in the ELICOS curriculum I've seen. (Tracie, 3rd June 2020)

5.2.4. Teachers' inability to enact critical literacy

Although some teachers do acknowledge the importance of teaching critical literacy, a factor that prevents them from applying this in their classrooms is their inability to enact critical literacy. Teachers are faced with institutional challenges (Cho, 2018) meaning they (the teachers) are not in a position to incorporate teaching critical literacy to any meaningful effect. For example, the teachers are reluctant to initiate changes, such as including more CL content in class because of their untenured status according to Sangster et al. (2013). The teachers who

participated in critical literacy training were dissatisfied with the impact they were having in their schools because they have limited influence on the school's overall educational philosophy and practice. The teachers all reported the initial usefulness of their professional development sessions, citing they have learned a great deal about the theories of critical literacy and critical pedagogies, but due to their status within their respective schools, they were not able to take these newly learned skills ahead in their teaching.

Even though Tracie stated she incorporates CML activities into her syllabus, namely deconstructing the front cover of popular magazine covers and movie posters as previously discussed, she did add that she desired to add more CML content. As previously mentioned, she attributes a busy high school curriculum preparation program and her inability to enact any influence on the people in White Rock Language School to make changes to include more CML content.

5.2.5. Testing over higher-order thinking

Another inhibitor facing teachers is barriers to enacting critical literacy pedagogy due to a preoccupation with proficiency tests at the expense of critical thinking skills, which Wilson (2016, p.257) refers to as the 'tyranny of testing' in EAP courses, and Masuda (2012) claims that this obsession with testing devalues critical literacy.

> The structure of the national curriculum there isn't enough – no room for kids to think, it's more important for them to get a good mark on a standardised test (Tracie, 3rd June 2020)

Tracie's comment about there being a preoccupation with standardised testing in ELICOS classrooms at the expense of learning the power of language resonates with numerous researchers (Emler et al., 2019; Goodman & Burton, 2012; Miller et al., 2020; Wilson, 2016) concern with a preoccupation with the standardised assessment of pupil performance in education. Of relevance for English as an Additional Language (EAL) students, Goodman and Burton (2012) argue that too much emphasis placed on standardised testing can result in students slowly progressing in the education system and can even jeopardize their chance for educational success.

The other important stakeholders apart from curriculum designers, and teachers are of course the students for whom critical media literacy is not their priority. As Stazicker and Woods, (2022) explain the main aim of EAP courses is to provide namely that, English for academic

purposes, where the curriculum is designed to increase student's skills for the English-language requirements for higher education. So, it stands to reason that EAP students might be hesitant to take class time away from English proficiency test preparation. And, these EAP students are under huge amounts of pressure to pass their English proficiency test requirements (Stazicker & Woods, 2022).

> This sentiment was displayed by the students in this study in the informal discussions before the commencement of the educational interventions, when the discussions centred on the length and/or class time that would be devoted to the fake news and critical media literacy activities. They expressed initial concern about meeting their language acquisition targets in line with their matriculation expectations (26th May 2020).

An argument is that EAP courses are perhaps too focused on the function of language for specific purposes and do not encompass wider uses of language for discursive practices. The problem faced by these students, and EAP teachers, is if they solely focus on test preparation, not academic skills to progress through their courses. Terraschlke and Wahid (2011) argue EAP courses should not only aim to improve students' level of English but also to convey useful academic study skills and introduce students to the common genres of their discipline. This line of argument is supported by Wilson's (2016) point that every university in Australia entails critical thinking skills as an asset to their school/program, and gaining these critical skills is essential to the student's success in higher education (e.g., Bharuthram, 2012; Chanock et al., 2012; Devereux & Wilson, 2008, Vered, 2016). Tracie, Jenny and Anne all recognised the importance of developing students' CML skills. Being either former or current educators who are innately aware of what is expected of university students in Australia in terms of possessing critical thinking skills. Adding that they do not see the newly arrived students possessing these literacy skills at the beginning of their courses in White Rock language school, but do hope to develop them during their time at the school.

As previously mentioned, international student transition into Australian tertiary programs is complicated if students have not had sufficient pedagogical exposure to critical literacy, as Hellsten (2013) and Liyanage et al. (2021) state it is the lack of critical thinking skills which is cited as being overlooked in international students' experiences. Going on to state international students have difficultly grasping the critical context when doing critical text analysis activities. As a result, the international academic transition period can be challenging for many of these

students. Teaching and learning are not just a matter of skill acquisition or knowledge transmission; it is about access and apprenticeship into institutions, resources and texts (Freebody, 2007). Exposing this student segment to varied texts, for example, fake news stories on social media, and analysing them with critical pedagogy was expanding their academic literacies. The majority of the students reported they did not have educational experience with critical pedagogy namely critical media literacy and all reported never analysed fake news articles on social media before in a formal education setting.

Allen said 'I do not need to check fake news in class because I can spot it', likewise Jess said 'There is a lot of fake news about health and diet content'. Jess added that the author's intent on these fake media messages was to appeal to women who are desperate to lose weight or get in shape. However, when asked why they (the students) think these were fake news posts they could not provide much evidence. For example, they couldn't identify any of the visual, textual or other common traits associated with typical fake news posts on social media. This was further proof that whilst these students were confident in their ability to spot fake news, they weren't confident in their ability to analyse it in a formal education setting, which stands to reason because they all reported never studying it before in class.

Therefore, addressing this lack of critical pedagogy exposure and diversity of text reflects the philosophical pragmatism of John Dewey's moral education, in that curriculum and the learning experience of students needs to be accessible to all (Pavlis & Gkiosos 2017). The study aimed to improve the educational equity of these EAP students who might not be familiar with this type of pedagogy, and who were not exposed in their educational history. The study identified that not all these students received quality teaching about how to critically engage with and make decisions about news media. And, at the culmination of the study it familiarised them and gave them more exposure to critical literacies setting these students up for long-term success in Australian tertiary schools where the students had more tools to evaluate sources of information critically and independently.

5.2.6. Student resistance to covering critical media literacy tasks in class

As previously mentioned in the previous section, most of the students were unfamiliar with critical pedagogy practices in education except for two students. When examining the student

demographics, an interesting correlation was found that the students who had exposure to international curricula were more receptive and literate in the educational interventions which critically analysed the fake news media stories. The Hong Kongese student Jess was quite familiar with CL educational content, citing an educational background with a Western-style education system used in Hong Kong. And the Chinese student Ivan who went to an international high school in Shanghai similarly spoke about his educational experience within an international curriculum. When asked further about their critical thinking educational exposures they said they had familiarity with the types of higher-order reading strategies that were going to be used in the study, namely in the fake news reading checklist; which included identifying assumptions, detecting bias, comparing and contrasting texts, and checking the author. It was a surprising finding because according to Wilson (2016), many EAP students do not have experience in critical reading and critical thinking or at least of the kinds of critical thinking expected in tertiary education.

Whereas in keeping with Wilson's (2016) claim about EAP typically not being exposed to critical pedagogy, the remaining three other students who attended Chinese secondary schooling did not report such familiarity with critical thinking skills. This Western, or perhaps international curriculum exposure phenomenon was consistent with other students. The other students who all came from mainland China were less knowledgeable about critical pedagogy and this could perhaps be attributed to their public schooling as opposed to the international school in China and Hong Kong school system. Perhaps these Chinese students, who had a public schooling background, were exposed to predominately 'Asian' learning modes (Confucian) which led them to be somewhat more resistant to covering CML content in class and is consistent with Biggs and Tang's (2011) observation that Asian students are less willing to cover critical pedagogy in class.

Regardless of their region of origin, the Hong Kongese and the international schooled Chinese student both displayed a propensity towards the critical literacy educational intervention and subsequently displayed competency during the CML introductory exercises which goes against the cultural maladjustment and cognitive disadvantage that Biggs and Tang (2011) talk about in Asian learners. A possible argument could be made that educational background is a better determination of critical pedagogy adjustment in class than educational origin, or nationality. This could be considered a positive finding, in that even if newly arrived ELICOS students, particularly those students who wish to continue to study in Australia or other Western

educational institutions are exposed to critical pedagogy early in their studies they can competency in critical literacy tasks later needed in EAP classes and ongoing tertiary courses in the future.

As Liu et al. (2022) explain critical literacy has already developed well in the Western context, however less so in mainland China and in an EFL context. An increasing number of international schools has been established in response to the state policy of 'cultivating students with the international horizon, understanding international principles, and engaging in international affairs' (Liu et al., 2022 pp.11-12). However, most EFL pedagogical practice still focuses on deciphering meanings from linguistic perspectives. Students' critical awareness of empowering themselves to challenge social injustice and fulfil responsibilities as global citizens is still relatively weak, which has posed new challenges to teaching EFL reading.

The lack of educational exposure can result in student resistance during educational activities because Davies and Barnett (2015, p.48) state it challenges the students' worldview which 'makes life awkward', what she is referring to is that EAP students, particularly those coming from an Asian educational background experience awkwardness when they are exposed to diverse educational and worldview perspectives. To balance the argument, assuming Asian students seeking to enter Western universities are lacking in critical thinking skills taking an assimilationist approach mindset and making certain assumptions that might not be the case, namely that this student segment experiences cultural maladjustment and has a cognitive disadvantage (Biggs & Tang, 2011). Adopting this approach might lead to a detrimental cognitive deficit label being given to 'Asian' international students (Biggs & Tang, 1999) studying in 'the West', and perpetuates stereotypical beliefs about 'Asian' learning modes (Confucian) as being detrimental to academic achievement.

Allen the Chinese student, whom aforementioned received his schooling in a Chinese public school, most likely comprised of predominately 'Asian' learning modes (Confucian) was the most resistant to covering fake news in the class.

> I know what fake news looks like, so I don't need to study it in class (8th June Allen)

His comment about his competence and confidence in spotting fake news on social media could also be interpreted as a reflection of his educational background. In that, he was typically not used to critical pedagogy, further analysing fake news on social media. Student reluctance was reported in Pohl's (2008) study when using critical pedagogy to question the hegemony of

Western education in an EAP group. Similarly, Wallace's study (2003) was abandoned by several Arabic students when critical pedagogy was used to examine controversial texts on Islam.

Allen did participate in the educational interventions, and completed all the CML tasks expected of him however I did notice a hesitancy in his actions perhaps due to disbelief that this was not deemed appropriate educational material for an EAP class which has been discussed previously, EAP courses are primarily designed for English proficiency test preparation. His hesitancy appeared to be a type of culture shock, it displayed Hellesten's (2103) example of classroom culture shock due to Western curriculum content which focuses more on independent research skills abilities and critical thinking to complete courses (Hellsten, 2013). This phenomenon presented by Hellsten (2013), occurs more at the university level where Asian students are exposed to an 'internationalisation' of higher education where the shock is from cross-cultural influences of pedagogy and practice according to Hellsten (2013), specifically critical cognitive content which induces cultural academic shock.

Exposing Allen to critical pedagogy during this study and inducing his academic culture shock is hopefully going to better prepare him for his future tertiary preparation. At the time of the study, he was planning to enter an Australian university and study a humanities course which as Wilson (2016) states would most likely entail some form of critical thinking. Therefore, it was hoped that this was a gentle introduction to the sort of academic demands that would be eventually placed on him in his academic future. This course extends to the other students as well who were similarly not expecting to cover this sort of educational material in the study as well.

My reflections on the tertiary education sector, and having observed Japanese university students struggle in their study abroad experiences for 11 years, I felt that there were certain elements in the curriculum missing that could aid their transition into foreign education institutions. To now, in the Australian ELICOS sector seeing Asian foreign students struggle in EAP classes in the same area, namely due to being not prepared for Western pedagogy, in particular, critical pedagogy gave me the motivation to study this area of education preparation. Recognising that this international academic transition period can be challenging for many international students in Australian universities is the premise of this study. As Hellsten (2013) added from the student learning perspective a smooth transition into new and foreign learning environments is believed to determine academic success.

However, the dangers in assuming Asian students seeking to enter Western universities are lacking in critical thinking skills taking an assimilationist approach mindset and making certain assumptions that might not be the case, namely that this student segment experiences cultural maladjustment and has a cognitive disadvantage (Biggs & Tang, 2011). Adopting this approach might lead to a detrimental cognitive deficit label being given to 'Asian' international students (Biggs & Tang, 1999) studying in 'the West', and perpetuates stereotypical beliefs about 'Asian' learning modes (Confucian) as being detrimental to academic achievement. However, there is a lack of empirical evidence to support claims that Asian learning styles (surface and rote learning etc) are counteractive to learning in 'western' learning systems (Watkins, 2014). On the contrary, there is evidence to support that these claims are contraindicative, as Biggs and Tang (2011) state there is data that places 'Asian' students in the top five per cent of university courses generally.

5.2.7. Age factor

Age was a factor that Tracie identified as a potential inhibitor to students mastering CML skills. In her experience, as an experienced ELICOS teacher, she considers age as a more prominent factor than English level in students' receptiveness to CML, stating that;

> Year 10 onwards were more interested in covering CML content….its maturation wise not so much English language proficiency. And year 9's were less keen …. Or less engaged in that sort of stuff (Tracie 3rd June 2020).

This statement was reflected in the study's research participants, where the oldest student Jess aged 31 (at the time of the study) was the most engaged in the study compared to the younger students aged 18-22 year old's respectively. Tracie's statement of age is a factor in how receptive students are to learning CML skills is also echoed by Khana and Idris' (2019) findings from Indonesian internet users (n = 396) that age and level of education were two significant factors in determining the ability to recognise false information on social media. In their study, the under-18 users were least likely to detect misinformation on social media, believe in the unreliability of information on social media and share information without verification.

5.3. Enablers

5.3.1. Fake news is known and there is an interest

At the outset of the research, through informal discussions with the students in the pre-intervention stage of the study, they all stated they were familiar with social media platforms and used them daily. This was not a surprising finding given the wealth of literature on the popularity of social media among the youth (Typeset, 2022; Ramshaw, 2020; Social Buddy, 2020; Notley et al., 2017). According to social media statistics for Australia (Typeset, 2022) the 18-24 age bracket is the largest users of social media, and globally the 16-24 age group spends about 3 hours a day on social media (Social buddy, 2020). Putting time spent on social media into perspective this age cohort spend considerably more time than the national average (among all age groups) in comparison only spends 1 hour 57 minutes per day on social media (Ramshaw, 2020). Therefore, the participant age range would be familiar with using social media platforms,

Also, through informal discussions with the students in the pre-intervention stage of the study they all stated they knew what fake news meant and stated they knew of several recent examples in social media which they have seen on their accounts. This was predicted prior to conducting the research in the research proposal stage, that fake news in social media would be known by the participant students and it was highly likely that they would have been exposed to fake news and as a result they would, see the relevancy to this in their lives. This prediction that fake news on social media would be known was based on the literature findings from previous studies. The students' comments reaffirm the numerous education social media researchers (Herrero-Diz et al., 2020; Kurasawa 2018; Newman et al., 2019) assertion that adolescents consume their news mostly on social media where they are potentially exposed to a large amount of fake news.

The students being aware of fake news and being able to cite several recent examples on social media is a promising sign. It proves the point that students are immersed in a media-rich world and are being exposed to a tremendous amount of information, which requires a critical eye to decipher misinformation from fact (Burnett & Merchant, 2011; Lewandowsky et al., 2012). Moreover, it presents a need for these students to become media literate, to be able to possess CML skills to sift through this torrent of online media misinformation and assign value to social media stories. Also, in the pre-intervention stage of the study, the EAP students stated their

desire to cover CML tasks in class is promising. The wider implications taking from this context and broadening it out to similarly aged and EAL/D students and mainstream secondary school students who have the same level of education is promising, plus even other international students at the early university level who would also be similarly aged and perhaps at the same level of English level.

At the university level, international students early on in their university experience could benefit from this study in terms of developing the CML skills necessary for first-year university course critical literacy skills. Hellsten (2015) stated an academic area that was overlooked by international students was understanding the critical context in critical text analysis activities, and this lack of analytical skill problematises their transition into Australian tertiary programs because they have a lack of sufficient pedagogical exposure to critical literacy. The relevance of critical literacy at Australian universities is argued by Wilson (2016) who stated that Australian education values critical thinking skills as an asset to their school/program, and gaining these critical skills are essential to the student's success in higher education. To mention two prominent universities which value critical literacy, firstly is the University of Queensland which advocates it as a core element in their courses and by extension education in general 'Critical Thinking as part of formal schooling and of its importance to the very idea of a knowledge economy' (University of Queensland, n.d.). Another prominent university in Australia, namely The University of Sydney directly echoes Wilson's (2016) claim that critical literacy is an asset, the university describes to think or read critically as important in achieving higher marks (The University of Sydney, n.d.). The study's target population of being mostly Chinese nationally and aged between 18-31 years old shares commonality with Australia's biggest international student demographic which is Chinese international students at 27%, this student cohort makes up the highest percentage of January-June 2022 enrolments (Department of Education, International Education Data and Research [DEIEDR], 2022). The scaffolding aimed at enabling comprehension of CML inquiry skills in this study's education intervention considered the cultural background of the students and the classroom materials' metalanguage factoring in student's SLA level all would be highly transferrable to a broad range of ELICOS international students and higher education international students.

At the high school level, the transferability of this study's CML skills aligns with Australian Curriculum, Assessment and Reporting Authority (ACARA) Senior English as an Additional Language or Dialect Curriculum (ACARA, 2014) aims to develop student's critical analysis

skills for the representation of ideas, attitudes and values in the Australian context (ACARA, 2014). High school English teachers could meet the following strands of the national curriculum in the study's educational intervention program namely; exploring how "language choices shape meaning and influence audiences" (Unit 2) and 'identifying and analysing attitudes, values and culturally based assumptions within texts' (Unit 3). This is a call to numerous researchers (Cross, 2011; Gutierrez, 2014; Fajardo, 2015) asking for more critical literacy in the secondary school classroom sector who all argue that CML skills are beneficial for this level of students. The scaffolding aimed at enabling comprehension of CML inquiry skills was greatly influenced by the aforementioned Australian Curriculum units, therefore adoption or replication of the study's educational intervention is highly appropriate. Moreover, the educational intervention materials' metalanguage factoring in student's SAE level would be highly transferrable to EAL/D students in a mainstream secondary school classroom.

5.3.2. Independent researching skills

At the outset of the more independent tasks in the educational intervention (interventions 4 and 5) where the students were tasked with finding and analysing a fake news post on social media, analysing the news post and presenting their findings in class the students initially were taken aback with the independent role placed assigned to them. To put it another way, they were unfamiliar with the style of independent learning techniques; researching fake news posts; evaluating the misinformation, and communicating and sharing information. This was not however an inhibitor to their successful acquisition of CML skills as seen in the ability to successfully find, analyse and report on their fake news posts in class. This perhaps was an educational transition phase whereby they experienced classroom culture shock due to the exposure to Western curriculum content which focuses more on independent research skills abilities and critical thinking which they seemingly struggled with. The student's sentiment of surprise at such a student-led task of finding a fake news post on social media appeared to be a cultural academic shock. This finding in the study reflects Hellsten's (2013) claim of the effect of the 'internationalisation' of higher education which is argued to have brought new elements of cross-cultural influences of pedagogy and practice.

This finding was perhaps not surprising given the students reported little to no educational experience in CML activities in non-tertiary education, and minimal previous ELICOS or

similar university preparation courses. And this is the goal of EAP courses to improve students' recognition and ability to participate in different academic activities according to Hamp-Lyons (2011). Moreover, it was the goal of this study to expand the participating EAP students' academic abilities, which will ultimately better prepare them for their critical thinking skills that as previously mentioned are according to Moore (2013) imperative in tertiary education. Preparing EAP students who as previously argued might not possess critical thinking skills and independent research academic skills fits into the study's research aim to address educational deficiencies and in doing so provide equity in education for these students and other students similarly preparing for tertiary education.

5.3.3. Critical reading skills

One such skill which was identified in this study was the utility of critically reading media texts, which incorporated a critical analysis of their truthfulness. Critical reading is important for these students because it allows readers to evaluate the arguments in the text which is a precursor to move onto more in-depth critical analysis of texts such as being aware of your opinions and assumptions (Hellsten, 2013). A sentiment proposed by this study is while it is important for EAP students to be prepared for the relevant English proficiency tests first and foremost, critical reading skills have a place in the EAP curriculum. These critical thinking skills will eventually need to be honed in further education and this study is not suggesting an abandonment of proficiency test preparation in the curriculum, rather than there is room for these CL skills in the curriculum which will be useful for the students when they enter into their tertiary programs.

5.3.4. Metalanguage

At the sentence level, educational materials (fake news reading checklist) used in the study were aimed at incorporating ACARA metalanguage to validate the educational language, and in the bigger picture make it transferable to the high school sector as well. The following section will explain how metalanguage was used to assist students in successfully completing this educational intervention and how this language support could be expanded to other educational contexts.

The study's fake news reading checklist, specifically the follow-up questions were aimed at facilitating students' comprehension in the educational discipline of CML and English language proficiency. In keeping with an EAP class course aim, the materials ranged in content but always had a language-learning intent. Therefore, there was a focus on the language choices made by the author (s) of the fake news posts, for example examining the author's intent and who was advantaged/ disadvantaged in their media messages incorporating the didactic metalanguage. One such example of this is exhibited in the reading checklist' question 'What language does the author use?' – 'Does the headline use excessive punctuation or capital letters, what grabs your attention?' The metalanguage analysis focused on emotive language which would be useful for language learners. An example of this metalanguage used in the high school EAL/D context is evident to see with seniors the English as an Additional Language or Dialect Curriculum (ACARA, 2014) aims to develop students' "critical analysis skills" (ACARA, 2014 Rationale and Aims) by exploring how "language choices shape meaning and influence audiences" (Unit 2).

During the initial fake news educational introduction session, extensive scaffolding of the fake news reading checklist was necessary. Specifically, the scaffolding of language of intent - *'What do you think of this title?* This language was too vague, students didn't understand that they were being asked to analyse the wording of the title, to reveal the author's intention. After this observation and in consultation with the participating teacher the word choice and its effect on the readers was altered to as follows '*What language (words, phrases, images, symbols) does the author use to persuade the audience?*

Using the following fake news title in the intervention's session 'There is <u>no</u> real scientific basis for social distancing' *Laura Ingraham, Fox News*. The classroom activities paid particular attention to the wording '*no'* as a negative quantifier which was identified as language used by the author to persuade the author of the degree of certainty about the claim of the effectiveness of social distancing. The participant students also needed to be given examples of persuasive language; such as 'it is often thought', 'many people believe', 'current opinion suggests' etc, and evaluative persuasive language such as; 'clearly', 'obviously', 'without a doubt' etc. Once this language was provided, they were able to find examples of persuasive language in fake news stories by themselves.

Identifying these word choices played a pivotal part in providing effective scaffolding to the EAP students, for whom English is not a native language, to aid in their comprehension of the

task. Analysing the language had a didactic purpose, the metalanguage used could easily be transferrable into a high school English classroom, particularly appeasing EAL/D specialist teachers or in the absence of that mainstream English teachers who are seeking EAL/D inclusive classroom materials who would need to provide scaffolding to those EAL/D students to successfully complete a replication of this CML educational intervention. Providing metalanguage aimed at scaffolding students who come from LOTE backgrounds at the broader level allows more students to develop their CML skills in Australia and poetically other English-speaking countries.

5.3.5. Blending inside and outside learning

Several critical media literacy researchers (McDougall, et al., 2018; Lewandowsky et al., 2017; Kellner & Share, 2019) have been calling for research in the area of correcting disinformation both in and outside of educational settings. There have been several studies (Alvermann, 2017; Frechette, 2014; Navera et al., 2019; Saunders et al., 2017) that have achieved varying success in incorporating social media platforms typically used by their target audience outside of class to critically analyse fake news stories. Although, according to Lewandowsky et al. (2017) the blending of inside and outside learning of CML applied in social media has been rarely fully effective, if educational countermeasures to misinformation are effective they have to discourage the spread of misinformation not just alert users to the existence of it in a formal education setting and analyse it.

This claim made by Lewandowsky et al. (2017) is evident to see in the Saunders (2017) study, which attempted to blend inside and outside learning by critically analysing misinformation on Twitter. The research design set out to incorporate formal education of identifying fake news in a high-school English class that applied CML skills using a social media platform namely Twitter, that the students were familiar with. And the teacher-led classroom example of the (#besombody) Tweets was a solid example of fake news and one in which a critical media analysis could be achieved. The inside in the classroom learning was achieved through the aforementioned Tweets analysis, although not allowing students to post a social media response on Twitter to the besomebody blog failed to incorporate outside learning because there is no potential to share or comment which could be argued is not fully participating in this form of media.

The sharing behaviour of adolescents on social media, or more importantly not sharing fake news, is the bridge between inside and outside of the classroom learning. The ability of these students to apply these newly acquired CML skills gained from the classroom to dismiss disinformation sourced by the students outside of the classroom is the point where the two intersect. The students can fully realise and/or appreciate their newly acquired CML skills by applying what they have learnt in the classroom can impact their online behaviour, and perhaps make them more receptive to further CML studies in formal education. In the focus group sessions, which as a reminder were conducted upon completion of the educational intervention found the students all stated they have never responded to a fake news post before. That is in terms of analysing with a critical eye employing all the CML skills listed in this study; such as questioning the author, identifying assumptions, detecting bias, and examining the visual, and textual methods used to convey messages just to name a few. However, they all expressed a desire to apply their newly acquired CML skills to not only consolidate their learning but to make an impact in the non-proliferation of fake news in their social media domain.

If these two domains can be blended that would fulfil the overarching aim of CML to prevent sharing of fake news on social media by the highest segment of the population who shares unverified news posts on social media Herrro-Diz (2020). If more CML educational programs were similarly designed, focusing on analysing the appearance of information presented as news (headline, image, language), questioning the journalistic integrity of the author and/or news source and highlighting the power of fake news and vulnerable in their messages, then teens would perhaps be less likely to share and perhaps more likely to respond to fake news posts, challenging its truthfulness. Targeting this age group and the analytical content would be most impactful for stopping the spread of fake news and give likely momentum to more CML in formal education. This is due to social media researchers' assertions, that sharing is fuelled by emotions (Badillo, 2019; Middaugh, 2019; Wardle & Derakhshan, 2017) and that 'outrage' language seeks to provoke strong emotional responses through the presentation of misleading, out of- context, flashy facts, personal attacks, generalizations etc is attractive to adolescent social media users and they are sharing these without hesitation (Wardle & Derakhshan, 2017). Badillo (2019) adds teenagers are especially vulnerable to this type of language because they tend to 'act before they think' and this produces more sharing on social media, this claim was reinforced by Herero-Diz's (2020) study findings that adolescents in Spain were the most likely demographic to share fake news on social media.

A reminder of the importance of CML studies among adolescents in terms of their vulnerability in sharing fake news was displayed by Allen's following comment;

> I don't share fake news, but I like and retweet posts from my friends online. But they are people … they trust (referring to how he trusts the content they post) (Allen 3rd June 2020).

This perhaps could be an example of blind trust where Allen maybe unknowingly admitted to sharing fake news. This might display Badillo's (2019) earlier claim that teenagers tend to act before they think when sharing online posts, and adds strength to Herrero_Diz's (2020) findings that adolescents unknowingly share fake news on social media. The sharing behaviour on social media among young adults is a focus of researchers and teachers in the field of CML because this is a pivotal feature of social media.

Celebrity inclusion for added engagement

The implications for future studies seeking to blend inside and outside the classroom fake news studies are that they should include a component that analyses celebrities' fake news posts. This was done to good effect in the Saunders et al. (2017) study whereby the students were engaged in the critical analysis of the disingenuous #besomebody Tweets. This adds another level of engagement by not only using social media, a media platform they are familiar with and use regularly but also because the students are interested in celebrities. This was evident to see in my study with 3 out of the 5 students selecting fake news stories from celebrities. It was also a surprising finding that the students were surprised to learn that celebrities contributed to fake news on social media.

> There was some shock and a bit of apprehension during this lesson (BBC 7 BBC video 7 types of people who create and share fake news), some of the students seemed dismayed by the fact that celebrities are among the main contributors and sharers of fake news on social media. It was quite the realisation on their behalf. (25 May 2020)

Tracie experienced this phenomenon among her students as well when she similarly tasked students with critical literacy activities which revealed celebrities' involvement in fake news, she remarked that;

> students see celebrities…..as they don't lie, because they're just people we see
> their lives all the time. Whereas they are suspicious of politicians and conspiracy

> theorists. That's really, really interesting that they didn't identify celebrities as the perpetrator, which they probably the biggest ones apart from politicians (Tracie 25 May 2020).

It was a powerful moment when the students realised that their beloved celebrities were capable of producing fake news. As mentioned above, during the BBC video it was quite a revelation for some students that celebrities either created or shared fake news. Perhaps, due to Tracie's claim that they (and their general audience) see them as trustworthy people because we see their daily lives (seemingly) through constant exposure to what they are doing. The students also learnt that celebrities can be misappropriated in fake news posts. This was presented by Ivan's example of the TV celebrity Tim Allen's status falsely advocating for a Mexican/ United States of America border wall, which Tim Allen did not in fact endorse. This is an important aspect of CML, as Qi et al. (2022) state celebrities are often taken out of context or wholly misrepresented to convey a message on fake news posts. Therefore, there is an educational need to rectify this fallacy and an opportunity for teachers to really make an impact on their student's perception of celebrity's fake news involvement in their CML classes.

5.4. Educational duty over algorithms

The study sourced the CML educational materials from the website *PolitiFact* for the previously mentioned reasons that it is a useful educational tool for teachers seeking to incorporate CML skills into their classes with clearly labelled truth meter readings. However, the students were tasked with finding examples of their own fake news stories in social media and not relying on fact-checking websites where the fake news stories are easily identified.

> Not all students could find a fake news story, some needed assistance in finding a clear example of fake news suitable for analysis (which could provide enough detail to sufficiently answer all of the fake news reading checklist questions) (25 May 2020).

This was an interesting finding because the student (Allen) who struggled in finding a fake news story was also the student who was somewhat resistant to participating in the educational interventions. His resistance stemmed from his reported misguided confidence in identifying fake news stories claiming that;

> I know what fake news looks like, so I don't need to study it in class (Allen 8 June 2020)

It is evident to see that he misinterpreted his ability in identifying fake news stories on social media, and this was even more significant after exposure to who are the most common people to create and share fake news on social media and analysing the Fox News fake news story. This finding suggests that this target audience does need to hone their CML skills in a formal education setting to successfully be able to identify fake news stories. This finding resonates with the Herro-Diz finding that Spanish teenagers were not able to verify the credibility of false information before sharing it, despite their assertions that they can. The finding from the Herrero-Diz survey results underlines the importance of in-class education responses to combat young social media users' lack of CML skills.

Another example of students failing to display fake news identifying skills was the student (Ray) who mistook a satirical news story thinking it was fake news. Although the purpose of comedic satire news stories is not to deceive their readers with disinformation, they can be intentionally masqueraded as real news or picked up and unintentionally recirculated as genuine by the media (Golbeck, 2018). The problem arises as Golbeck et al. (2018) assert some readers may not always recognise the difference. Ray selected a satirical news story from The Onion, to base his classroom analysis on unaware of the satirical nature of this website, and Allen's inability to find a fake news story signals the vulnerability of this student age group's experience in developing CML skills. These findings emphasise the importance of an educational response from teachers to equip this age group with CML skills to better discern fake news on social media to prevent its proliferation and enable this age group to be more social media savvy. These findings add weight to the "digital naïves" label given by (Schulten, 2015 pp.45) that teenagers do not question the credibility of the information they consume. My classroom findings were similarly echoed by Tracie with her classroom experiences with her students in CML tasks;

> They are not really digital natives……more like digital interlopers….yes they multitask and use the internet. But struggle in finding a newsworthy source of information (Tracie 3rd June 2020)

To equip students with the ability to decipher the fake news posts from satire or in general determine the truthfulness of news is through education rather than relying on fake checking

websites or apps. There are very useful fact-checking websites such as *Politifact, Full Fact* and apps *Media Smarts* just to name a few with sophisticated algorithms that are easy to use, case in point the aforementioned visual ease of the PolitiFact website in this study using the truth-o-meter and clearly identified points retorting the falsehoods in the news multiple news stories. However, most CML researchers agree the best "antidote" to the threats posed by false news is education (Larkin, 2017; McDougall et al., 2018) and they make the case that "Knowledge and education are by far the best weapons against fake news" (Valero & Oliveira, 2018, pp. 72). Despite the advancements in fake news detecting websites that can provide accuracy ratings and truthfulness ratings, Spratt and Agosto (2017) argue there is a need for educators to instil a sense of responsibility in their students to prevent the circulation and spread of fake news, which is a big step toward them becoming information-conscious consumers. One student Ivan displayed an example of information-consciousness and responsibleness towards the non-proliferation of fake news illustrated in his comment;

If we don't check fake news, then fake news wins (Ivan, May 25th 2020)

His comment reflects a proactive approach to combating fake news, one that extols an educational duty over passive algorithms to combat fake news. That proactivity displayed in Ivan's comment was exactly the sort of responsibility in their students to prevent the circulation and spread of fake news that Spratt and Agosto (2017) champion. The purpose of the CML education interventions is to teach critical evaluation of fake news posts to develop knowledge of the context and to question the authority of the source.

In 2017 The German Network Enforcement Act, for instance, imposed fines of up to 50 million euros (AUS$74 million) on social media companies if they fail to remove "obviously illegal" content within 24 hours upon receiving a complaint (Haciyakupoglu et al., 2018 p.45). This optimistic initiative has spurred other countries to draft laws that are being proposed that would similarly give governments more powers to hold technology companies (e.g., Facebook, Twitter and Google) and individuals accountable for the spread of fake news. And, shortly after this law was instated in Germany Facebook was found in violation of the "Anti-Fake News" law in 2019 in which Facebook is planning to appeal the Federal Office of Justice's decision is less optimistic about the proliferation of fake news on Facebook and at the broader level social media in general. The issue here is that the personalisation algorithm used by Facebook, Twitter, Instagram and Snapchat incentivizes

attention-grabbing misinformation and inaccurate “scoops”, this inaccurate information can spread virally expanding its reach and influence significantly (Kurasawa, 2018). Regulating social media outlets not just Facebook appears to be ineffectual, and a media regulation solution in combination with fact-checking technology is perhaps not the answer.

The construction of fact-checking technology and government social media regulations does not address the credulous social media user population with little knowledge of how media works and is liable to believe anything they’re told. The educational response to fake news instils the CML proficient users with the ability to make informed decisions that are not dependent solely on the information provided by the author (s), but rather independently evaluating the information, understanding its construction, and appreciating that its mediation influences its truthfulness. Increasing levels of critical media literacy among this vulnerable adolescent age group is what this current sort to rectify.

5.5. Themes that emerged

5.5.1. Post-truth in a pandemic

Critical media literacy is essential because we live in a period where there is a high amount of fake news (Allen & McAleer, 2019; Bovet & Makse, 2019; Maddalena & Gili, 2020), and at a time when there is a need for consistent and immediate reliable news. This was recently experienced in early 2020 when a torrent of misinformation was shared in the first few months of the COVID outbreak leading the World Health Organization (WHO) to declare an ‘infodemic’ (Park et al., 2020). This pandemic spurred the need to access fast credible news which resulted in an increase in news consumption in the early months of the COVID-19 pandemic which saw heavy news users jump to 70% of respondents in April of 2020 (McGuinness et al., 2022). During the pandemic the global population was heavily reliant upon the media for government health information for example face mask regulations, vaccination efficacy and requirements, lockdowns and health officials’ recommendations to protect themselves and family members. However, this coincided with a surge in fake news, and as a result, 65% of respondents said that they were concerned about what was ‘real or fake’ on the internet (McGuinness et al., 2022). These all warrant the consumers of news and the public to be more critical of their news consumption.

The educational intervention program began in May 2020; therefore COVID-19 was a hot-button topic and was as a result included in the content materials of the study. It was as previously mentioned used in the introductory classroom example used to prepare students for exposure to potential disinformation later on was COVID, namely the social distancing sanctions employed in the United States of America. Also, 3 out of 5 students chose a fake news example based on COVID which signifies its prominence in the media at that time and their thoughts on checking accurate information about this pandemic which was no doubt affecting their lives. An interesting phenomenon that was realised by the students during the educational interventions was the post-truth era notion. The term 'post-truth' relates to circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief' and come after the fake news has circulated (Krasni, 2020). In other words, post-truth has been described by the famous English satirist Jonathan Swift as 'falsehood flies, and the truth comes limping after it' (McIntyre, 2018, p. 248). This concept was observed in the study with COVID-19 fake news posts being proven false in a matter of days, in the case of a student's (Jess) fake news about the steam cleaning re-usable face mask. A Hong Kongese member of parliament advocated steaming facemasks as an effective sanitizing measure, and in the following days was rebutted by sceptics and health officials.

In her classroom presentation, Jess talked about how the fake news story on Facebook she chose was received by other social media users. She commented that there were numerous likes, shares and comments praising the sanitary and money saving tip. This is an example of the 'post-truth' effect on social media, in particular how denial of qualifying knowledge as 'fact' as opposed to 'emotion' or 'mere opinion' is exhibited by social media users (Durnová, 2019). The study focused on developing the student's comprehension of CML skills in detecting and analysing fake news, although exploring the effects that this form of misinformation is created, shared and received serves an educational purpose to motivate students to develop those literacy skills. This further analysis of the motivations why such posts are circulated could be argued to add to the appeal of CML, in the sense that exploring the illogical, emotional and falsehoods associated with fake news emphasises the importance of this form of literacy in formal educational settings.

5.5.2. Nation slamming – standpoint theory

A prominent theme that emerged in the educational intervention sessions specifically during the task where students searched for fake news stories and gave a subsequent presentation on the topic was how fake news author (s) can or aim to discredit nations.

> The mainland Chinese students expressed their concern about the representation of China on social media during the educational intervention. In particular countries banning China for creating COVID-19 disease (25th May 2020).

> Trump said that China created COVID-19 in a lab in Wuhan. That's not true….and he can't say that (Ivan, 25th May 2020)

This nation-slamming concern was shared by the other Chinese students who similarly reported an anti-China rhetoric in Western media. These three Chinese students who have lived in Australia for the last five years, expressed their disdain for Australian and American media portrays of China. Not just claims that China created COVID, but also the standard of living in China.

> The Western media always shows fake news about China, doesn't have their freedom or they don't live well. Let's think about it don't listen or read a text, maybe you have to go to China somewhere (Ivan, 25th May 2020).

Ivan wanted to discuss a fake news meme in class, in addition to the one he selected in the educational interventions, which was on the topic of nation-slamming. Citing a social media meme claiming China doesn't have affordable health care, which Ivan claims is inaccurate and politically motivated. According to Buckingham (2019), fake news often has a political dimension: it is intended as a form of misinformation or propaganda that is designed to exert political influence. The fake news example cited by Ivan might be politically motivated, aimed at discrediting China's inadequate health care, he surmised that it was likely criticism from the West, that it was an attack on China's ability to provide sufficient healthcare to its citizens. As Shaffer (2019) and Cepeda (2016) add fake news can be state-sponsored campaigns aimed at fuelling distrust in democratic institutions. The author and the exact origins of the fake news were unknown, however, the claims made about the Chinese health care system were false and

easily refuted by fact-checking. This example of fake news illustrates the concern that Ivan and the other Chinese students were concerned about the growing anti-China sentiment portrayed by Western media.

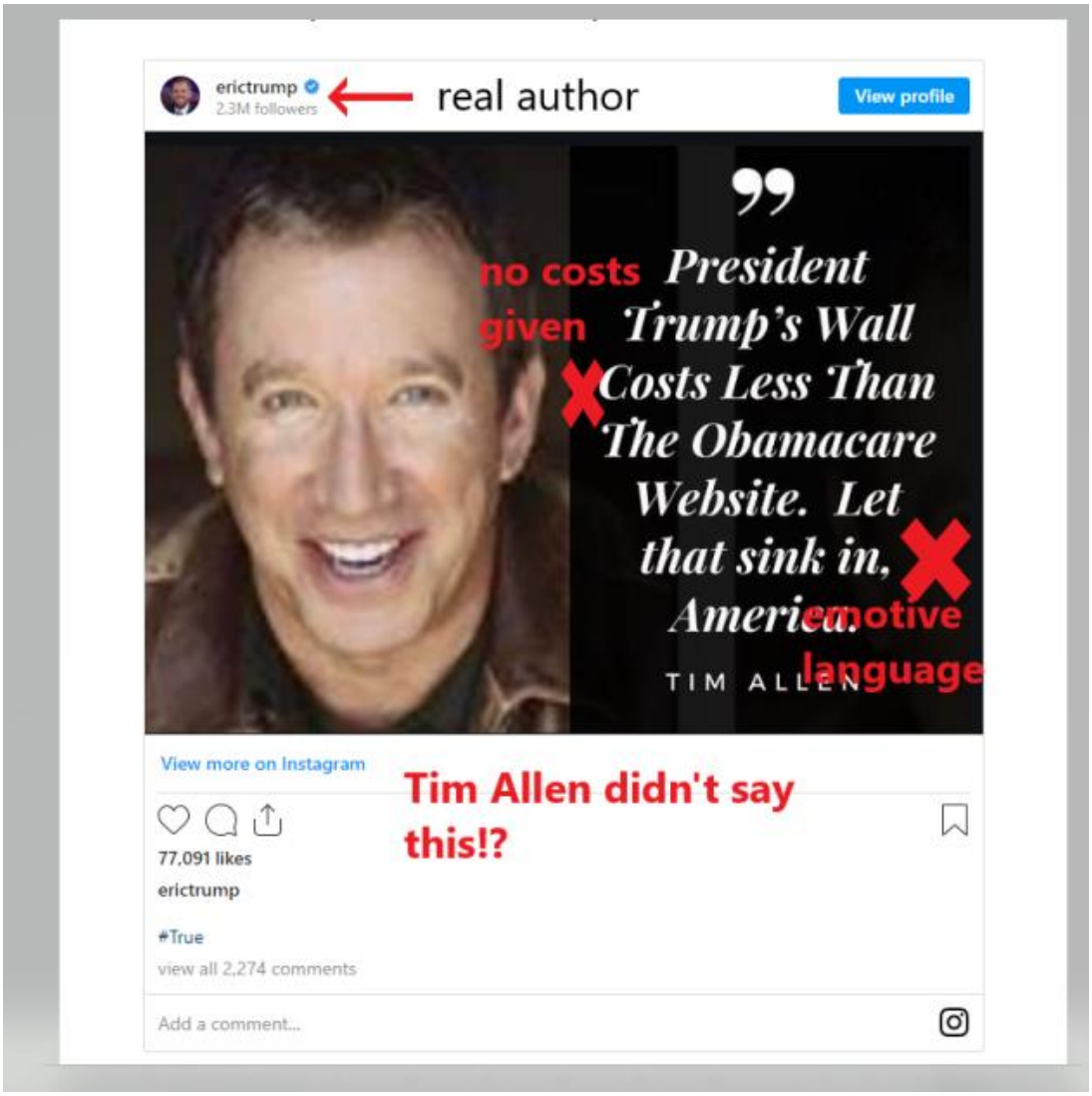
5.5.3. Emotional hook / first glance factor

A trend that was observable from examining the students' chosen fake news posts on social media was that they all prominently displayed an image or photo. During the research when the students were asked to select a fake news story to examine in class, most students selected social media posts that were memes or either contained a photo accompanying a post. This is hardly surprising given that social media posts mainly consist of images aimed at getting user's interest. Tweets with images get 18% more clicks, 89% more likes, and 150% more retweets than those without images Cao (2020, p.2)

The majority of fake news posts are attached with images in social media networks according to numerous fake news researchers (Zeng, et al. 2021; Cao, et al. 2020; Qi, et al. 2019), aimed at creating a visual impact and emotional provocation on the readers in absence of facts (Qi, et al. 2019). Creators of fake news seem to know how exactly to construct a fake news post to best pique reader's interest using visual aids and this is a concern to teachers and for CML in general because in Shellenbarger's (2016) finding that four in 10 high-school students judge the credibility of news in social media based on how visually appealing it is or if it has a large photo, rather than on the source.

The students observed how largely visual fake news messages on social media platforms are typically constructed through visual manipulation techniques. Ivan's fake news post was a clear example of such a visual manipulation, what appeared to be a political message by Tim Allen (when in fact Tim Allen refutes these claims made by Eric Trump) Tweet post comparing the costs of building a wall and an Obama care website. The purpose was meant to signal facts between the two potential budgetary allocations, however, there are no costs listed in the meme which Buckingham (2019) states displays a clear absence of facts. The 'just think about it' heading seems an attempt to appeal to personal belief, not an opinion based on numerical facts. Plus, the prominent photo of Tim Allen, a TV personality famous for his home renovation show connotes to the readers that he's an authority figure on building.

Figure 11 *Student's response to Eric Trump's Tweet*



This dissected fake news post (see Figure 11), displayed Ivan's CML skills breaking down the semantic correlations between the text content and the image. However, as Cao et al. (2020) assert most social media users find that fake news images are more visually striking and emotionally provocative than real news images. This finding from Cao and the level of visual misinformation found in the study using Eric Trump's Tweet is just one example among countless visually appealing fake news posts on social media, presents the argument that there is a need for CML educational response to effectively identify this misinformation, one which includes more of semantic visual analysis that this study provided.

5.5.4. Emotionally charged language

Another factor that influenced the students' choice of fake news selection, was emotionally targeted language. That is not surprising given Derakhshan and Wardle's (2017) claim that social networking sites are driven by the sharing of emotional content, and the proliferation and sharing success of fake news are associated with its persuasive, exaggerated and emotional characteristics which are strategically thought out and exploited by the creators of fake news (Baptista, & Gradim, 2020; Preston et al., 2021). Allen's example of fake news which misrepresented a Chinese education minister's message and was used by another author to benefit a private university in China, contained emotionally targeted language such as `Western universities are unfairly treating Chinese students during the COVID-19 pandemic' and the emotional message to Chinese ex-pat students 'time to return to China'. As Allen explained, which he translated into English words, was extreme emotional language aimed at appealing to the international student's emotional response. Such as Western universities have 'let down Chinese students' and 'Western universities have given up on Chinese students'. As Buckingham (2019) explains fake news usually diverts attention away from the facts and the truth, floods the readers with emotion and even feeds personal belief. At the time of the study, there was a heightened level of anxiety over the status of international students in Australia, particularly Chinese students, and this story would no doubt fuel such anxieties among this student segment.

The study purposely incorporated an explicit language analysis of the fake news posts operationalised through the fake news reading checklist, which analysed the language used in the headline and the language used by the author use to persuade the audience. This focus on language was in part due to it the educational setting of these study participants being conducted in a language classroom. And, also due to the importance to analyse language techniques used by the creators of fake news in influencing the belief of the readers of fake news.

5.5.5. Summary

This chapter has discussed the major themes which emerged during the study. It discussed the implications of the findings from the research and how this could potentially impact students in other educational sectors, for example apart from EAP students such as senior high school EAL/D students and mainstream high school students. Furthermore, what do these findings mean for the teaching of CML in a broader sense. Unfamiliarity with the

term CML was not an inhibitor to the participant teacher's knowledge and application of CML educational materials. This key finding could be applicable to other educators who similarly perhaps are unfamiliar with the term but as familiar with educational pedagogy that uses critical thinking. This finding coincides Kellner and Share's (2019) assertion that CML is a new teaching pedagogy, and is perhaps unknown among educators but because it is based on critical thinking foundations there is the potential for educators to make connections to this. Another key finding, that was expected and re-iterated what the literature is saying, is that there is a distinct lack of CML teaching materials. This was evident in Tracie's necessity to create her own CML teaching content, as there wasn't content readily available to her and she needed to create her own teaching materials. Moreover, the lack of CML represented in the national curriculum and ELICOS standards and teachers' and students' expectations not to cover CML in class compounds the rhetoric of inhibitors to teaching CML in formal education settings. To balance the argument, the counter findings that Fake news is known and there is an interest among the students is a positive for CML being adopted in formal education. More specifically in an EAP classroom, it was a positive finding that the CML framework overarching questions could be utilised and scaffolded into a comprehensible fake news reading checklist.

CHAPTER 6: CONCLUSION

5.5.6. Introduction

This chapter will discuss present conclusions and suggestions for future research. Also, summarise the study's key findings and their implications to teaching CML in ELICOS and mainstream schools. The main limitation of the study the study only focuses on one teacher's perspective (Tracie), and only five (5) EAP students in an in-tact class. However, to gain deep insight and in-depth understanding of teaching/learning familiarity, knowledge and application of CML the low participant numbers gave a thorough understanding of the educational intervention. The chapter will also discuss the further implications of the inhibitors and enablers of students gaining proficiency in CML skills in an EAP class setting when introduced to this type of critical pedagogy. Also, this chapter will expand on the educational intervention discussing the implications of the findings from the research and how this could potentially impact students in other educational sectors apart from EAP. Furthermore, what do these findings mean for the teaching of CML in a broader sense?

5.5.7. Expanding critical media literacy terminology impact

A key finding in the study was that Tracie reported being unfamiliar with the term critical media literacy. This represented a key finding because it adds weight to the argument by Kellner and Share (2019) that CML is a new, emerging form of literacy. However, regardless of the lack of knowledge of the terminology the study found evidence that critical media literacy was being adopted and used in her classroom, namely deconstructing what is culturally embedded on the covers of popular magazine and movie posters as previously discussed. Tracie was applying her extensive critical literacy knowledge in a media area of analysis, and she had no shortage of teaching materials (she developed) necessary to help her students critically analyse media texts. This is contrary to Notley's et al. (2017) study finding that most teachers (78%) in Australia cited they need more media educational materials specifically CML content to 'guide staff/students through the process', including weblinks, photocopiable sheets and 'age appropriate' resources to help them guide to their students (Notley et al. 2017 pg6). And, this was the main factor why so few Australian high school teachers (24%) surveyed have critically analysed news stories in classroom activities.

The term's knowledge among educators is perhaps not an issue to teachers incorporating this form of pedagogy in their studies. In that perhaps educators could easily connect this potential unknown wording of literacy to their pre-existing critical literacies. This study aimed to collect

data from a small number of teachers and former teachers, although only focusing on one teacher's perspective (Tracie), to gain an intimate insight and in-depth understanding of her familiarity, knowledge and application of CML. However, no conclusions can be realistically made only after interviewing one teacher, this is perhaps a limitation of the study. To answer the study's research question about what a larger amount of ELICOS teachers know and do when teaching EAP students to critically analyse media articles, it seems a larger study surveying more teachers and across more ELICOS schools could offer more of a quantifiable substantive finding to produce a more definitive answer to answering that research question.

Tracie and Jenny (previously) were both designing their syllabi based on the National Standards for ELICOS Standards Legislations (2018), in which as previously discussed there is no mention of 'critical media literacy' or 'media literacy'. This lack of inclusion of CML in the ELICOS curriculum reflects the insignificance of this form of literacy in this educational sector at the policy level. This absence in the curriculum is perhaps a leading factor in why Tracie was unfamiliar with the term CML. Looking further into the Secondary school curriculum, namely the Senior English as an Additional Language or Dialect Curriculum (ACARA, 2014) and mainstream Secondary school curriculum The Australian Curriculum, Assessment and Reporting Authority (ACARA, 2014) where there is similarly no mention of CML. This lack of representation in educational policy problematises the widespread adoption of this form of literacy. As Alford and Kettle (2017) argue representation (or lack of it in this case) in policy are important because they inform discursive opportunities at the official level by prioritising or omitting certain educational content. And, as Alford and Kettle (2017) explain officially recognised curriculum instils to teachers what is endorsed and legitimised by educational authorities, essentially what is the ideal guide to learn English.

However, at the state level, there is a positive sign of inclusion with the Victorian Department of Education's 'Literacy Teaching Toolkit' which includes a section on developing CML (DET, 2019). The government resources advocate examining the information the creator has included and encourages students/teachers to think about what information the creator has omitted (DET, 2019). This acknowledgement of this form of literacy signals a positive indication that could potentially have a flow-on effect and encompass more inclusion in educational policy in Australia.

5.5.8. Propagating CML teaching materials and awareness

This lack of CML teaching materials subsequently represents an inhibitor to students receiving quality critical media lessons, moreover the deficit of materials specifically tailored to the EAL/D students' segment. This was highlighted in the findings section, which mentioned in more detail, how Tracie had to construct all her own CML materials. It was an objective of this study to directly respond to this educational deficit and produce empirically tested fake news CML content ready for use for teachers. More specifically, 'to provide schools and teachers with a greater understanding about the teaching of critical media literacy'. And, this research aim was achieved in the study's fake news reading checklist, which is an originally constructed teaching material that has been empirically tested in the classroom.

Not only did this study provide the aforementioned reading checklist based on the CML theoretical framework. But, also lesson plans and teaching notes on authentic sources such as BBC video *The seven types of people who create and share fake news* on social media (Spring, 2020) and the Laura Ingraham's Fox News story. The research methodology employed in this study, Design-based research, which as previously explained allows the teacher/researcher to better understand the learning context and learning experiences through multiple iterations (Goff & Getenet, 2017; Plomp, 2013), allowed feedback from the teachers and students to really shape the fake news reading checklist, the main educational tool. The content, sequencing, mode of delivery and design of the specific teaching resources as in the wording and design of the fake news reading checklist. All this invaluable input led to producing empirically tested classroom teaching materials which is what CML researchers (Kellner & Share, 2015; Nettlefield, & Williams, 2018; Notley's et al., 2017) have been calling for. The educational materials produced from this study's educational interventions and refined through DBR iterations will add to the to the vital corpus of educational material on CML, the hopeful implication of these educational resources might lead to CML being more embraced in formal educational settings by ELICOS teachers.

The results of the research, referring to the CML educational program, has been presented in the leading ELICOS organisation in Australia, which is *English Australia* in their teaching resources Special Interest Group (SIG) named Bright Ideas. Also, there are plans to publish the

lesson plans accompanying the BBC video and Fox News lessons in Europe's leading authority for EAL/D teacher's materials namely the British Council teaching magazine *ET-Pro*. Disseminating these teaching resources among highly reputable teaching organisations will hopefully raise awareness of this form of literacy and supply teachers who are interested in this form literacy with useful teaching resources.

5.5.9. Further qualitative research potential

There was a general interest from all students regarding checking fake news on social media once the educational interventions began, despite the student's educational background and subsequent disposition to critical pedagogy in an EAP class the students were interested. This is a key finding because this coincides with Notley's et al. (2017) survey findings that young Australians have an interest in covering news content in class and are receptive to formal education to increase their ability in spotting fake news and finding out if news stories are true and can be trusted. Perhaps this finding coincides with the timing of the study, which was conducted in early 2020 around the first global outbreak of COVID 19 and there was an increased necessity to receive accurate information about prevention of contracting this infectious disease and need to understand government mandates and restrictions. Perhaps this made the students more inclined to check the accuracy of suspicious news reports on social media regarding COVID information. Despite the immediate and ongoing outbreak situation in early 2020, there was an interest in covering all topics of fake news even posts not related to the pandemic and they were engaged in moving through the stages of the educational intervention program. For example, the students were engaged in examining the *Fox News* story and completing all of the questions in the fake news reading checklist in not just the teacher led example but in fake news posts that they found as well.

This is a significant and positive finding because this willingness to check the validity of news posts on social media is a hurdle for adolescent learners according to Spelic (2016), who claims that young people are 'incurious', that they feel no need to pose questions about news on social media or inquire about its origins. This notion that young people harbor a disinterest to critically evaluate media authenticity is a concern for Spelic (2016), and there is also a claim that they desire is to remain ignorant as Weller's (2017) proposes social media users are in the

age of "unenlightenment" in which news consumers inhabit a space of predictable and seemingly safe incuriosity. This lack of desire for knowledge, erases the cultural development gained in the 20th century to pursue and validify knowledge. Whereas, the concept of unenlightenment is a devolution of this development of knowledge and essentially sees a reversal of this basic principle: as Weller states a 'wilful avoidance of knowledge' (Weller, 2017 p.74). These concepts of incurious and unenligthenment have been exhibited in adolescent social media behaviour in Herrero-Diz's et al. (2020) study, where the participants (Spanish teenagers) did not fact check news posts (which were fake news) before sharing them on social media. The concept of incuriosity and unenlightenment are potential inhibitors to among adolescents in Australia and by extension also EAP students, and this represents a factor to overcome in any critical media literacy class. However, educational interventions like in this study that are designed to foster CML skills of inquiry in fake news are likely to combat these worrying social trends of young social media users sharing fake news. It would be an interesting topic to research the sharing behaviour of this target population after completing a fake news analysis similar to this study which aims hone their CML skills, and conduct initial interviews and exit interviews exploring if and possibly how it changed their sharing behaviour. The results could better understand social media users' behaviour, prove the effectiveness of educational interventions in this area of study and specify which CML skills the participants applied in future fake news analyses. For example; if they noticed and examined the headline more, actively questioned the publisher/ author or checked what any news sources were saying about the social media post just to name a few the points which were covered in the fake news reading checklist.

5.5.10. Quantitative research potential

Future research into the area of sharing behaviour of Australian adolescents' could branch out into quantitative research, capturing their habits upon receiving news through social media. The aim of the research could be to better understand young Australian students' habits when receiving informative content through social media and the reasons why they choose to share it or not. This proposed research would largely be a replication of the Herroro-Diz (2020) study, and focus on the specific research questions to measure if are there are any differences in the adolescent student populations' sharing nature depending on receiving either fake or reliable content. And, whether these differences influence whether they share this content on social media. The proposed study could design a questionnaire to measure their online behaviour in

three areas (1) if they have a tendency in sharing content if it aligns with their interests, regardless of its truthfulness, and (2) if trust in the social media user, affects their determine if the content is credibility or not, and (3) if the appearance of credible information, regardless if it is fake news or not, is shared. This could produce more targeted results on what CML skills were uptaken upon completion of a CML educational intervention compared to a control group, in a possible experimental style of research methodology.

This research design, could produce more of a quantifiable finding about the sharing nature of adolescents in Australia. If this questionnaire could be administered to a large sample population it could perhaps produce a statically significant response to Notley's et al. (2017) survey findings that young Australians do or do not have confidence in spotting fake news and finding out if news stories are true and can be trusted. In Herrro-Diz's study the participants; 480 adolescents in Spain shared news stories that grabbed their attention, regardless of the journalistic integrity of the author or news source were being shared. It would be interesting to replicate this study in Australia and see if there is a similar trend among Australian adolescents.

5.5.11. Translanguaging for critical media literacy

Tranlanguaging was offered as a language learning aid for the EAP students because this study was conducted in a language proficiency classroom. Therefore, it makes sense to provide as many educational tools as possible to achieve that proficiency target, one of which was the practice of translanguaging. As previously mentioned, it is well reported among linguistic researchers (Jackson et al. 2017; Coleman et al. 2016; Mourassi, 2015; Garcia & Lin, 2017) the SLA benefits of translanguaging. For example, that if a language classroom incorporates the multilingual students use of L1 to describe something in L2 then this will facilitate a deeper learning of the target language according to Hesson et al. (2014). This SLA language learning concept was used to good effect in the study by allowing students the option to select a social media post in their native language, and allowing the students to explain their chosen social media posts using L1 words and/or cultural themes utilising translanguaging techniques. This process of interlinguistic transfer was explained in more detail earlier in the research design and findings section, however to briefly reiterate translanagugaing maximised the communication potential and facilitated deeper learning of the target language, which was expected and is well reported about in other classroom intervention studies (Galante, 2020; Liu et al., 2022; Saha, 2021). However, an unexpected finding was that translangauging language

techniques also positively affected CML skill acquisition, which appears to be new knowledge in the field of CML studies.

Allen, who like most other students chose to analyse a fake news post in his native language (Mandarin), and in the analysis, he illustrated an important aspect of the author's mis-use of emotive language when critically analysing fake news on social media. The propensity of fake news authors use of emotional language is well documented (Badillo, 2019; Ciampaglia & Menczer, 2018; Middaugh, 2019; Wardle & Derakhshan, 2017), and this emotional language is mis-used as Herrero-Diz et al. (2020) state to camouflage hoaxes. And, this was found to be the case where the usage of the Mandarin word used by the author, which directly translates into 'caution'. Although as Allen explained the word usage took on a more emotionally charged connotation of 'threat', and this sentiment was highlighted in the context of the threat posed to Chinese international students abroad at the beginning of the outbreak in May 2020 took on a more serious connotation of a threat to their lives. In Allen's chosen post, the author posing as a Chinese government official, was using what Wardle and Derakhshan (2017) describe as emotional language to camouflage a hoax. The hoax was that in fact the social media post was actually a student recruitment promotion by a private university in China to lure Chinese international students abroad back to that particular university. This activity paired with the translangauging affordances successfully drew attention to emotional language prevalence in fake news on social media which allows these EAP students to achieve educational targets in a CML class, which has wider implications to the successfully comprehension of CML skills in a formal education setting.

Understanding the context of how language is used is crucial for CML acquisition. The study's allowance of translaguaging facilitated students to not only fully internalise the meaning of the emotionally language in their native language firstly, but also fully understand the context the language was used and then how it could be interpreted in the target language. At the broader level this is a barrier to SLA according to several linguistics (Cummins, 1981; Thomas & Collier, 1997) due to the assertions that newly arrived English language learners typically take up to seven years before they fully understand the how the target language is used in context, and learning language in context requires extensive explicit language teaching according to Dörnyei (2009), Godfrold (2015) and Williams (2015). At the more specific CML level, it is the lack of EAL/D students understanding of cultural background knowledge and choice of the studied text in critical literacy tasks that is a barrier to understanding. As previously stated by

Alford and Kettle (2017) it is the text's construction and cultural assumptions which complicate this content for EAL/D students who might not be familiar with these because they might be newly-arrived learners. Therefore, translangauging provides this vital familiarity to the EAL/D students, with choosing to analyse news posts in their native language removing the barrier to understanding the text's construction and cultural assumptions necessary to engage in CML tasks.

By allowing the EAP students to explain their chosen social media post, using first language (L1) words and/or cultural themes utilising translanguaging techniques, was observed in the study to facilitate the students' comprehension of CML. Allen's ability to successfully understand the context of the emotionally charged language, firstly allowed him to understand the language in context which in turn allowed him to examine the author's intent to use emotional outrage language which is a key criteria in CML skills development. The juxtaposition of translanguaging and analysing fake news language facilitated the in-depth CML analysis, and it accesses a vital language tool possessed by EAP students whom are typically multilingual and multinational language users to aid them in understanding complicated target language in CML activities. The implication of this finding for further CML studies with EAL/D students is that translanaguaging can be used to facilitate students understanding of the context of the language which will allow those multilingual students more competently analyse the language features of fake new authors use of not just emotive language but also language that indicate the author's perspective.

5.5.12. The fake news reading checklist as an educational material

The extensive scaffolding given to the EAP students could apply to similar EAL/D students in mainstream English classes, or EAL/D students early on in their university studies or mainstream high school students. This is because the fake news reading checklist, which is this study's main scaffolding tool, was designed to support students regardless of their English proficiency level to learn and develop a potentially new concept of analysing fake news in a formal education setting and learn a new skill of CML. The six guiding questions and multiple branch questions in the fake news reading checklist (see Appendix C) extending the various tenets of CML theories were written to move students progressively toward a stronger understanding and, overall, greater independence in the learning process. This scaffolding

progression was displayed in the fake news reading checklist by starting the fake news analysis with examining the headline and what language (words, phrases, images, symbols) does the author use to persuade the audience – to obtain the author's perspective, before moving onto the more deeper analysis of the author's intention and wider implications such as 'Who do you think is advantaged and disadvantaged?' and speculating on why the author created or shared the fake news story. For example, the values, ideas or message they were trying to spread. The progression of the sequential guiding questions provides scaffolding which Gonulal and Loewen (2018) explain keeps the learning on target and maintains the learner's active engagement and focus on the particular goal. All of this extensive scaffolding could be incorporated into a mainstream high school's teachers lesson plan, where perhaps certain sequential steps could be left out for high achievers or at achievers and left in or added upon for students who need more scaffolding to complete the fake news reading checklist.

This extensive scaffolding of the context to aid comprehension for the EAP students in this study is similarly valuable for EAL/D students in the secondary school setting. The scaffolding utilised in this study facilitates understanding the context which reaffirms Alford and Kettle's (2017) statement that the text's construction and cultural assumptions are areas which EAL/D students could find complicated in mainstream classes because they might not be familiar with these, and might not have been exposed to such cultural assumptions in their cultural community or be a newly arrived immigrant. The scaffolding found to be effective in this study for assisting the EAP students grasp the cultural background knowledge and choice of the studied text could likewise be applied by a mainstream teacher in a subject English class to assist EAL/D students. They are both students whose first language is a language or dialect other than English and who require additional support to develop proficiency in Standard Australia English (SAE), and as mentioned above in the interests of this study both require extensive scaffolding and explicit instruction. The scaffolding required for the EAP students in this ELICOS setting could easily be transferable to EAL/D students in the secondary school context because as Gibbons (2009) states scaffolding supports EAL/D students' language and curriculum concepts learning needs specifically supporting learners in developing new knowledge, skills and understanding such as CML skills in critical fake news analysis.

The checklist questions underwent extensive scaffolding during the study based on student responses during the classroom intervention sessions. For example, scaffolding the language

of intent as in the transformation of the original checklist question ‘What do you think of this title?’ which was regarded as too vague by the students. It was evident to see from the in-class observations that they did not understand that the line of questioning was aiming to analyse the authors intention and were being asked to examine the wording of the title. Explicit instruction, which is promoted by Archer and Hughes (2010) as being an effective and efficient teaching form of instruction was required. And after this observation of the student’s difficulty, and consultation with Tracie the wording was scaffolded applying an explicit instruction form of scaffolding which was reworded to the following; ‘What language (words, phrases, images, symbols) does the author use to persuade the audience’. This rewording applied explicit instruction by making the instruction more direct and success orientated which as Archer and Hughes (2010) state has been shown to promote achievement for all students and foster engagement. The scaffolding of the fake news checklist questions, which applied explicit instruction was aimed at providing a classroom tool that was highly practical and accessible resource to give specialised teachers (EAP, EAL/D) or general teachers in a secondary school context explicit instructions in any class.

The fake news reading checklist is suitable in mainstream secondary classes not only catering for EAL/D students with scaffolding and explicit instruction but also facilitating a broader student diversity. Explicit instruction which is a systematic teaching instructional approach that pertains explicitly sets out learning directions and learning objectives (Ellis & Worthington, 1995; Rosenshine & Stevens, 1986), this form of teacher instructions is most beneficial for low- performing students and students in special education according to Hall (2002). The fake news reading checklist contains explicit instructions in the strategies to be taught to the students, for example in the ‘Conceptual understandings’ in the Critical Media Literacy Framework. This would allow teachers to apply explicit instructions in their teaching to diverse students to include a critical approach to teaching/learning media strategies. Another area of explicit instruction that could be of benefit to mainstream high-school teachers seeking to include diverse students is by explicit instruction is the delivery of the checklist instructions, for example the sequenced wording of the activity for example questions analysing the author’s credibility and words and images choices. The affordances of the explicit instructions in the fake news reading checklist appear to have broad reaching educational benefits not only for EAP students in the ELICOS sector but also EAL/D students in the mainstream secondary school education setting plus students with diverse learning needs as well.

The possible constraints of the fake news reading checklist applicability in a mainstream English class in the Secondary School context is that the classroom materials might be too easy for the EAL/D students. The fake news reading checklist and other educational materials were designed and tested on EAP students who are typically newly arrived immigrants which are likely to be at a lower-level of English proficiency than the EAL/D students who have typically entered the secondary school system having received intensive English training prior to entering school and as a result requiring less scaffolding and explicit language instruction. Newly arrived EAL/D students who are at a beginner or emerging level of English have access to The New Arrivals Program (NAP) which supports them with successful entry to Australian schools (Department of Education, 2020), therefore there is a process to ensure EAL/D students have at least mastered an intermediate level of English before entering schools. Whereas EAP students or may or may not have received ELICOS and /or English as a Foreign Language (EFL) lessons in their home country. The more on average more advanced English proficiency of EAL/D students in mainstream schooling as opposed to newly arrived EAP students could problematise the teaching instructions and fake news reading checklist appropriacy in mainstream classes.

Although perhaps the constraints of the fake news reading checklist applicability in mainstream secondary schools mighty not be due to the typically more advanced the English level of the EAL/D students, rather it could be their age. A significant finding in this study was that English proficiency was not a leading factor on student's responsiveness to fake news CML tasks, rather age was. Tracie stated a potential inhibitor to students mastering CML skills was age not the students' English level, a statement corroborated by study's research participants, where the oldest student Jess aged 31 (at the time of the study) was the most engaged in the study compared to the younger students aged 18-22 year old's respectively. Similar studies support argument, Khana and Idris' (2019) found that age was a factor in how receptive students are to learning CML skills from Indonesian internet users (n = 396). With slightly younger EAL/D students in the senior years of secondary schooling compared to older EAP students in ELICOS, age might be an inhibitor to the successful application of the fake news reading checklist and subsequent CML teaching materials.

The conception, development and refinement of the fake news reading checklist was to fulfill an aim the research to produce empirically tested classroom CML materials. The multiple DBR iterations allowed the teacher/researcher to construct the fake news reading checklist that in the

earlier paragraphs explained can provide extensive scaffolding is easy to enough for other teachers to use, the considerable scaffolding generated from the educational sessions was aimed at allowing EAP students to successfully acquire the required CML skills to complete this and any similar fake news on social critical analysis task.

5.5.13. The BBC introductory video and fox news story lessons

The introductory lessons were firstly aimed at introducing the concept of fake news on social media, and secondly also giving the students necessary tools to complete the fake news reading checklist later on. Although, these two lessons could be offered as stand-alone activities for teachers who are not interested in going into the same amount of in-depth analysis of fake news or do not have the lesson time available to devote to such a lengthy activity in their syllabus.

The educational program was designed to offer the students a variety of instructional techniques used to move them progressively toward a stronger understanding and, overall, greater independence in the learning process (Gonulal & Loewen, 2018). The students were first introduced to a descriptive activity on the seven most common types of people who create and share fake news on social media form of instruction (BBC video). Then a teacher led analysis of a carefully chosen fake news story using an analytical form of instructional scaffolding technique (Fox News story). This was aimed at moving students independently to apply their newly acquired CML Skills to independently locate and correctly identify a fake news story to analyse. To finally, constructing a social media response on their chosen fake news story designed to display a greater independence in the learning process. These variety of instructional techniques were designed to prepare students for the last and most demanding CML skill of identifying and selecting a fake news story, to as Gonulal and Loewen (2018) propose allow the teacher to gradually shift the responsibility of the learning process to the student. An example of this was in the case of the introductory lesson which used the BBC video on the 7 most common types of people who create and share fake news on social media this vocabulary, for example ‘scammer, joker, insider etc’ was incorporated into the fake news reading checklist.

However, as sole lessons, the BBC introductory lesson which features the video on seven most common types of people who create and share fake news on social media could be used as a

lone purpose to introduce the concept of fake news on social media and the basic motivations why these posts are created and shared. Likewise, the Fox News lesson notes could be a condensed down into a brief lesson with minimal analysis questions aimed at simply exposing students to a blatant and comprehensible example of fake news on social media. This classroom content aim provide teachers with appropriate teaching instruction, moving students towards independence in understanding the fundamentals of CML skills in doing so giving the students confidence in knowledge and understanding of fake news in social media.

5.5.14. Fake news reading checklist based on theoretical foundations

The fake news reading checklist is also a valuable educational tool for teachers seeking to concisely incorporate the collective wisdom of Kellner and Share's CML framework. Kellner and Share, who are constructors of the CML framework and wrote 'The critical media literacy guide: Engaging media and transforming education' (2019) book are widely regarded as the leading authority on CML.

The educational merit of this framework's knowledge is evident to see as a documentary analysis combining the collective knowledge from 52 relevant sources on CML. However, as previously mentioned in its original form it is quite theoretically dense and not entirely comprehensible enough for all students. Tracie (experienced teacher) and I reached a consensus that it would too theoretically impenetrable for the EAP students who participated in this study and needed to be edited to facilitate the EAP students in this study. The workshops aim were to merge the gap between theory and educational practice in the theoretically thick CML framework, which was refined into a domain specific form for fake news stories on social media. And after multiple educational iterations which included students input the CML framework it was transformed into an empirically tested teaching tool which maintained the CML framework theoretical foundations.

The fake news reading checklist incorporated the CML frameworks' vital critical literacy educational content of identifying assumptions, detecting bias, checking the author etc. The implications of the theoretically based fake news reading checklist for practice is that these critical thinking skills, which are valuable for EAP or senior high school students seeking to pursue further education, are incorporated into the reading checklist. As previously mentioned, Australian tertiary education institutions values critical thinking skills as an asset to their

school/program, and gaining these critical skills are essential to the student's success in higher education (Wilson, 2016). This CML framework was transformed into the fake news reading checklist to provide these EAP students with a critical reading tool to hone their critical thinking / reading skills which were designed to pique their interest in CML and expose them to critical pedagogy practices they would likely encounter in Australian universities after they graduate from the EAP course.

5.6. Effectiveness of Design-based research in educational studies

This doctoral study's objective was to observe and capture the students' experiences on being gradually exposed to critical pedagogy on fake news and documenting their reactions, and how DBR could be utilised in proving these students with CML skills necessary to analyse fake news in a formal education setting. In DBR, researchers often take the researcher/teacher role according to Juuti (et al., 2016) to allow them to perform a participant observation role to understand the classroom settings, social and psychological atmosphere, pupils' motivation, attitudes towards learning topics and students' experiences. This twin role was effective in this study because it allowed me as teacher, using an intact class, to collaborate intimately with participants at the research site to intimately understand the classroom atmosphere and explore their attitudes and motivations. Prior and during the educational interventions I had access to the students being their regular teacher and could interact with the participants students through informal discussions and conducting the educational interventions allowed me to construct a rich, detailed description of this educational setting, for example understanding of the students' views about a fake news story that is relevant to their lives is represented in the media and how CML is necessary to deconstruct fake news messages. This perhaps would not be possible if the study was conducted in a controlled laboratory setting such as experimental research design.

The students were willing to share in what context they had witnessed fake news, for example Jess shared her experience with bogus health/diet information on social media, and even felt comfortable voicing her reluctance to the educational intervention because it was going to take class time away from English test preparation activities. This ranged to other students expressing their conviction to learning CML skills to combat fake news with Ivan's comment 'if we don't check fake news, then fake news wins' (Ivan, 25th May 2020). These in-depth admissions are testament to adopting a research/teacher role in educational studies. These

findings reflect advocates of DBR (Barab & Squire, 2004) who propose that conducting research in context, rather than in a controlled laboratory setting, yields more authentic and useful knowledge and that this produces research validity as a result, which can more accurately inform practice (Anderson & Shattuck, 2012). The students having familiarity with the teacher/researcher seemingly allowed them to earnestly express their views on fake news and its educational merit, and importantly why or why not it should be taught in an EAP class. Improving classroom practices that are not detached from practice is what this research was seeking to achieve, and incorporating a DBR teacher/research style role has the potential to reflect an accurate reflection of student views towards educational interventions which could be replicated in similar CML studies or other critical pedagogy studies in which there might be resistance from students.

Designing an effective education intervention of CML skills required understanding what were the inhibitors and enablers with the participants in this study. The study utilised the strengths of having a familiar teacher/research role not only with the students, but also the participating teacher who likewise drew on her experiences of teaching CML skills in various educational contexts. The students revealed their aforementioned resistance to covering CML tasks in class due to their own preconceived notions of what a university preparation course should entail which was there main inhibitor to engaging in this study. And, Tracie identified student's age as a main factor to inhibiting CML studies in class. This was a surprising finding because there are limited studies presenting this line of argument with the exception of Khana and Idris' (2019) study. The results from this study's findings could act as a case study to gain a better understanding of a using CML to analyse fake news on social media which can be used by teachers to elaborate on an extensive range of inhibitors and enablers.

Also, the success of implementing DBR practices in this study which has educational benefits for similar studies was immersing the participants in the study who added value to the educational materials. The participants in the study, which were the students and teachers overall greatly improved the quality of the educational materials and the educational intervention application. The participant teacher, Tracie, proved to be an excellent critical friend of the study lending her years of teaching expertise in educational workshops. Her role in the study was elevated from not just an informant to be interviewed once or twice, but expanded to treated as a collaborator prescribing to DBR research methodology (Chan et al., 2006; Wang & Hannafin, 2005). Involving her so closely in the study as a collaborator allowed her to impact the study more by shaping the nature of the educational materials and even

direction of the educational intervention itself really tapping into her wealth of CL and CML teaching knowledge. In DBR, researchers usually collaborate with practitioners in all phases of their research (in this study it was the pre-invention workshops and follow-up teacher interviews), and they treat these practitioners as research partners because they respect their knowledge of the context and the expertise these practitioners have acquired (Barab & Squire, 2004; Hoadley, 2004; MacDonald, 2008). This was why Tracie the senior ELICOS teacher played such a prominent role in the findings and was given multiple followed up interviews. Adopting DBR research practices by giving the participant teacher Tracie a collaborator role fully utilised her educational wisdom and provides a rationale for its inclusion in other educational studies similarly looking to design educational materials for educational interventions.

One of the main benefits of DBR in educational studies is the ability to repeatably test educational materials in class to improve practice and to fully produce empirically tested classroom materials. In this study, during the intervention sessions, the fake news reading checklist was formed and refined largely based on the participant students and participant teachers' comments. This effectiveness of conducting DBR iterations is evident to see with the participants' ideas in DBR being considered as important as the ideas of the researcher (Barab & Squire, 2004; Chan et al., 2006; Collins et al., 2004; Zaritsky et al., 2003). The participant teacher and students contributed to the wording and sequencing of the fake news reading checklist creating variations in the educational tool and as the teacher/researcher I overserved how these changes affected learning. As Samarapungavan et al. (2011) explain, DBR researchers document and try to understand the reasons for such variations in educational materials and how they affect student learning which is a real asset of this research style to better inform teaching practices. The fake news checklist underwent many versions and alterations through what DBR refer to as cycles of testing, evaluation, and refinement to effectively empirically test this educational tool in class. DBR's systematic and flexible design process was highly effective for refining the CML framework, which was original structure of the fake news reading checklist, into a classroom friendly tool. This CML framework, which is quite theoretical and was not intended as a classroom tool, was empirically tested at the participating school and transformed into the more (EAP) student-friendly fake news reading checklist, favouring DBR multiple interviews and iteration reviews to make it effective. A single experimental research design perhaps would not have been as effective as it was evident to see from the classroom interventions that transforming the CML framework into a classroom

tool needed multiple sessions to make it ready for student use. Teachers seeking to transform other theoretically dense concepts into classroom friendly materials could greatly benefit from applying a similar DBR iteration processes following this studies systematic, flexible and potentially multiple intervention sessions, followed by iterative review, analysis, design, development and implementation.

This study's aim was to respond to the call to produce CML educational materials. Kellner and Share (2019) state CML, as an educational pedagogy is still in its infancy in the United States of America, and this is reflected by Notley's survey findings that most teachers (78%) in Australia stated that they need more CML support and resources content. Another distinctive feature of this research methodology is its research aims to produce a tangible outcome. The DBR researcher's aim is to produce meaningful and effective educational products tailored for a specific context that can be transferred and adapted (Barab & Squire, 2004). As previously mentioned this study's tangible outcome was the fake news reading checklist and accompanying materials. The study fulfilled this aspect of DBR by designing a fake news reading checklist to guide teachers and students through the process of critically analysing fake news on social media. The lack of resources is a very common educational problem according to Maffea (2020), resulting in students not be being able learn to their fullest potential and causing distress in teachers. This research methodology should be adopted by more researchers seeking to produce educational resources. As Bell (2004) explained, the range of DBR educational products can be quite broad for example the development and refinement of a semester-long curriculum and/or instructional techniques for a particular subject. To create an impact in education, educational researchers could adopt DBR research practices by focusing on creating resources.

5.7. Effectiveness of practice architectures in educational studies

Collecting the 'sayings, doings and relatings' data in this study ustiling practice architectures was effective in gaining a holistic understanding of the inhibitors and enablers of teaching CML to analyse fake news. Understanding the exact nature of the resistance to CML in an EAP class due to the curriculum devotion to English proficiency tests was found to be a multifaced problem, likewise students' ability to be persuaded to engage in the CML educational

intervention had many different aspects. Teacher and student acceptance, and facilitating engagement from the EAP students was found to be shaped and delivered by the values of all the key stakeholders involved. This study found the inhibitor is affected by the broader community such as the students' prior educational institutions in the students' home countries and their ongoing educational institutions in Australian tertiary institutes. It was multifaced because the inhibitors which were influenced by the student's educational background, namely their previous schools, was a key finding in the study. The students who experienced a more international school educational background were more receptive to critical pedagogy. This resistance was overcome by their ongoing (Australian) university educational institutions importance on critical literacy skills. A key finding in the study was that the students were persuaded of the educational merit of CML practices when they were shown course synopsis that contained critical literacy.

This separate but connected findings on educational intuitions reflects 'relating' in practice architectures by understanding the relationships between the participants which occurred simultaneously in a complex pattern of interactivity. The pedagogical stance taken by their previous and ongoing educational institutions were differing, they explained their preconceptions of what an EAP class should entail, yet at the same were convinced that the critical literacy content would be a worthwhile academic skill as well. The student's acceptance of the educational intervention and their engagement in the program required applying the theoretical knowledge of practice architectures by understanding of the entire social practice of these students (Kemmis & Grootenboer, 2008). Analysing the study's findings using practice architectures was effective in understanding the everyday educational context and nature of CML learning for these EAP students.

Practice architectures also gels well with DBR in terms of seeking a thorough understanding of the educational context. This is because DBR researchers acknowledge that the educational interventions are shaped and delivered by the values of the key participants (e.g., students and teachers) and the broader communities (e.g., schools, districts) in which they are situated (Berland, 2011). The student's educational insutuitions was explored in the study as mentioned in the previous paragraph, but also values the values of the EAP teachers, academic manager and principal. Another EAP teacher and roles which directly impact the teachers as in academic manager and principal were all asked on their values towards CML in exploration of how the fake news educational intervention would be shaped in this study, not to mention a critical reflection of myself and my educational background to explore how this educational

intervention could be delivered. These agendas were captured through sayings, doings and relatings all 'hang together' according to Hemmings et al., (2013), these factors make practice architectures more suitable in education settings for understanding the everyday educational context and nature of learning for which this study was aiming to explore.

Practice architectures was effective in this study to explore a social understanding of the students' views about CML of a fake news story, and the findings showed how this was relevant to their lives in terms of educational pursuits which is an important finding for future studies in CML and how to motivate potentially reluctant students. Also practice architectures proved suitable for researchers conducting qualitative research, because this form of data analysis aligns with qualitative research aims to constructing a rich, detailed description of educational settings.

5.8. Summary

The submission of this thesis and subsequent publications and presentations could aid the familiarisation of CML. And, in doing so add to the term's momentum created by Victorian Department of Education's 'Literacy Teaching Toolkit' and potentially increase the familiarity of this form of literacy in the Australian education space with the goal of getting it represented in more educational polices. In addition to adding to the professional domain, another goal of the study was also to develop CML educational tools that would be conducive to students' CML skills acquisition. This study did deliver on that goal by conceiving, shaping and honing the fake news reading checklist. The DBR methodology which contained multiple iterations certainly facilitated that process; benefiting from a designing phase allowing the educational materials to be workshopped allowing them to ready for in-class use, testing and refinement phase to implement and adjust the materials with the students in-class, and finally a reflection phase eliciting students thoughts on the educational tools and overall effectiveness. This educational intervention achieved the aim of DBR research methodology to produce an educational tool, and in doing so responded to the call from CML researchers (Notley et al. 2017) to promote empirically tested CML educational tools. This fake news reading checklist and subsequent support materials has the potential to alleviate stress in teachers who are needing material in class and allow EAP students and EAL/D students in a mainstream secondary school setting and more with the materials to reach their full potential in gaining valuable CML skills to benefit their ongoing studies. Further, the CML skills that this study

extolled could assist adolescents to become more media literate to avoid misinformation and by extension avoid sharing fake news on social media to hinder the proliferation of fake news being shared on social media.

There are various differences between EAP students and EAL/D students in mainstream secondary school classes. Although, they both have a desire to cover this content in class, because they are both roughly in the same age bracket being mature enough to appreciate this form of critical questioning pedagogy. Both student segments are in need of more critical pedagogical exposure in education. EAP students who are lacking in critical pedagogical exposure to EAP students and this form of literacy are not being addressed in ELICOS programs with the majority of the curriculum is devoted to traditional academic literacies (e.g., academic writing, presentation skills, proficiency test preparation), tending to neglect critical pedagogy (Hellsten, 2013; Wilson, 2016). And, there is an achievement gap experienced by EAL/D students in Australian schools, who are often relegated to remedial curriculum programs and didactic pedagogical approaches (Allison, 2011). Therefore, both student segments could greatly benefit from targeted CML educational interventions to expand their proficiency in more critical pedagogy.

The student's engagement towards covering social media in an educational setting was not surprising given their age groups' fondness for using social media and using this form of media as a news source. The adolescents desire to cover social media analysis in a formal education setting is not surprising because it has been found by numerous researchers (Alvermann & Hagood, 2000; Moje et al., 2000; Nettlefield, & Williams, 2018) Whereas, adolescents desire to analyse and more importantly combat fake news on social media has not been so extensively researched and adds to the rebuttable against youth being 'incurious' according to Spelic (2018) about checking the authenticity of news on social media. This finding has positive ramifications in addressing the (unknown) sharing of fake news on social media phenomenon (Herroro-Diz, 2020). Moreover, it adds to the emerging body of research (Navera et al. 2019; Saunders et al., 2017) adopting an educational response to combat the proliferation of fake news on social media and literature on the merit of fostering CML skills among adolescents.

The study also extends to the emerging field of educational research literature examining the sharing nature of fake news on social media among adolescents. This promising area of research is hailed as the best response to the fake news on social media (Buckingham, 2019; Kellner & Share, 2019; Schulten, 2015), and as a result would most likely be of interest to

educators and curriculum designers. With adolescents being identified as the main perpetrators of (unknowingly) sharing fake news posts on social media (Herroro-Diz, 2020), whilst at the same time claiming they possess proficient CML skills to identify fake news and deny sharing it on social media. Both the Herroro-Diz (2020) study and this study' found evidence on the contrary with participants stating they diligently check fake news but if fact do. This reaffirms the need to explore this issue further in formal education settings. Honing CML is best response to spotting and debunking fake news on social media because it is a proactive response to fake news rather than passively relying on fact checking websites. Also, harnessing CML skills incorporating critical thinking will as argued through this thesis skills will help students to analyse, interpret, evaluate and make judgement about all the content they consume on social media which is valuable skill in the modern society.

REFERENCES

Abdallah, M., & Wegerif, R. B. (2014). Design-Based Research (DBR) in Educational Enquiry and Technological Studies: A Version for PhD Students Targeting the Integration of New Technologies and Literacies into Educational Contexts. Online Submission.

Abednia, A., & Izadinia, M. (2013). Critical pedagogy in ELT classroom: Exploring contributions of critical literacy to learners' critical consciousness. *Language Awareness*, 22(4), 338-352. https://doi.org/10.1080/09658416.2012.733400

ACARA. (2014). Australian curriculum. http://www.australiancurriculum.edu.au/Home

Akcam, B. K., Guney, S., & Cresswell, A. M. (2019). Research design and major issues in developing dynamic theories by secondary analysis of qualitative data. *Systems*, 7(3), 40. https://doi.org/10.3390/systems7030040

Alford, J., & Kettle, M. (2017). Teachers' reinterpretations of critical literacy policy: Prioritizing praxis. *Critical Inquiry in Language Studies*, *14*(2–3), 182–209. https://doi.org/10.1080/15427587.2017.1288067

Alford, J., & Windeyer, A. (2014). Responding to national curriculum goals for English language learners: Enhancing reading strategies in junior high school content areas. *Journal of Immersion and Content-Based Language Education*, 2(1), 74-95. https://doi.org/10.1075/jicb.2.1.04alf

Allen, D. E., & McAleer, M. (2019). Fake News and Propaganda: Trump's Democratic America and Hitler's National Socialist (Nazi) Germany. *Sustainability*, 11(19), 5181. https://doi.org/10.3390/su11195181

Allison, D. (2011). Learning our literacy lessons : EAL/D students, critical literacy and the national curriculum. *Australian Journal of Language and Literacy*, *34*(2), 181–201. https://doi.org/10.1007/BF03651855

Alvermann, D. E. (2017). Social media texts and critical inquiry in a post-factual era. *Journal of Adolescent & Adult Literacy*, 61(3), 335-338. https://doi.org/10.1002/jaal.694

Archer, A. L., & Hughes, C. A. (2010). *Explicit instruction: Effective and efficient teaching*. Guilford Publications.

Armstrong, S., Buckley, S., Lonsdale, M., Milgate, G., Kneebone, L. B., Cook, L. & Skelton, F. (2012). Starting school: a strengths-based approach towards Aboriginal and Torres Strait Islander children.

Armstrong, M., Dopp, C., & Welsh, J. (2022). Design-based research: What is DBR, why might one do it, and how does one do it well?. Education research: Across multiple paradigms. Provo, UT: EdTech Books. https://edtec hbooks. org/educa tion_resea rch/design_based_research.

Ashley, S. (2015). Media Literacy in Action? What Are We Teaching in Introductory College Media Studies Courses?. *Journalism & Mass Communication Educator*, 70(2), 161-173. https://doi.org/10.1177/1077695815572191

Anderson, T., & Shattuck, J. (2012). Design-based research: A decade of progress in education research?. *Educational researcher*, 41(1), 16-25. https://doi.org/10.3102/0013189X11428813

Australian Human Rights Commission. (2022). Right to education | Australian Human Rights Commission. Humanrights.gov.au. https://humanrights.gov.au/our-work/rights-and-freedoms/right-education

Badillo, A. (2019). La sociedad de la desinformación: propaganda,«fake news» y la nueva geopolítica de la información. Documento de trabajo, 8, 2019-14.

Bakker, A., & Van Eerde, D. (2015). An introduction to design-based research with an example from statistics education. In Approaches to qualitative research in mathematics education (pp. 429-466). Springer, Dordrecht.

Bali, M. (2017). Fake news: Not your main problem. Retrieved from https://dmlcentral. net/fake-news-not-main-problem/#.WGxNy-N7HsA.twitter

Barab, S., & Squire, K. (2004). Design-based research: Putting a stake in the ground. *The journal of the learning sciences*, 13(1), 1-14.

Barbour, R. S. (2014). Analysing focus groups. The SAGE handbook of qualitative data analysis, 313-326.

Baptista, J. P., & Gradim, A. (2020). Understanding fake news consumption: A review. *Social Sciences*, 9(10), 185. https://doi.org/10.3390/socsci9100185

Berland, L. K. (2011). Explaining variation in how classroom communities adapt the practice of scientific argumentation. *Journal of the Learning Sciences*, 20, 625-664. https://doi.org/10.1080/10508406.2011.591718

Bharuthram, S. (2012). Making a case for the teaching of reading across the curriculum in higher education. *South African Journal of Education*, *32*(2), 205-214.

Biggs, J., & Tang, C. (1999). Teaching for quality at university. Society for Research into Higher Education, Buckingham, England.

Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university*. McGraw-hill education (UK).

Bingimlas, K. A. (2017). Learning and Teaching with Web 2.0 Applications in Saudi K-12 Schools. *Turkish Online Journal of Educational Technology*-TOJET, 16(3), 100-115.

Bouchard, D. (2015). Brain readiness and the nature of language. *Frontiers in Psychology, 6*, 1-16. doi:10.3389/fpsyg.2015.01376

Bovet, A., & Makse, H. A. (2019). Influence of fake news in Twitter during the 2016 US presidential election. *Nature communications*, 10(1), 1-14.

Boyd, D. (2017). Did media literacy backfire?. *Journal of Applied Youth Studies*, 1(4), 83-89.

Brannen, J., & Pattman, R. (2005). Work-family matters in the workplace: the use of focus groups in a study of a UK social services department. Qualitative Research, 5(4), 523–542. https://doi.org/10.1177/1468794105059508

Brown, A. L. (1992). Design experiments: theoretical and methodological challenges in creating complex interventions in classroom settings. *Journal of the Learning Sciences*, 2(2), 141–178.

Brown, S. (2015). Using focus groups in naturally occurring settings. *Qualitative Research Journal*.

Brown, C., Taylor, C., & Ponambalum, L. (2016). Using design-based research to improve the lesson study approach to professional development in Camden (London). *London Review of Education*.

Buckingham, D. (2019). Teaching media in a 'post-truth'age: fake news, media bias and the challenge for media/digital literacy education/La enseñanza mediática en la era de la posverdad: fake news, sesgo mediático y el reto para la educación en materia de alfabetización mediática y digital. Cultura y Educación, 31(2), 213-231.

Bulger, M., & Davison, P. (2018). The promises, challenges, and futures of media literacy. *Journal of Media Literacy Education*, 10(1), 1-21.

Burns, A. (2014). Professional learning in Australian ELICOS: An action research orientation. *English Australia Journal*, 29(2), 3-20.

Bylund, J. (2011). Thought and second language: A Vygotskian framework for understanding BICS and CALP. *Communique, 39*(5), 4-6.

Cai, G., & Cook, G. (2015). Extensive own-language use: A case study of tertiary English language teaching in China. *Classroom Discourse*, 6(3), 242-266. https://doi.org/10.1080/19463014.2015.1095104

Cao, J., Qi, P., Sheng, Q., Yang, T., Guo, J., & Li, J. (2020). Exploring the role of visual content in fake news detection. Disinformation, Misinformation, and Fake News in Social Media, 141-161.

Cepeda, E. J. (2016). Media illiteracy poses a 'threat to democracy'. Albuquerque Journal. Retrieved from https://www.abqjournal.com/900361/media-illiteracy-poses-a-threat-todemocracy.html

Charlton, E. (2019, May 21). How Finland is fighting fake news— In the classroom. World Economic Forum. https://www.weforum.org/agenda/2019/05/how-finland-is-fighting-fakenews-in-the-classroom/

Chan, T. W., Roschelle, J., His, S., Kinshuk, K., Sharples, M., Brown, T., . . . Hoope, U. (2006). One-to-one technology enhanced learning: An opportunity for global research collaboration. Research and Practice in Technology Enhanced Learning, 1, 3-29.

Chanock, K., Horton, C., Reedman, M., & Stephenson, B. (2012). Collaborating to embed academic literacies and personal support in first year discipline subjects. *Journal of University Teaching and Learning Practice*, *9*(3), 3.

Chen, F., Tsai, S. C., & Tsou, W. (2019). The application of translanguaging in an English for specific purposes writing course. *English Teaching & Learning*, 43(1), 65-83.

Cho, H. (2018). Tensions and Challenges in Enacting Critical Literacy Pedagogy. In Critical Literacy Pedagogy for Bilingual Preservice Teachers (pp. 161-190). Springer, Singapore.

Clements, D. H., & Battista, M. T. (1990). The effects of Logo on children's conceptualizations of angle and polygons. *Journal for Research in Mathematics Education*, 21(5), 356-371.

Collins, A. (1990). Toward a design science of education (Report No.1). Washington, DC: Center for Technology in Education.

Collins, A., Joseph, D., & Bielaczyc, K. (2004). Design research: Theoretical and methodological issues. *Journal of the Learning Sciences*, 13(1), 15–42.

Compton, J. (2013). 'Inoculation theory'. *The SAGE handbook of persuasion: Developments in theory and practice*. 220-236.

Condon, W., & Kelly-Riley, D. (2004). Assessing and teaching what we value: The relationship between college-level writing and critical thinking abilities. *Assessing Writing*, 9(1), 56-75. https://doi.org/10.1016/j.asw.2004.01.003

Corser, K., Dezuanni, M., & Notley, T. (2022). How news media literacy is taught in Australian classrooms. *The Australian Educational Researcher*, 1-17.

Crookes, G., & Lehner, A. (1998). Aspects of process in an ESL critical pedagogy teacher education course. *Tesol Quarterly*, 32(2), 319-328.

Creswell, J. W. (2014). *A concise introduction to mixed methods research*. SAGE publications.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Cross, K.P. (1999). Learning is about making connections: The Cross Papers #3. League for Innovation in the Community College.

Cross, R. (2011). Monolingual curriculum frameworks, multilingual literacy development: ESL teachers' beliefs. The Australian Journal of Language and Literacy, 34(2), 166-180. Cummins, J. (1981). Age on arrival and immigrant second language learning in Canada: A Reassessment1. *Applied linguistics*, 2(2), 132-149.

Cusworth, R. (1994). What Is a Functional Model of Language? PEN 95.

de Lange, T. (2011). Formal and non-formal digital practices: institutionalizing transactional learning spaces in a media classroom. *Learning, Media and Technology*, 36(3), 251-275.

Davies, M., & Barnett, R. (Eds.). (2015). *The Palgrave handbook of critical thinking in higher education*. Springer.

Design-Based Research Collective. (2003). Design-based research: An emerging paradigm for educational inquiry. *Educational researcher*, 32(1), 5-8. https://doi.org/10.3102/0013189X032001005

Department of Education and Training. (2022). The ESOS legislative framework https://www.education.gov.au/esos-framework/esos-legislative-framework

Department of Education and Training. (2019). Literacy teaching toolkit. https://www.education.vic.gov.au/school/teachers/ teachingresources/discipline/english/literacy/ Pages/default.aspx

Devereux, L., & Wilson, K. (2008). Scaffolding literacies across the Bachelor of Education program: an argument for a course-wide approach. *Asia-Pacific Journal of Teacher Education*, 36(2), 121-134.

Digby, W. (2005) Approaches to the challenge of student cultural diversity: Learning from scholarship and practice. In J. Fanghanel and D. Warren (eds.), *International*

Conference on the Scholarship of Teaching and Learning: Proceedings 2003 and 2004. London: Educational Development Centre, City University, 237-253.

Dobinson, T., & Buchori, S. (2016). Catering for EAL/D students' language needs in mainstream classes: Early childhood teachers' perspectives and practices in one Australian setting. *Australian Journal of Teacher Education* (Online), 41(2), 32-52.

Dörnyei, Z. (2007). *Research methods in applied linguistics*. New York: Oxford University Press.

Dörnyei, Z. (2009). Individual differences: Interplay of learner characteristics and learning environment. *Language learning*, 59, 230-248.

Dyson, R. A. (1998). Media Literacy: Who Needs It and What Does It Mean?. *Gazette* (Leiden, Netherlands), 60(2), 155-166.

Durnová, A. (2019). Unpacking emotional contexts of post-truth. *Critical policy studies*, 13(4), 447-450. https://doi.org/10.1080/19460171.2019.1670222

Easterday, M. W., Lewis, D. R., & Gerber, E. M. (2014). Design-based research process: Problems, phases, and applications. Boulder, CO: International Society of the Learning Sciences.

Ellis, E. (2005). *Bilingual students-monolingual teacher.* Paper presented at the Actas do Simposio Internacional sobre o Bilinguismo, Vigo, Spain.

Ellis, E. S., & Worthington, L. A. (1994). Research Synthesis on Effective Teaching Principles and the Design of Quality Tools for Educators. Technical Report No. 5.

Emler, T. E., Zhao, Y., Deng, J., Yin, D., & Wang, Y. (2019). Side effects of large-scale assessments in education. ECNU Review of Education, 2(3), 279-296.

Estepa, J. (2017). Rasmussen poll: 40% think Fox News should win Trump's 'fake news trophy'. USA Today

European Commission. (2018). Digital single market. Tackling the spreading of an increasing problem for the functioning of our democracies disinformation online. https://cutt.ly/Rymxo2w

Faizi, R., Chiheb, R., & El Afia, A. (2015). Students' Perceptions Towards Using Web 2.0 Technologies in Education. *International Journal of Emerging Technologies in Learning*, 10(6). https://doi.org/10.3991/ijet.v10i6.4858

Fajardo, M. F. (2015). A review of critical literacy beliefs and practices of English language learners and teachers. *University of Sydney Papers in TESOL*, 10.

Freebody, P. (2007). Literacy education in school: Research perspectives from the past, for the future.

Funk, S., Kellner, D., & Share, J. (2016). Critical media literacy as transformative pedagogy. In Handbook of research on media literacy in the digital age (pp. 1-30). IGI Global.

Galante, A. (2015). Intercultural communicative competence in English language teaching: Towards validation of student identity. *BELT-Brazilian English Language Teaching Journal*, 6(1), 29-39.

Galante, A. (2020). Pedagogical translanguaging in a multilingual English program in Canada: Student and teacher perspectives of challenges. *System*, 92, 102274. https://doi.org/10.1016/j.system.2020.102274

Gallardo-Echenique, E. E., Marqués-Molías, L., Bullen, M., & Strijbos, J. W. (2015). Let's talk about digital learners in the digital era. The International Review of research in open and distributed learning, 16(3).

Gao, J., & Ma, S. (2021). Learning Condition, Linguistic Complexity, And First Language Transfer In Semiartificial Language Learning: A Conceptual Replication And Extension Of Tagarelli Et Al.(2016). *Studies in Second Language Acquisition*, 43(2), 355-378. https://doi.org/10.1017/S0272263120000686

García, O., & Lin, A. M. (2017). Translanguaging in bilingual education. *Bilingual and multilingual education*, 117-130.

George Lucas Educational Foundation (2021). Making classrooms more inclusive multilingual learners [Video]. Retrieved from https://www.edutopia.org/video/making-classrooms-more-inclusive-multilingual-learners

Goff, W., & Getenet, S. (2017). Design-based research in doctoral studies: Adding a new dimension to doctoral research. *International Journal of Doctoral Studies*, 12, 107-121.

Golbeck, J., Mauriello, M., Auxier, B., Bhanushali, K. H., Bonk, C., Bouzaghrane, M. A., ... & Visnansky, G. (2018, May). Fake news vs satire: A dataset and analysis. In Proceedings of the 10th ACM Conference on Web Science (pp. 17-21).

Goldberg, D. (2017). Responding to fake news: Is there an alternative to law and regulation. Sw. L. REv., 47, 417.

Gonulal, T., & Loewen, S. (2018). Scaffolding technique. *The TESOL encyclopedia of English language teaching*, 1-5.

Guess, A. M., Lerner, M., Lyons, B., Montgomery, J. M., Nyhan, B., Reifler, J., & Sircar, N. (2020). A digital media literacy intervention increases discernment between mainstream and false news in the United States and India. Proceedings of the National Academy of Sciences, 117(27), 15536-15545.

Gutierrez, A. (2014). Exploring critical literacy in Victoria and Queensland: Affordances, tensions and hybridisations. *English in Australia*, 49(3), 33-41.

Hall, T. (2002). Explicit instruction: Effective classroom practices report. National Center on Accessing the General Curriculum. Retrieved December, 1, 2003.

Hamp-Lyons, L. (2011). *English for academic purposes*. In Handbook of research in second language teaching and learning (pp. 89-105). Routledge.

Haque, E. (2007). Critical pedagogy in English for Academic Purposes and the possibility for 'tactics' of resistance. Pedagogy, Culture & Society, 15(1), 83-106.

He, J. J., & Chiang, S. Y. (2016). Challenges to English-medium instruction (EMI) for international students in China: A learners' perspective: English-medium education aims to accommodate international students into Chinese universities, but how well is it working?. *English today*, 32(4), 63-67.

Hellstén, M. (2013). International student transition: Focusing on researching international pedagogy for educational sustainability. *International Education Journal: Comparative Perspectives*, 8(3).

Hermida, A. (2016). Social media and the news. The SAGE handbook of digital journalism, 81-94.

Herrero-Diz, P., Conde-Jiménez, J., & Reyes de Cózar, S. (2020). Teens' Motivations to Spread Fake News on WhatsApp. Social Media+ Society, 6(3), 2056305120942879.

Hoadley, C. M. (2004). Methodological alignment in design-based research. *Educational psychologist*, 39(4), 203-212.

Hobbs, R., & Jensen, A. (2009). The past, present, and future of media literacy education. *Journal of media literacy education*, 1(1), 1.

"Ingraham Angle" on new mask rules, left-wing media. (2021, May 15). Fox News. https://www.foxnews.com/transcript/ingraham-angle-on-new-mask-rules-left-wing-media

Janks, H. (2002). Critical literacy: Beyond reason. The Australian Educational Researcher, 29(1), 7-26.

Janks, H. (2013). Critical literacy in teaching and research1. *Education inquiry*, 4(2), 225-242. https://doi.org/10.3402/edui.v4i2.22071

Järvinen, P. (2005). Action research as an approach in design science.

Jen, E., Moon, S., & Samarapungavan, A. (2015). Using design-based research in gifted education. *Gifted Child Quarterly*, 59(3), 190-200.

Jensen-Clayton, C. (2016). Disrupting dangerous illusions in international education: performativity, subjectivity, and agency in English language courses for overseas students (ELICOS) (Doctoral dissertation, University of Southern Queensland).

Ju, A., Jeong, S. H., & Chyi, H. I. (2014). Will social media save newspapers? Examining the effectiveness of Facebook and Twitter as news platforms. *Journalism practice*, 8(1), 1-17. https://doi.org/10.1080/17512786.2013.794022

Juuti, K., Lavonen, J., & Meisalo, V. (2016). Pragmatic Design-based research–Designing as a shared activity of teachers and researches. In Iterative design of teaching-learning sequences (pp. 35-46). Springer, Dordrecht.

Kalsnes, B., & Larsson, A. O. (2018). Understanding news sharing across social media: Detailing distribution on Facebook and Twitter. *Journalism studies*, 19(11), 1669-1688.

Keene, E.O., & Zimmermann, S. (1997). Mosaic of thought:Teaching comprehension in a reader's workshop. Portsmouth, NH: Heinemann.

Kek, M. Y. C. A., & Huijser, H. (2011). The power of problem-based learning in developing critical thinking skills: preparing students for tomorrow's digital futures in today's classrooms. *Higher Education Research & Development*, 30(3), 329-341.

Kellner, D., & Share, J. (2005). Toward critical media literacy: Core concepts, debates, organizations, and policy. *Discourse: Studies in the cultural politics of education*, 26(3), 369-386. https://doi.org/10.1080/01596300500200169

Kellner, D., & Share, J. (2019). The critical media literacy guide: Engaging media and transforming education. Brill.

Kelly, C., & Brower, C. (2017). Making meaning through media: Scaffolding academic and critical media literacy with texts about schooling. *Journal of Adolescent & Adult Literacy*, 60(6), 655-666.

Kemmis, S., & Grootenboer, P. (2008). Situating praxis in practice: Practice architectures and the cultural, social and material conditions for practice. In Enabling praxis (pp. 37-62). Brill Sense.

Kemmis, S., McTaggart, R., & Nixon, R. (2014). *Introducing critical participatory action research*. In The action research planner (pp. 1-31). Springer, Singapore.

Kennedy-Clark, S. (2015). Reflection: Research by design: Design-based research and the higher degree research student. *Journal of Learning Design*, 8(3).

Khan, M. L., & Idris, I. K. (2019). Recognise misinformation and verify before sharing: a reasoned action and information literacy perspective. *Behaviour & Information Technology*, 38(12), 1194-1212. https://doi.org/10.1080/0144929X.2019.1578828

Krasni, J. (2020). How to hijack a discourse? Reflections on the concepts of post-truth and fake news. *Humanities and Social Sciences Communications*, 7(1), 1-10.

Kumagai, Y., & Iwasaki, N. (2011). WHAT IT MEANS TO READ "CRITICALLY" IN A JAPANESE LANGUAGE CLASSROOM: STUDENTS'PERSPECTIVES. Critical Inquiry in Language Studies, 8(2), 125-152.

Kurasawa, F. (2018, July 27). Social media can be information poison when we need facts most. The Conversation. Retrieved from https://theconversation.com/social-mediacan-be-information-poison-when-we-need-facts-most-100495

Navera, J. A., Garinto, L. A. B., & Valdez, P. N. M. (2019). Teaching against the meme: politics, argumentation and engagement in an ESL classroom in the Philippines. *Journal of Asia TEFL*, 16(1), 393.

Newman, N., Fletcher, R., Kalogeropoulos, A., Levy, D. A., & Nielsen, R. K. (2019). Digital News Report 2019. Reuters Institute.

Lewandowsky, S., Ecker, U. K., & Cook, J. (2017). Beyond misinformation: Understanding and coping with the "post-truth" era. *Journal of applied research in memory and cognition*, 6(4), 353-369.

Lewis, C., Perry, R., & Murata, A. (2006). How should research contribute to instructional improvement? The case of lesson study. *Educational researcher*, 35(3), 3-14.

Lichterman, J. (2016). Twitter has outsized influence, but it doesn't drive much traffic for most news orgs, a new report says. Nieman Lab.

Lin, A. M., & He, P. (2017). Translanguaging as dynamic activity flows in CLIL classrooms. *Journal of Language, Identity & Education*, 16(4), 228-244.

Liu, D., Deng, Y., & Wimpenny, K. (2022). Students' perceptions and experiences of translanguaging pedagogy in teaching English for academic purposes in China. Teaching in Higher Education, 1-19.

Liu, J. E., Lo, Y. Y., & Lin, A. M. (2020). Translanguaging pedagogy in teaching English for Academic Purposes: Researcher-teacher collaboration as a professional development model. System, 92, 102276.

Liyanage, I., Walker, T., & Shokouhi, H. (2021). Are we thinking critically about critical thinking? Uncovering uncertainties in internationalised higher education. Thinking Skills and Creativity, 39, 100762.

Locke, T., & Cleary, A. (2011). Critical literacy as an approach to literary study in the multicultural, high-school classroom.

Luke, A. (2013). Defining critical literacy. In Moving critical literacies forward (pp. 37-49). Routledge.

Luke, A., & Freebody, P. (1999). A map of possible practices: further notes on the four resources model. *Practically primary*, 4(2), 5-8.

MacDonald, R. J. (2008). Professional development for information communication technology integration: Identifying and supporting a community of practice through design-based research. Journal of Research on Technology in Education, 40(4), 429-445.

Maddalena, G., & Gili, G. (2020). The history and theory of post-truth communication. London: palgrave macmillan.

Maffea, J. (2020). Lack of Resources in Classrooms.

Mahon, K., Kemmis, S., Francisco, S., & Lloyd, A. (2017). Introduction: Practice theory and the theory of practice architectures. *In Exploring education and professional practice* (pp. 1-30). Springer, Singapore.

Masuda, A. (2012). Critical literacy and teacher identities: A discursive site of struggle. *Critical Inquiry in Language Studies*, 9(3), 220-246.

Mazak, C. M., Mendoza, F., & Mangonéz, L. P. (2016). 5. Professors Translanguaging in Practice: Three Cases from a Bilingual University. In Translanguaging in Higher Education (pp. 70-90). Multilingual Matters.

McDonald, T., Thornley, C., Staley, R. & Moore, D. W. (2009). The San Diego striving readers' project: building academic success for adolescent readers. *Journal of Adolescent & Adult Literacy*, *52*(8), 720-722.

McDougall, J., Zezulkova, M., van Driel, B., Sternadel, D. (2018). 'Teaching media literacy in Europe: evidence of effective school practices in primary and secondary

education', NESET II report. Luxembourg: Publications Office of the European Union.

McGuinness, K., Fisher, C., & Lee, J. Y. (2022). Australians' shifting concerns about mis- and disinformation. *Australian Journal of Political Science*, 1-16. https://doi.org/10.1080/10361146.2022.2122777

McIntyre-Mills, J., Goff, S., & Hillier, D. (2011). Systemic action research: a strategy for whole system change.

McKenney, S., & Reeves, T. C. (2014). *Educational design research*. In Handbook of research on educational communications and technology (pp. 131-140). Springer, New York, NY.

McIntyre, L. (2018). Post-truth. MIt Press.

Media Literacy Now: http://medialiteracynow.org/what-is-media-literacy/

Media Literacy Project: https://medialiteracyproject.org/about-mlp/

Miller, D., Turner, J., & Wilson-Simmons, N. (2020). The Pros and Cons of Common Core Testing.

Moje, E. B., Young, J. P., Readence, J. E., & Moore, D. W. (2000). Commentary: Reinventing adolescent literacy for new times: Perennial and millennial issues. *Journal of Adolescent & Adult Literacy*, 43(5), 400-410.

Moore, J. L. (2013). Preparing advocates: Service-learning in TESOL for future mainstream educators. *TESOL Journal*, 4(3), 555-570.

Moursi, A. (2015). The Inter-Linguistic and the Cross-Linguistic Influence on the Acquisition of L2 (English) Linguistic Items: A Case Study in the Context of ALEs as Postgraduate Learners. *Studies in English Language Teaching*, 3(3), 187-202.

Naidoo, L., & D'warte, J. A. (2017). The Western Sydney Rustbelt: Recognizing and building on strengths in pre-service teacher education. *Australian Journal of Teacher Education,* 42(4), 6.

Nandhini, M. (2016). Web 2.0 tools in education. In National Conference on Higher Education in the Knowledge Age: Techno-Pedagogical Perspectives and İnnovations. India.

National Institute of Cybersecurity & Office of Internet Security. (2019). Protección del menor ante las fake news [Protection of minors against fake news]. Mundo Digital. http://www.mundodigital. net/proteccion-del-menor-ante-las-fake-news/

Nettlefold, J., & Williams, K. (2018). Insight Five: A snapshot of Media Literacy in Australian Schools.

Notley, T., Dezuanni, M., Zhong, H. F., & Howden, S. (2017). News and Australian children: How young people access, perceive and are affected by the news.

Novak, M. C. (2019, April 11). Communication Technology: The World of Gadgets & Gizmos. Learn.g2.com. https://learn.g2.com/communication-technology

Peels, R., & Pritchard, D. (2021). *Educating for ignorance*. Synthese, 198(8), 7949-7963.

Prensky, M. (2001). Digital natives, digital immigrants part 2: Do they really think differently?. On the horizon.

Saha, S. (2021). Translanguaging pedagogy in EAP classroom (Doctoral dissertation, Brac University).

Samarapungavan, A., Patrick, H., & Mantzicopoulos, P. (2011). What kindergarten students learn in inquiry-based science classrooms. *Cognition and Instruction*, 29(4), 416-470.

Sangster, P., Stone, K., & Anderson, C. (2013). Transformative professional learning: Embedding critical literacies in the classroom. *Professional Development in Education*, 39(5), 615-637.

Saunders, J. M., Ash, G. E., Salazar, I., with student authors, Pruitt, R., Wallach, D., ... & Szachacz, A. (2017). “We're Already Somebody”: High School Students Practicing Critical Media Literacy IRL (in Real Life). Journal of Adolescent & Adult Literacy, 60(5), 515-526.

Schatzki, T. 1996. *Social practices: A Wittgensteinian approach to human activity and the social*. New York: Cambridge University Press.

Schatzki, T. 2002. *The site of the social: A philosophical account of the constitution of social life and change*. University Park, PA: University of Pennsylvania Press.

Schatzki, T. (2016). Practice theory as flat ontology. In Practice theory and research (pp. 44-58). Routledge.

Schostak, J. (2005). Interviewing and representation in qualitative research. McGraw-Hill Education (UK).

Shaffer, K. (2019). Democracy Hacked, Part 1. In Data versus Democracy (pp. 67-89). Apress, Berkeley, CA.

Shellenbarger, Sue. 2016. “Most Students Don’t Know When News Is Fake, Stanford Study Finds.” The Wall Street Journal, November 21. Accessed June 27, 2017. https://www.wsj.com/ articles/most-students-dont-know-when-news-is-fake-stanford-study-finds-1479752576.

Sheller, M. (2015). News now: Interface, ambience, flow, and the disruptive spatio-temporalities of mobile news media. *Journalism Studies*, 16(1), 12-26.

Somekh, B., & Lewin, C. (Eds.). (2011). *Theory and methods in social research*. Sage.

Spelic, S. (2018, May 28). *Incuriosity is a thing, and why not? - Sherri Spelic*. Medium. https://edifiedlistener.medium.com/incuriosity-is-a-thing-619ad8bf45b3

Spring, M. (2020, May 4). Who spreads “fake news”?. BBC News. https://www.bbc.com/news/blogs-trending-52474347

Stazicker, A., & Woods, N. (2022). *Teaching International Foundation Year: A Practical Guide for EAP Practitioners in Higher and Further Education*. Routledge.

Surjosuseno, T. T., & Watts, V. (1999). Using Bloom's Taxonomy to teach critical reading in English as a foreign language classes. Queensland Journal of Educational Research, 15(2), 227-244.

Szkudlarek, T., & Zamojski, P. (2020). Education and ignorance: between the noun of knowledge and the verb of thinking. *Studies in Philosophy and Education,* 39, 577-590.

Szurawitzki, M. (2012). Analyzing the language of social networking sites-An analysis model. In Proceedings of 24th Scandinavian Conference of Linguistics (pp. 355-363).

Swan, M. (2005). Practical English Usage 3rd edition.

Tan, C. (2017). Teaching critical thinking: Cultural challenges and strategies in Singapore. British educational research journal, 43(5), 988-1002.

Terraschke, A., & Wahid, R. (2011). The impact of EAP study on the academic experiences of international postgraduate students in Australia. *Journal of English for Academic Purposes*, 10(3), 173-182.

Tobias, S., & Duffy, T. M. (2009). Constructivist instruction. Success or failure.

Thomas, W. P., & Collier, V. (1997). School Effectiveness for Language Minority Students. NCBE Resource Collection Series, No. 9.

Typeset, S. M. (2022, May 12). Social Media Statistics for Australia [2021 & 2022]. Meltwater. https://www.meltwater.com/en/blog/social-media-statistics-australia

Ramos-García, A. M. (2018). English for Academic Purposes: A Proposal to Improve Listening Skills of Education Students. In Integrating Information and Communication Technologies in English for Specific Purposes (pp. 93-106). Springer, Cham.

Ramshaw, A. (2020, September 16). Social Media Statistics for Australia (2019) - Genroe. Genroe. https://www.genroe.com/blog/social-media-statistics-australia/13492

Ranieri, M., & Fabbro, F. (2016). Questioning discrimination through critical media literacy. Findings from seven European countries. *European Educational Research Journal*, 15(4), 462-479. https://doi.org/10.1177/1474904116629685

Reeves, T. (2006). *Design research from a technology perspective*. In Educational design research (pp. 64-78). Routledge.

Robertson, L., & Scheidler-Benns, J. (2016). Critical media literacy as a transformative pedagogy. *Literacy Information and Computer Education Journal*, 7(1), 2247-2253.

Rubin, D. (1982). *Diagnosis and correction in reading instruction*. New York: Holt, Rinehart and Winston.

Panasuk, R. M., & Lewis, S. (2012). Constructivism: Constructing meaning or making sense. *International Journal of Humanities and Social Science*, 2(20), 1-11.

Park, S., Fisher, C., Lee, J. Y., & McGuinness, K. (2020). COVID-19: Australian news and misinformation. News and Media Research Centre.

Parton, G., & Bailey, R. (2008). Problem-based learning: a critical rationalist perspective. *London Review of Education*, 6(3), 281-292.

Pavlis, D., & Gkiosos, J. (2017). John Dewey, from philosophy of pragmatism to progressive education. *Journal of Arts and Humanities*, 6(9), 23-30. https://doi.org/10.18533/journal.v6i9.1257

Pennycook, A. (1997). Vulgar pragmatism, critical pragmatism, and EAP. *English for specific purposes*, 16(4), 253-269.

Pennycook, A. (2021). *Critical applied linguistics*: A critical re-introduction. Routledge.

Plomp, T. (2013). Educational design research: An introduction. Educational design research, 11-50.

Pohl, A. (2008). Language learning histories: an introduction to critical thinking. *EA Journal*, 24(1), 13-23.

Rosenshine, B., & Stevens, R. (1986*). Teaching functions*. Handbook of research on teaching, 3, 376-391.

Qi, P., Cao, J., Yang, T., Guo, J., & Li, J. (2019, November). Exploiting multi-domain visual information for fake news detection. In 2019 IEEE international conference on data mining (ICDM) (pp. 518-527). IEEE.

University of Queensland. (n.d.). Critical-Thinking.project.uq.edu.au. Retrieved September 1, 2022, from https://critical-thinking.project.uq.edu.au/about

Watkins, D. (2014). Correlates of approaches to learning: A cross-cultural meta-analysis. In Perspectives on thinking, learning, and cognitive styles (pp. 165-196). Routledge.

Wang, F., & Hannafin, M. J. (2005). Design-based research and technology-enhanced learning environments. *Educational technology research and development*, 53(4), 5-23.

Wan, W., Low, G. D., & Li, M. (2011). From students' and teachers' perspectives: Metaphor analysis of beliefs about EFL teachers' roles. System, 39(3), 403-415.

Weller, M. (2016, September 23). *Open education and the Unenlightenment – The Ed Techie*. The Ed Techie. https://blog.edtechie.net/general-education/open-education-and-the-unenlightenment/

West, A., Swanson, J., & Lipscomb, L. (2017). Ch. 11 scaffolding. Instructional methods, strategies and technologies to meet the needs of all learners.

Wilson, A. (2015). A guide to phenomenological research. Nursing Standard (2014+), 29(34), 38.

Wilson, K. (2016). Critical reading, critical thinking: Delicate scaffolding in English for Academic Purposes (EAP). *Thinking skills and creativity*, *22*, 256-265. https://doi.org/10.1016/j.tsc.2016.10.002

Van den Akker, J. Gravemeijer, K. & McKenney, S. (Eds.). Nieveen, N. (2006). *Educational design research* (Vol. 2). London: Routledge.

Vered, K. O. (2016). The critical nexus: Linked practices in reading, thinking and writing to develop discourse competency. Journal of Academic Language and Learning, 10(1), A155-A168.

Zaritsky, R., Kelly, A. E., Flowers, W., Rogers, E., & O'Neill, P. (2003). Clinical design sciences: A view from sister design efforts. *Educational Researcher*, 32(1), 32-34.

Zeng, J., Zhang, Y., & Ma, X. (2021). Fake news detection for epidemic emergencies via deep correlations between text and images. Sustainable Cities and Society, 66, 102652. https://doi.org/10.1016/j.scs.2020.102652

APPENDIX A

"Fighting fake news isn't just up to Facebook and Google" from The Washington Post, on February 6th, 2017

"Whoever loses the 'fake news' war loses everything" from The Washington Post, on February 8th, 2017

"Using 'fake news' to your benefit? It's simple!" from The Chicago Tribune, on February 8th, 2017

"Readers biases play into fake news phenomenon" from The Chicago Tribune, on January 3rd, 2017

"WH official: We'll say 'fake news' until media realizes attitude of attacking the President is wrong" from CNN Politics on February 7th, 2017

"When fake news becomes a real threat" from USA Today, on December 5th, 2016

"Fake news spurs call for media literacy lessons in schools" from The Cabinet Report on February 10th, 2017

"Getting literal about media literacy in K12: How schools can help students realize the difference between real and fake news" from District Administration, January 16th, 2017

"Indoctrination alert! Yahoo calls for 'educating children in media literacy to combat fake news' from The Daily Sheeple, December 1st, 2016

"Media illiteracy poses a 'threat to democracy' from The Albuquerque Journal, December 2nd, 2016

APPENDIX B

Critical Media Literacy Framework

Conceptual Understandings	Questions
1. Social Constructivism All information is co-constructed by individuals and/or groups of people who make choices within social contexts.	WHO are all the possible people who made choices that helped create this text?
2. Languages / Semiotics Each medium has its own language with specific grammar and semantics.	HOW was this text constructed and delivered/accessed?
3. Audience / Positionality Individuals and groups understand media messages similarly and/or differently depending on multiple contextual factors.	HOW could this text be understood differently?
4. Politics of Representation Media messages and the medium through which they travel always have a bias and support and/or challenge dominant hierarchies of power, privilege, and pleasure.	WHAT values, points of view, and ideologies are represented or missing from this text or influenced by the medium?
5. Production / Institutions All media texts have a purpose (often commercial or governmental) that is shaped by the creators and/or systems within which they operate.	WHY was this text created and/or shared?
6. Social & Environmental Justice Media culture is a terrain of struggle that perpetuates or challenges positive and/or negative ideas about people, groups, and issues; it is never neutral.	WHOM does this text advantage and/or disadvantage?

Adapted from Kellner and Share (2019).

APPENDIX C

Fake news reading checklist

1. Look at the headline

Does the headline uses excessive punctuation or capital letters, what grabs your attention?

2 Question the publisher/ author

Google search, who are they? Are they a credible source?

What claims does the author make?

What evidence does the author use?

What language (words, phrases, images, symbols) does the author use to persuade the audience?

How does the news language indicate the author's perspective?

3. What do other news sources say about this story?

4. Who do you think is advantaged and disadvantaged?

5. Why do you think this person created or shared this fake news story? What values, ideas or message are they trying to spread?

6. What type of person created or shared this fake news story?

Type	**Tick box**	**Why**
Politician		
Celebrity		
Conspiracy theorist		
Scammer		
Insider		
Relative		
Joker		

APPENDIX D

Initial teacher interviews

Critical media literacy is not an established form of teaching pedagogy. Therefore, what does CML mean to you?

What importance do you place developing students' CML skills?

What has worked well in your CML classes, and what hasn't?

Do you have any requests and or expectations for this CML intervention?

What editions or amendments would you make to the CML framework and product evaluation form?

Subsequent teacher meetings

What aspect of the CML lesson was effective?

What aspect of the CML program needs refinement?

What editions or amendments would you make to the CML framework and product evaluation form?

Student focus group guiding questions

What did you enjoy about the CML program?

Do you like covering CML in school?

What aspects of the program did you feel make understanding this topic easier?

Do you feel that this topic is relevant in your life?

Was the CML framework easy to follow?