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# Exploring the Literacy Experiences of Preservice Early Childhood Teachers: Social and Contextual Influences, and Implications for Teacher Education

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**Abstract:** Considering that early literacy (reading and writing) is critical for later literacy and academic success, this study investigated the social and contextual influences on the early and current literacy experiences of 70 preservice early childhood teachers in the United States through a questionnaire. Analyses of both quantitative and qualitative data revealed eight key findings: First, the strongest influence on these individuals' early literacy development was parents, followed by teachers. Second, their current literacy experiences were shaped primarily by professors/academic work followed by self-motivation. Third, nearly half of the preservice teachers regarded themselves as average readers and writers. While the majority of them enjoyed reading and more than half also enjoyed writing, those who lacked such enjoyment provided various reasons, especially citing insufficient intrinsic motivation, limited time for reading, and inadequate writing skills or ideas. Fourth, most of them prioritized their literacy time to fulfill academic requirements. Fifth, most devoted a limited amount of time to literacy activities. Sixth, there was a relatively strong positive correlation between reading fluency and writing fluency. Seventh, a positive correlation was found between years in college and writing fluency. Eighth, there was a negative correlation between grade point average and time spent writing per week.

**Keywords:** preservice early childhood teachers; literacy dispositions; literacy habits; reading; writing



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## 1. Introduction

As agents of education and leaders in the classroom, teachers play a pivotal role in all aspects of children's learning. One crucial area of children's learning in their formative years is early literacy, which has traditionally centered on reading and writing for communication and comprehension purposes [1–3]. We recognize that contemporary understanding of literacy has expanded significantly over time. As the concept of literacy has evolved, it has also been redefined to encompass a broader range of areas. For instance, in a technologically advanced world, literacy now includes digital literacy, which can be defined as the application of literacy skills (e.g., reading, writing, speaking, listening) to effectively interact with digital environments [4]. It also includes media literacy, described as "the ability to access, analyze, evaluate, create, and act using all forms of communication" [5] and artificial intelligence literacy, which researchers define as the acquisition of fundamental knowledge, skills, and attitudes related to AI understanding and applications [6]. However, for the purpose of this study, we focused solely on the traditional, basic conceptualization of literacy as involving reading and writing.

Early childhood teachers are uniquely positioned to support children's early literacy development. For instance, they can model positive literacy dispositions and habits.

Research has reported that teachers who are voracious literacy practitioners do not only possess high levels of literacy abilities, but also serve as models of good literacy habits for their students [7–9]. There is also evidence that by modeling positive literacy attitudes and habits, teachers are more likely to motivate their students to develop these qualities [10]. In contrast, it might be difficult for teachers to instill positive literacy habits in their students if they themselves are aliterate—having the ability to read and write but choosing not to, a phenomenon that has been dubbed by Applegate and Applegate [11,12] as “the Peter Effect”. This idea refers to the story from the Bible where a beggar asked Apostle Peter for money, and Peter responded that he could not give what he did not have.

While the influence of teachers is indisputable, Bronfenbrenner’s [13,14] socioecological theory, which underscores the critical systems of influence on human development, suggests that parents are also, first and foremost, key socializing agents in children’s early development. Guided by this theory, we investigated the various social and contextual influences on preservice early childhood teachers’ early and current literacy experiences. This study focused specifically on preservice early childhood teachers who were studying to become teachers for preschool to third grade in a teacher education program at a public university in the United States. This focus is particularly important because the findings can inform teacher education programs, another critical system of influence, on how best to enhance aspiring early childhood teachers’ literacy practices. In turn, these prospective teachers may be better positioned to support children’s early literacy development in their future teaching.

### *1.1. The Socioecological Theory as the Guiding Conceptual Framework*

As human development is affected by socioecological factors [13,14], so is the cultivation of literacy skills as a vital facet of such development. Thus, as we were keen to investigate social and contextual influences on preservice early childhood teachers’ literacy experiences, our study was guided by Bronfenbrenner’s [13,14] socioecological theory. This theory emphasizes multiple levels of influence on human development within a concentric nest of complex interrelated contexts, spiraling from the innermost microsystems (e.g., parents, teachers) to the outermost macrosystems (e.g., culture, society). According to this theory, parents and teachers are the most immediate and direct systems of influence on children’s development.

Empirical evidence has substantiated the influences of parents and teachers on the early literacy development of children in the United States. For instance, Wheeler and Hill [15] found that parents’ frequent and high-quality read-alouds to their two- to four-year-old children contributed to various benefits, including increased reading comprehension and motivation to read. Chen and Adams [16] documented how a preschool teacher successfully facilitated emergent literacy development by creating a digital library of easily accessible, developmentally appropriate books for children to read for free. While theoretical and empirical evidence has established the crucial impacts of parents and teachers on child development, another body of evidence suggests that as children grow older and experience new life transitions, the influences of parents and teachers tend to diminish over time [17]. Given the potential social and contextual changes in human development over the course of one’s life, we found it important to examine the key influences on both the early and current literacy experiences of preservice early childhood teachers.

### *1.2. Social and Contextual Influences on Early Literacy Experiences*

Early literacy is a foundational capacity for children to acquire, especially during the formative years, when their brain structure and function are rapidly unfolding concomitant with other developmental capacities, such as social and cognitive abilities [18]. Furthermore, as a critical area of child development, early literacy lays the foundation for later literacy acquisition and academic success [19–21]. Thus, it is understandable that early literacy has become a primary focus of instruction in U.S. early childhood classrooms [18,22]. It is also not surprising that a robust body of research has examined factors affecting the

quality of early literacy instruction [23,24]. However, less research has investigated the social and contextual influences on the early and current literacy experiences of preservice early childhood teachers who, if and when they become teachers, will be responsible for delivering instruction, including early literacy.

#### 1.2.1. Parental Influences

The influence of the quality and quantity of parental literacy practices on children's early literacy development—and their link to later literacy outcomes—appears to be a global phenomenon, as evidenced in many countries, including Australia [25], India [26], Malaysia [27], Norway [28], the United Kingdom [29], the United States [30], Turkey [31], and New Zealand [32]. For instance, in a large New Zealand cohort of 4697 children aged 4 and their primary caregiving parents, Bird et al. [32] found that parents' verbalizations during a parent-child writing task (involving open-ended questions, print talk, and praise) predicted various early learning factors, including "literacy and numeracy skills; oral language and regulation skills; behavior difficulties; and interpersonal and motor skills" (p. 262). Using data from the longitudinal Millennium Cohort Study of 18,818 children born in the UK between September 2000 and January 2002, Shigemasa et al. [29] demonstrated that parental reading to infants and toddlers contributed positively to their later cognitive development beyond reading skills.

The important influence of parents on children's early literacy dispositions was also documented in Altun et al.'s [31] study of 261 parents and their 5-year-old children in Turkey. Their study revealed that the home literacy environment, the number of books in the home, and maternal reading attitudes and habits significantly predicted the children's positive reading attitudes. In the United States, Chen and Ren's [30] study of 84 Chinese-English bilingual children of immigrant parents revealed that parental reading significantly benefited these children's bilingual development. Specifically, children whose parents read to them exclusively in Chinese or in both Chinese and English achieved higher scores in receptive Chinese language compared to those whose parents did not read to them at all. This finding suggests that the linguistic backgrounds and practices of parents can influence not only their children's acquisition of the mainstream language but also their home language.

Research in the United States has further attested to early social and contextual influences on the literacy experiences of preservice and in-service teachers [12,33,34], revealing parents as key socializing players in their early literacy development. For instance, in their study of 747 preservice and in-service teachers enrolled in a graduate school of education, Nathanson et al. [33] reported that parents exerted powerful effects on these individuals' enthusiasm for reading. Similarly, in their study of the early literacy experiences, reading attitudes, and practices of 129 elementary preservice teachers, Sulentic-Dowell et al. [34] found that some elementary preservice teachers reported strong positive social and contextual influences from their families on their ability to become independent readers during elementary school. For instance, Sulentic-Dowell et al. [34] described a preservice teacher named Sally who recounted that, as a child, she was strongly encouraged to read, was read to by her family members (including older siblings, parents, and grandparents), and was provided with various kinds of reading materials (e.g., a Bible, newspapers, and books).

#### 1.2.2. Teacher Influences

While research evidence has corroborated that parents are vital socializing agents in children's early literacy development, the role of teachers is also essential. For instance, the 24 U.S. elementary teachers in Draper et al.'s [35] interview study reported that their own teachers had positive impacts on their reading experiences during teacher-led reading activities (e.g., reading with teachers). In addition to delivering effective literacy instruction, teachers can model positive literacy habits derived from good literacy attitudes. For instance, positive reading attitudes can manifest behaviorally in reading habits, leading teachers to engage in more reading themselves [36]. Furthermore, research has revealed

that preservice teachers may be better equipped to apply effective strategies to foster enthusiastic readers and writers in their future students [34,37].

However, not all studies have shown positive influences of teachers on early literacy development. For example, in a study of the writing experiences among 16 elementary school teachers in England, Cremin [38] found that while some teachers recounted positive experiences (e.g., creating both a picture book and a chapter book to share in class), others reported negative experiences (e.g., being smacked on the wrist with a ruler for writing incorrectly and enduring other forms of discouragement). This finding suggests that depending on their pedagogical approach, teachers can be a positive or negative force for children's early literacy development.

### *1.3. Social and Contextual Influences on Current Literacy Experiences*

The afore-reviewed literature makes it evident that parents and teachers are primary agents of influence in children's early literacy development. However, as individuals experience various developmental changes throughout life [17], the influences on their development may also vary. Given this developmental context, it is important to examine potentially new influences on individuals' current literacy experiences.

#### *1.3.1. The Influence of the Academic Context*

There is empirical evidence suggesting that the quality of young children's early literacy experiences in the social environment, both at home and in school, continues to have a lasting effect on their later literacy development [39]. However, other evidence has suggested that there are different contextual factors affecting individuals' later literacy experiences during adulthood. For instance, one contextual influence on the current literacy experiences of preservice teachers who are college students is related to academic work [36,40]. For instance, in a study of 1051 prospective teachers in Spain, Grando [36] found that most of them (84.20%) only engaged in compulsory reading to fulfill the academic demands of their studies. Unfortunately, this academically driven extrinsic motivation does not seem strong enough to sustain the preservice teachers' reading habits, such as developing themselves as enthusiastic readers and writers [36].

Furthermore, while not all preservice teachers prioritize literacy habits in their lives, for those who do, they primarily engage in literacy activities for academic purposes over leisure [35,41]. For instance, Draper et al. [35] found that preservice teachers engaged in literacy activities primarily to fulfill academic requirements, such as reading textbooks and writing school reports. This finding is not surprising, as it likely reflected the status of preservice teachers as university students studying to become teachers, a process that may require them to prioritize their time commitments to literacy for academic purposes over anything else. Thus, it stands to reason that non-academic literacy habits may take a backseat for preservice teachers in teacher education programs as they prioritize academic literacy activities concomitant with their college studies.

#### *1.3.2. The Influence of Literacy Dispositions*

Another contextual influence on the quality of individuals' literacy experiences is related to their literacy dispositions, including attitudes, motivations, and enthusiasm. Specifically, research has revealed that a good reading attitude contributes to reading motivation in two types: intrinsic (e.g., reading for pleasure) and extrinsic motivation (associating reading as a fulfillment of instrumental purposes, such as academic demands) [10,11]. In their study of 65 teachers in the United States, McKoo and Gespass [10] found that those who read for leisure leveraged both intrinsic and extrinsic aspects of their motivation to engage in reading activities. This finding underscores the importance of having a positive literacy attitude and motivation in potentially promoting literacy engagement.

In addition to the influences of literacy attitudes and motivation, previous research (e.g., [10,36,40]) has revealed that many preservice and in-service teachers do not prioritize reading and writing habits in their lives, which may be related to a lack of literacy enthusiasm. Specifically, studies conducted in the United States [10–12,34] have shown alarming low levels of enthusiasm and engagement in literacy activities among preservice teachers and in-service teachers. For instance, in their study of 195 sophomore students in initial teacher certification courses in elementary education in two vastly different universities in the United States, Applegate and Applegate [11] found that only less than half of these prospective teachers (45.70%) were classified as “enthusiastic readers”, and among them, only 6.70% could be classified as “avid readers”. In their follow-up study of 184 sophomores aspiring to become elementary school teachers from two similar universities, Applegate and Applegate [11] found that the overall percentage of “enthusiastic readers” was 51.60%, with 6.50% of them being categorized as “avid readers”. In another study, published 10 years later, Applegate et al. [12] revealed similar findings. Specifically, they found that among the 348 education majors (234 in elementary school teachers), only 51.10% of them were “enthusiastic readers”. These researchers further revealed that of all aspiring teachers at all grade levels, the lowest percentage of “enthusiastic readers” (36.40%) was found among those intending to teach kindergarten and first grade. These individuals would be considered preservice early childhood teachers—the population that we were examining in this study.

### 1.3.3. The Influences of Literacy Habits as Manifested in Engagement

Engagement with reading and writing materials has been identified as a good literacy habit, while a lack of engagement is considered a poor literacy habit, as found in some preservice and in-service teachers [11,42,43]. Research (e.g., [42,44]) has also demonstrated that some prospective and practicing teachers prioritize nurturing their own enthusiasm for literacy by engaging in relevant activities. For instance, in their study of 274 preservice teachers in the United States over eight years, Fowler and Whitsett [44] found that most of these teachers read for pleasure (46% reading fiction, 33% non-fiction, 16% biography, and 5% poetry). These preservice teachers were encouraged to read extensively through a variety of activities (e.g., nominating a book, explaining the reason for the nomination, and recommending a reading method). Other leisure reading materials for preservice teachers include newspapers and magazines, while materials for leisure writing include emails and short stories [42].

A good literacy habit may also be manifested not only in what individuals read but also in the amount of time they invest in literacy activities. Research (e.g., [10,36,40]) has revealed that some preservice and in-service teachers devote little time to reading and writing. For instance, in a survey study of 1051 prospective teachers in Spain, Granado [36] found that only 60% of them spent 5–6 h weekly on any reading material. Similarly, in a survey study of 395 preservice teachers in the United States, Huang [40] found that only 38.40% of them invested 1 to 4 h weekly in academic reading, while 19.50% devoted also 1 to 4 h to leisure reading. In contrast, 25.70% spent no time on academic reading, and 46.50% did not engage in leisure reading at all.

The lack of literacy engagement does not necessarily imply that individuals do not value literacy. In fact, research (e.g., [10,33]) has shown that some teachers may value literacy in theory but fail to apply it in their actual practice. For instance, in their questionnaire study of 65 teachers from elementary schools in three states (New Jersey, Florida, and Texas) in the United States, McKool and Gespass [10] revealed that while most of these teachers valued leisure reading, only about half of them immersed themselves in daily reading, and among those who did, they only read for 10 min; instead, these teachers spent more time in other activities, such as grading schoolwork, watching television, engaging with family, and completing housework. Similarly, in their questionnaire survey of 747 practicing and prospective teachers enrolled in a graduate school of education, Nathanson et al. [33] found a high level of “aliteracy” among these individuals: although they had the ability to read

and recognized the value of reading, they themselves did not invest time in reading. Furthermore, the lack of engagement in literacy activities may hinder individuals' formation or maintenance of their identities as readers and writers. For instance, in their interview study with 24 preservice elementary and special education teachers in the United States, Draper et al. [35] revealed that some of these teachers did not see themselves as readers or writers because they were not actively engaged in reading and writing.

The aforementioned findings suggest that preservice teachers' current literacy experiences may be influenced by three contexts: (1) academic literacy, (2) literacy dispositions, and (3) literacy engagement. Two gaps were also detected: (1) a theory–practice gap between the theoretical valuing of the importance of leisure literacy activities and actual engagement in them; and (2) a time–engagement gap between the prioritization of time commitment and literacy engagement. It is also worth noting that the teachers' dispositions toward literacy—whether love/enthusiastic, hate/unenthusiastic, or neutrality—are not fixed; they may change at different times in the individuals' lives as a function of various contextual factors, such as the purpose for reading and the level of stress experienced [45].

#### *1.4. The Rationale for and the Goal of This Study*

The role of early childhood teachers is profound. They are uniquely positioned to shape children's emergent literacy experiences, which, in turn, set a strong foundation for later literacy and academic achievement [19–21]. In the United States, literacy instruction is highly emphasized and taught in schools, particularly in early childhood classrooms [18,22]. The importance of early literacy development has galvanized early childhood teacher education programs across the country to prioritize the theory and practice of early literacy in their curricula aimed at preparing preservice early childhood teachers with the knowledge, skills, and dispositions to teach young children [46,47]. However, little is understood about the social and contextual factors affecting preservice early childhood teachers' literacy experiences, which may impact their literacy instruction and practices in the future.

To gain insights into preservice early childhood teachers' early and current literacy experiences, which are critical for informing early childhood teacher education, this study aimed to identify the most prominent socializing agents of influence on these teachers' literacy experiences, as well as their literacy abilities, dispositions, and habits. The preservice early childhood teachers in this study refer to college students enrolled in an early childhood teacher education program who are learning to become teachers for preschool to third grade. To this end, we sought to address the following four research questions:

- (1) What are the most prominent social and contextual influences on preservice early childhood teachers' early and current literacy experiences?
- (2) How do these preservice early childhood teachers describe their literacy abilities, dispositions, and habits?
- (3) Are there relationships among the various salient social and contextual factors influencing these preservice early childhood teachers' current literacy experiences?
- (4) To what extent do the salient social and contextual factors influence the preservice early childhood teachers' current literacy experiences?

## **2. Method**

### *2.1. Participants*

The participants in this study comprised a convenience sample of 70 college students enrolled in an early childhood teacher education program at a four-year public university in New Jersey, a northeastern state in the United States. Given that these students were intending and studying to become teachers for preschool through third grade, they are referred to as preservice early childhood teachers throughout this article. Table 1 presents the participants' sociodemographic characteristics. As shown, these participants were all females aged 19 to 47 years ( $M = 24.37$ ,  $SD = 6.29$ ), with 72.80% self-identifying as White. This demographic distribution aligns with the general national trend in 2024, which shows that the majority of early childhood teachers in the United States (e.g., 96.70% of

preschool and kindergarten teachers) were female, and 73.50% were White [48]. Most of these participating preservice teachers (74.30%) were between the college ages of 19 and 24. Sixty participants (85.70%) were born in the United States with English as their first language, while the remaining 10 participants (14.30%) were born in other countries. For those born elsewhere, the length of time they had lived in the United States ranged from 6 to 33 years ( $M_{years} = 17, SD = 8$ ).

**Table 1.** The sociodemographic characteristics of participants ( $N = 70$ ).

Variable	N	%
Gender		
Female	70	100.00
Ethnicity		
White	51	72.80
African American	11	15.70
Hispanic	6	8.60
Asian	2	2.90
First Language		
English	61	87.10
Other than English	9	12.90
Marital Status		
Single	59	84.30
Married	7	10.00
Separated	1	1.40
Divorced	2	2.90
Other	1	1.40

## 2.2. Research Instrument

To investigate the literacy experiences of preservice teachers, we developed a questionnaire that aligns with ideas from previous relevant studies (e.g., [10–12,34]). The questionnaire consisted of 24 questions, with the first 14 being close-ended questions designed to collect participants' sociodemographic information (e.g., age, gender, birthplace). The remaining questions were open-ended, aimed at gauging participants' perceptions of the influences on their early and current literacy experiences, including their identities as readers and writers, as well as their reading and writing abilities, dispositions, and habits. The participants' responses to these latter questions were summarized into codes by two research assistants and reviewed by the first author to ensure coding consistency (see Appendix A).

## 2.3. Procedure

This study was approved by the Institutional Review Board of the principal investigator's (PI) (the first author's) university. The paper questionnaire was administered by the PI to participants in four introductory early childhood classes (none on early literacy to avoid any confounding influences on their responses concerning their literacy experiences). With permission from the course instructors, the questionnaire was administered to students in their classes toward the end of the second semester of a two-semester academic year. These students had not yet taken any literacy courses in the early childhood teacher education curriculum. Each class comprised approximately 20 students. They were informed that participation was voluntary and that their decision to participate or not would not affect their performance or grade in the class where the questionnaire was administered. The questionnaire took about 10 min to complete. To minimize any potential influence from the physical presence of the PI and the course instructor, both of them left the classroom, while the students completed the questionnaire in class. A student volunteer was asked to collect the finished questionnaires for the PI.

#### 2.4. Missing Data Imputation

The sample included some missing data. As a rule of thumb, a missing rate of 15% to 20% is common in educational and psychological studies [49]. The missing data in this study ranged from 1.40% to 14.30% across the variables, which was an acceptable range. The little MCAR test shows that  $\chi^2 = 374.59$ ,  $p = 0.96$ , which means that the values were missing completely at random rather than systematically. We used expectation maximization (EM) to impute the missing data because it is considered acceptable when the data are missing completely at random [50].

#### 2.5. Data Analysis

For this study, while the quantitative and qualitative data were collected within the same questionnaire, they were analyzed separately and integrated during interpretation to offer a comprehensive understanding of the preservice early childhood teachers' perceived early and current literacy experiences. The qualitative data, consisting of responses to open-ended questions, were analyzed by two coders based on recurring words and phrases. Discussions were held between the coders until 100% agreement on the coding was reached.

Specifically, to analyze the qualitative data in accordance with Research Questions #1 and #2, we utilized a combination of deductive and inductive approaches. Deductive coding involves applying a predetermined or a priori codebook, while inductive coding entails open coding, where codes are derived directly from the qualitative data [51]. For Research Question #1, which explored factors influencing preservice early childhood teachers' early and current literacy experiences, the deductive coding approach predefined "parents" and "teachers" as codes for early literacy influences, as informed by the literature. The inductive coding approach, on the other hand, led to the identification of "professors/academic work" and "self-motivation" as codes for influences on current literacy experiences. For Research Question #2, which investigated preservice early childhood teachers' literacy abilities, dispositions, and habits, the deductive codes "abilities as readers", "abilities as writers", "enthusiasm, attitudes, and motivation in reading", and "enthusiasm, attitudes, and motivation in writing" were further confirmed through the inductive analysis process. Furthermore, both the inductive and deductive analysis processes involved quantifying the coded qualitative data.

To address Research Question #3, which explored possible relationships among the various social and contextual factors influencing preservice early childhood teachers' current literacy experiences, the quantitative data were first coded numerically and then analyzed. Specifically, we analyzed the coded data by first examining the descriptive statistics for the main variables (year in college and grade point average (GPA), reading fluency, writing fluency, reading hours per week, and writing hours per week) (see Table 2). We then conducted an analysis of bivariate correlations among these variables (see Table 3).

**Table 2.** Influences on preservice early childhood teachers' early literacy experiences.

Influence	Sample Response
Parents/family members	<ul style="list-style-type: none"> <li>• "My mother read to me every night when I was growing up, and my older brother read and wrote which inspired me."</li> <li>• "[My] parents had a lot of reading and writing materials and read to me often."</li> <li>• "[My] parents always read to me and encouraged me to read and write stories."</li> </ul>
Teachers	<ul style="list-style-type: none"> <li>• "[My] first grade teacher had a reading station. I was the fastest reader in class."</li> <li>• "Reading books in elementary school."</li> <li>• "Teachers taught me how to read and write."</li> </ul>



**Table 3.** Influences on preservice early childhood teachers' current literacy experiences.

Influence	Sample Response
Professors/academic work	<ul style="list-style-type: none"> <li>• "School really influences everything I read and write. It makes me a better reader and writer."</li> <li>• "My professors have always encouraged me to put myself beyond my limit [with writing]."</li> <li>• "School influences my reading and writing because school takes up most of my time, [and] this is the only time I get to read."</li> </ul>
Self-motivation	<ul style="list-style-type: none"> <li>• "I read a lot of different books from many different authors. I like to experience different writing styles."</li> <li>• "I like to read for pleasure often. I take pride in my writing and reading."</li> <li>• "I read books that interest me and books that will help develop my future career."</li> </ul>

To explore Research Question #4, which concerns the extent to which various social and contextual factors influence preservice early childhood teachers' current literacy experiences, we described each category based on the percentages revealed by the quantitative data.

### 3. Results

In this section, we address our research questions sequentially by first reporting the qualitative results and then the quantitative results.

#### 3.1. Qualitative Results

**Research Question #1:** What are the most prominent social and contextual influences on preservice early childhood teachers' early and current literacy experiences?

##### 3.1.1. Influences on Early Literacy Experiences

The majority of the preservice teachers (65.70%) identified their parents/family members as the most influential social agents in their early literacy experiences, followed by teachers/schools (17.10%), as revealed by their responses (see Table 2).

##### 3.1.2. Influences on Current Literacy Experiences

More than half of the preservice teachers (57.10%) reported that professors/academic work (as extrinsic motivators) were the most significant influences on their current literacy experiences, followed by self-motivation (28.60%) as an intrinsic factor, as demonstrated by their responses (see Table 3).

**Research Question #2:** How do preservice early childhood teachers describe their literacy abilities, dispositions, and habits?

##### 3.1.3. Abilities as Readers

The 70 preservice teachers' responses regarding their abilities as readers were categorized into three groups: (1) strong/above-average reader (40%), (2) average reader (47%), and below-average reader (13%). Table 4 presents some responses for each category.

**Table 4.** Abilities as readers and sample responses.

Ability as Reader	Sample Response
Strong	<ul style="list-style-type: none"> <li>• “I will say that my ability as a reader is excellent. I enjoy reading and my comprehension is good.”</li> <li>• “I think I am a strong reader. I enjoy it and comprehend what I read well.”</li> <li>• “I am a very good reader and I comprehend well.”</li> </ul>
Average	<ul style="list-style-type: none"> <li>• “I am an average reader.”</li> <li>• “I can read pretty well. I’m an average reader.”</li> <li>• “I feel I’m an average reader.”</li> </ul>
Below average	<ul style="list-style-type: none"> <li>• “I am a slow reader. (below average)”</li> <li>• “I have ADHD and have a hard time concentrating.”</li> <li>• “I have a really hard time reading something and understanding what I have read so it is very difficult for me to read a long book.”</li> </ul>

### 3.1.4. Abilities as Writers

The 70 preservice teachers’ responses regarding their abilities as writers, like their abilities as readers, were also classified into three groups: (1) strong/above-average writer (33%), (2) average writer (47%), and below-average writer (20%). Table 5 shares some responses.

**Table 5.** Abilities as writers and sample responses.

Ability as Writer	Sample Response
Strong	<ul style="list-style-type: none"> <li>• “I am a very good writer. I always put thought into what I want to write before actually writing.”</li> <li>• “Very capable. I am a much better writer than reader and speaker.”</li> <li>• “I am a great writer! I am efficient, creative, and very descriptive. I have a mind and eye for detail.”</li> </ul>
Average	<ul style="list-style-type: none"> <li>• “I feel my writing is average and most likely needs improvement. I try and use my best writing skills.”</li> <li>• “My ability as a writer, I will say, is average.”</li> <li>• “I think I have average writing skills. I like to have someone read over my work.”</li> </ul>
Below average	<ul style="list-style-type: none"> <li>• “I am not very good. I would say I am below average.”</li> <li>• “I know I am a weak writer unless it is a topic that I want to write about.”</li> <li>• “Not that good at it.”</li> </ul>

### 3.1.5. Enthusiasm, Attitudes, and Motivation for Reading

We view enthusiasm, attitudes, and motivation for reading as manifested in a genuine enjoyment of the activity and expressed as “I like to read”. The majority of the preservice teachers (80%) indicated that they “like to read”. More than half of them (55.70%) described their reasons for liking reading as related to enjoyment, leisure, and relaxation (e.g., stress relief), while 10% of them read for learning and gaining knowledge purposes. These reasons seemed to reflect intrinsic motivation. Among the 20% of the 70 preservice teachers who indicated that they did not enjoy reading, their reasons were related to a lack of interest (an intrinsic motivational constraint) or a lack of time (an external resource constraint). Table 6 presents some of their responses.

**Table 6.** Reasons for liking or not liking reading.

Reasons for Liking or Not Liking Reading	Sample Response
Liking reading for purposes of enjoyment, leisure, and relaxation	<ul style="list-style-type: none"> <li>• “When I have the time and I find a book or article I’m really interested in, I get lost in the words; it’s a mind vacation.”</li> <li>• “[Reading is] relaxing and enjoyable. It takes you away from your worries.”</li> <li>• “I find reading relaxing and I enjoy reading. Reading is my way of disconnecting from the stress in my life.”</li> </ul>
Liking reading for purposes of learning and gaining knowledge	<ul style="list-style-type: none"> <li>• “I like to read educational books because I like to learn about new things.”</li> <li>• “Because [reading] stimulates my mind. I also like to read educational books because I like to learn about new things.”</li> <li>• “I enjoy reading because it gives me the capability to expand my vocabulary and it gives [me] insight on whatever that interests [me].”</li> </ul>
Not liking reading due to a lack of interest (an intrinsic motivational constraint) or a lack of time (an external resource constraint)	<ul style="list-style-type: none"> <li>• “[Reading] does not interest me as a hobby, but if I have to, I will engage.”</li> <li>• “I think that it has to do more with the fact that I have so much other work to do with school.”</li> <li>• “It’s boring.”</li> </ul>

### 3.1.6. Enthusiasm, Attitudes, and Motivation in Writing

Like our conceptualization of enthusiasm, attitudes, and motivation for reading, we also viewed these aspects with respect to writing as manifested in a genuine enjoyment of the activity and expressed as “I like to write”. More than half of the preservice teachers ( $n = 41$ , 58.57%) indicated that they “like to write”. Among those who reported liking writing, 80% expressed that they wrote for enjoyment, leisure, relaxation (e.g., stress relief), and stimulation of creativity, while the remaining 20% indicated that they wrote for communication and self-expression purposes. These reasons seemed to reflect intrinsic motivation. Among nearly half (41.43%) of the 70 preservice teachers who indicated that they did not like writing, their reasons primarily related to a lack of writing skills and ideas. Table 7 presents some responses for liking or not liking writing.

**Table 7.** Reasons for liking or not liking writing.

Reasons for Liking or Not Liking Writing	Sample Response
Liking writing for purposes of enjoyment and the like	<ul style="list-style-type: none"> <li>• “I enjoy writing essays and personal stories. That’s why English writing is my 2nd major.”</li> <li>• “If it is writing for myself, it is a sense of escape and therapy to think things through.”</li> <li>• “Writing is therapy. You can express what you want.”</li> </ul>

Table 7. Cont.

Reasons for Liking or Not Liking Writing	Sample Response
Liking reading for purposes of communication of ideas and self-expression	<ul style="list-style-type: none"> <li>• “I get to express my feelings by writing it on paper and changing in any way that I wish.”</li> <li>• “Because it is easier for me to communicate my thoughts through writing than speaking.”</li> <li>• “I like to write because it is a way of expressing my ideas.”</li> </ul>
Not liking writing due to a lack of writing skills and ideas	<ul style="list-style-type: none"> <li>• “I feel I haven’t been properly taught through the school system until now and I feel I write incorrectly.”</li> <li>• “I have a hard time writing papers because I can’t organize my ideas.”</li> <li>• “I do not like to write because it takes a long time for me to come up with ideas and the right words to use.”</li> </ul>

3.2. Quantitative Results

**Research Questions #3:** Are there relationships among the various salient social and contextual factors influencing preservice early childhood teachers’ current literacy experiences?

Table 8 summarizes the descriptive statistics for the main variables. As shown, the preservice teachers averaged 3.26 years (*SD* = 0.83) in college, and a GPA of 3.36 (*SD* = 0.39) out of 4.0. On a scale of 1 (“Not Fluent at All”) to 4 (“Very Fluent”), these preservice teachers averaged 3.79 (*SD* = 0.51) on reading fluency and 3.64 (*SD* = 0.70) on writing fluency, suggesting that they were more fluent in reading than writing. They spent an average of 5.61 h (*SD* = 4.82) on reading per week and 5.44 h (*SD* = 5.51) on writing per week, suggesting that they spent more time on reading than writing.

Table 8. Descriptive statistics of variables.

Variables	Range	<i>M</i>	<i>SD</i>
Year in college	1–5	3.26	0.83
GPA	1–4	3.36	0.39
Reading fluency	1–4	3.79	0.51
Writing fluency	1–4	3.64	0.70
Reading hours per week	1–30	5.61	4.82
Writing hours per week	0–25	5.44	5.51

As presented in Table 9, the preservice teachers’ year in college was positively correlated with writing fluency and with writing hours per week. Surprisingly, their GPA was negatively correlated with writing hours per week. As expected, there was a strong, positive correlation between reading fluency and writing fluency, and similarly, there was a moderately strong, positive correlation between reading hours per week and writing hours per week.

Table 9. Bivariate correlations among variables.

Variables	1	2	3	4	5
1. Year in college	-				
2. GPA	−0.02	-			
3. Reading fluency	0.20	−0.04	-		
4. Writing fluency	0.28 *	−0.15	0.68 **	-	
5. Reading hours per week	0.06	−0.18	0.03	0.01	-
6. Writing hours per week	0.28 *	−0.27 *	−0.10	0.04	0.56 **

\* *p* < 0.05. \*\* *p* < 0.01.

**Research Questions #4:** To what extent do the salient social and contextual factors influence the current literacy experiences of preservice early childhood teachers?

As shown in Table 10, the majority (47.10%) of the 70 preservice teachers were in their third year of college study. Most of them (84.30%) maintained at least a GPA of 3.0 (equivalent to a B grade) (out of a maximum GPA of 4.0), which is considered a good GPA for majoring in early childhood education at their university. Most of them (82.90%) reported that their reading fluency was at level 4 (“Very Fluent”) and most of them (77.10%) also reported that their writing fluency was similarly at level 4. The majority of these preservice teachers (61.40%) spent only 1–5 h on reading per week and, similarly, most of them (71.40%) spent only 1–5 h on writing.

**Table 10.** Percentages of year in college, GPA, reading fluency, writing fluency, reading hours per week, and writing hours per week among preservice early childhood teachers ( $N = 70$ ).

Year in College	Percentage	GPA (out of 4.0)	Percentage	Reading Fluency	Percentage	Writing Fluency	Percentage	Reading Hours per Week	Percentage	Writing Hours per Week	Percentage
1	1.40%	3.0 or above	84.30%	1	0	1	0	1–5	61.40%	1–5	71.40%
2	14.30%	Below 3	15.70%	2	4.30%	2	12.90%	6–10	30.00%	6–10	15.70%
3	47.10%			3	12.90%	3	10.00%	11–15	5.70%	11–15	7.20%
4	31.40%			4	82.90%	4	77.10%	16–20	1.40%	16–20	2.80%
5	5.70%							21+	1.40%	21+	2.80%

As summarized in Table 11, more than half of the 70 preservice teachers (55.70%) reported reading academic materials and textbooks, while a majority (88.60%) of them indicated that they wrote for academic work.

**Table 11.** Types of materials currently read and written about by preservice early childhood teachers ( $N = 70$ ).

Reading	$n$ (%)	Writing	$n$ (%)
Academic materials/textbooks	39 (55.70%)	Academic-related	62 (88.60%)
Books (non-academic, including children’s storybooks)	15 (21.40%)	Non-academic-related (e.g., creative writing, poetry)	8 (11.40%)
Magazine/newspapers	14 (20.00%)		
Bible/religious materials	2 (2.90%)		

#### 4. Discussion

Informed by the socioecological theory of human development [13,14], we investigated the early and current literacy experiences of 70 preservice early childhood teachers in the United States. Eight findings emerged as particularly noteworthy. They collectively add insights to the teacher education literature concerning factors influencing preservice teachers’ literacy abilities, dispositions, and habits.

First, this study revealed that the strongest influence on preservice early childhood teachers’ literacy development in the early years was family, particularly parents, followed by teachers and schools. This finding aligns with previous research (e.g., [12,33]) and corroborates Bronfenbrenner’s [12,13] theory that parents and teachers are critical and immediate microsystems influencing children’s early development. The qualitative responses by the preservice teachers further attest to the support of parents in facilitating their early literacy development by ways, such as reading with them, offering reading materials to them, and nurturing their enthusiasm in literacy. Following parents, teachers were found to play the next most prominent role in these individuals’ early literacy experiences. The preservice teachers’ responses to open-ended questions further highlight that while parents established the foundational emergent literacy experiences, teachers provided formal instruction

and supportive guidance for their reading and writing development. Unlike the negative early literacy experiences reported in some previous research (e.g., [38]), the preservice teachers in this study generally described positive early influences from both their parents and teachers. Overall, the findings regarding the influences on preservice teachers' early literacy experiences illuminate a rich tapestry of the crucial roles that both parents and teachers play in shaping children's early literacy development. It follows logically that teachers should partner with families to connect home literacy experiences with formal literacy instruction at school, ensuring that learning in both contexts is mutually reinforcing and beneficial [52,53].

Second, this study revealed that, unlike their early literacy experiences, the preservice teachers' perceptions of their current abilities as readers and writers, as well as their literacy dispositions and habits, were influenced by social and contextual factors beyond just parents and teachers. The change in influences appears natural and inevitable, according to the time element of Bronfenbrenner's socioecological theory, which identifies life transitions as a critical context for human development [17]. This study reveals that, for these preservice teachers as college students, the most prominent influences on their current literacy development were academic work and professors, followed by self-motivation. This phenomenon represents a shift from the early influences of parents and teachers. It also supports the notion that as individuals transition through different life stages, they encounter social and contextual changes that impact their literacy practices and motivation for literacy engagement. Specifically, the preservice teachers developed intrinsic motivation to read and write for various purposes, including enjoyment, knowledge acquisition, and self-expression. They also engaged with reading materials related to their studies, which may have served as an extrinsic motivation. This finding aligns with previous research on preservice teachers' academically-oriented literacy practices influenced by their role as college students [36,40].

Third, this study revealed that nearly half of the preservice teachers considered themselves average readers and writers. While most reported enjoying reading and more than half expressed enjoyment in writing, those who did not like reading or writing cited reasons such as a lack of intrinsic motivation, insufficient time for reading, and limited writing skills or ideas. It appears that intrinsic motivation is a driving force for building positive literacy dispositions, including a love for reading [11]. However, it is possible that these preservice teachers, if and when they become teachers, may compensate for their lack of literacy enthusiasm and intrinsic motivation with strong knowledge and skills in literacy instruction. For instance, they might draw on their negative literacy experiences to provide needed instructional support, helping to connect with and inspire struggling readers and writers in the classroom to overcome their literacy challenges [41].

Fourth, the finding that the majority of preservice teachers devote most of their reading and writing time to academic materials over leisure materials aligns with the idea that individuals' priorities shift over time, impacting their development [17]. This finding echoes that of Sulentic-Dowell et al.'s [34] study, which revealed that academic reading dominated during the developmental periods from adolescence to adulthood. One possible explanation is that, for college students, academic work may understandably consume most of their time, leaving little opportunity or energy for leisure literacy activities. As individuals grow older, they may have less time for leisure and informational reading [34]. However, the lack of engagement in non-academic literacy activities does not necessarily imply that these preservice teachers lack enthusiasm or competence as readers and writers, a point that is also evident in previous research on preservice and in-service teachers (e.g., [10,33]). In fact, most preservice teachers in this study reported being enthusiastic about reading and writing and perceived themselves as very fluent in both.

Fifth, it was revealed that the majority of preservice early childhood teachers allocated only a limited amount of time (1–5 h per week) to reading or writing. For those who engaged in literacy activities, it was primarily to fulfill mandatory academic requirements. Given their enrollment in a teacher education program, these individuals may have been preoccupied with the demands of academic reading and writing. Despite the limited time devoted to literacy activities, most preservice teachers considered themselves to be highly fluent in reading and writing and perceived their skills as either average or above average. This finding contrasts with Draper et al.'s [35] study, which found that some teachers did not view themselves as readers or writers due to limited engagement with literacy. However, this contrast may not be surprising, especially considering that 60 of the 70 preservice teachers in this study were born in the United States, where English is the mainstream language, and the educational system emphasizes reading and writing.

Sixth, the finding of a positive correlation between reading fluency and writing fluency suggests that reading and writing are interrelated: the better someone is as a reader, the better they tend to be as a writer, and vice versa. This finding reinforces the understanding that reading and writing are integrated and reciprocal skills, where improvement in one likely facilitates the development of the other [54]. It also affirms that reading and writing are not only essential literacy skills providing the foundation for all academic learning [19], they are also the primary focus of traditional literacy instruction in U.S. early childhood classrooms [18,22].

Seventh, the positive correlations between years in college and writing fluency, and between the years in college and writing hours per week, seem logical. It suggests that as preservice teachers spend more time in college and dedicate more time to writing, their writing ability improves. This finding indicates that as students advance in their college education, they gain more experience and invest more time in writing, which likely enhances their writing fluency. Importantly, it underscores that writing is a developmental process that improves with time and experience [55].

Eighth, the finding that GPA was negatively correlated with writing hours per week seems counterintuitive. It suggests that students with lower GPAs, who might be expected to spend more time on writing to improve academically, actually spent less time on writing compared to their higher-achieving counterparts. This finding also contrasts with research showing that college students with higher GPAs generally demonstrate better literacy skills than those with lower GPAs [56]. One possible interpretation is that students with lower GPAs may need to spend more time on writing to catch up academically and meet rigorous written assignments, while higher achievers might be more efficient writers and therefore spend less time on writing. This interpretation implies that time spent on writing may reflect enthusiasm for the activity but does not necessarily correlate with writing competence or overall academic performance. Additionally, there may be a time–competence gap, where increased time spent on writing does not always lead to a higher GPA.

Considering all the findings of this study, there is cautious optimism about the social and contextual influences on preservice teachers' current literacy experiences, reflecting a developmental shift in priorities that impacts their literacy habits. These findings also highlight the significant changes in social and contextual influences on human development over time [17]. Additionally, they illuminate the complexity of various social and contextual factors and their interplay, which influenced both the early and current literacy experiences of preservice early childhood teachers in this study.

#### *4.1. Implications for Teacher Education*

The findings of this study contribute to the ongoing discourse on preparing preservice teachers as learners and future leaders in early childhood education. Specifically, they underscore the pivotal role that teacher education programs play in fostering positive literacy abilities, dispositions, and habits in preservice teachers through three main pathways: (1) leadership, (2) curriculum, and (3) instruction.

First, as leaders in the classroom, teachers can be transformative in their teaching practices by possessing “leadership traits such as inspirational motivation, intellectual stimulation, individualized consideration, and idealized influence in cultivating environments that not only support but actively promote a love for literacy among children” ([57], p. 81). To acquire these leadership traits, preservice teachers need the support of strong leadership in their teacher education programs. For example, teacher education leaders—notably, teacher educators, course instructors, and curriculum developers—in these programs can be transformative by adopting a holistic and integrative approach that fosters literacy-rich environments and dialogues for preservice teachers. They should also invest time and resources in assessing preservice teachers’ current literacy abilities, dispositions, and habits to better gauge their strengths and needs. In turn, this knowledge can then be incorporated into the program’s coursework.

Second, early childhood teacher education programs should consider the insights from this study when developing, shaping, and revising educational policies and curricula. For instance, teacher educators should prioritize opportunities for literacy learning and practices across the early childhood teacher education curriculum to better promote positive literacy competence, dispositions, and habits in preservice teachers. They should also ensure that the curriculum covers content on effective strategies for establishing strong teacher–parent partnerships in their future teaching, as parents and teachers are two critical socializing agents of influence in children’s early literacy development, as revealed by this study.

Third, and perhaps the most immediately actionable strategy, is to focus on teaching practices in the teacher education classroom without changing the leadership and curriculum visions and goals in the program. Specifically, teacher educators can model effective literacy strategies in the classroom for preservice teachers that can facilitate and advance their current literacy development. For instance, teacher educators can encourage preservice teachers to develop, maintain, or strengthen their positive literacy competence, dispositions, and habits by ways, such as encouraging them to engage in regular reading and writing, and providing opportunities for them to discuss academic and personal readings and writings in class. They can also model effective literacy practices, assign books for reading and discussion to help preservice teachers become well-versed in recommending these books to their future students, and suggest those burdened with heavy courseloads or who do not enjoy reading to consider listening to audiobooks as an alternative [45].

Considering the finding that the preservice teachers lacked interest or time for reading, teacher educators might carve out time in the classroom for preservice early childhood teachers to actively engage in academic or leisure reading. In addition to the instrumental benefits of academic reading, leisure reading can provide vast advantages, such as improving vocabulary size, general knowledge, social cognition, and the ability to understand and empathize with others’ emotions [8,58]. In this context, leisure reading might also serve as a byproduct that can contribute to preservice teachers’ success in their academic work. Given the finding about some preservice teachers lacking writing skills and ideas, teacher educators might consider providing time to discuss effective writing strategies with them. Furthermore, teacher educators can share their own past and current successes and struggles with literacy habits, which may resonate with preservice teachers. They can also encourage preservice teachers to read and write for enjoyment by providing assignments that promote engagement in literacy beyond academic work. These activities can help preservice teachers develop into avid readers and writers, if they are not already.

With support of leadership and instruction from teacher education programs, it is hoped that preservice teachers will ultimately develop and maintain positive literacy dispositions and good literacy habits while acquiring the requisite pedagogical knowledge and skills necessary to become competent teachers of reading and writing in the future. By cultivating these positive qualities, preservice teachers may, in turn, be better positioned to model and instill good literacy dispositions and habits in their own students in the future, potentially averting what Applegate and Applegate [11] described as the Peter Effect.



#### 4.2. Limitations of the Study and Directions for Future Research

Despite contributing important insights concerning the early and current literacy experiences of preservice early childhood teachers, this study has limitations. We note five here: First, we recognize that the sample size was relatively small, convenient, and homogeneous, with all participants from the same university in the United States. Furthermore, all participants were female, and most were White. These characteristics represent a limitation that precludes making any generalizations about other preservice early childhood teachers, particularly those with dissimilar sociodemographic characteristics. To address this limitation, future research might consider recruiting a more diverse sample of preservice early childhood teachers, including those with different sociodemographic characteristics and from various teacher education programs across different higher education institutions.

Second, the data collection method relied solely on a self-reported questionnaire, which means that the participants' responses may be subjective and influenced by their own interpretations of the questions asked as well as their own perceptions and assessments, including those regarding their reading and writing abilities and habits. Thus, these self-reported responses can only be viewed as perceived rather than actual representations of what the participants did. Future research might consider exploring the potential connection between preservice teachers' current literacy habits and their pedagogical approaches through interviews and observations of their literacy instruction, in addition to the questionnaire. Since the preservice teachers in this study had not yet begun student teaching, where they would have the opportunity to teach, we were unable to interview them about their literacy instruction or observe their classroom teaching. Future research might consider studying preservice teachers who are in the field and triangulating the data collection of their literacy practices with additional sources, such as interviews, daily logs of reading and writing activities, and reading and writing competency assessments. These supplementary data sources could help confirm or challenge the current findings and provide additional insights. Alternatively, future research could focus on in-service teachers by administering questionnaires, conducting interviews, and observing their literacy instruction in action.

Third, as this study focused on traditional literacy (reading and writing), we did not explore other forms of literacy, such as digital literacy, which includes reading and writing through digital means (e.g., the Internet, social platforms) [59,60]. In this digital age, it is likely that the literacy experiences of preservice teachers are increasingly digital. Future research might inquire into the social and contextual influences on preservice teachers' digital literacy abilities, dispositions, and habits.

Fourth, this study also did not explore the impact of bilingual practices by parents and teachers on individuals' bilingual development, which previous research in the United States has shown to be informative [30]. Future research might consider investigating this aspect.

Lastly, we acknowledge that we did not investigate what Bronfenbrenner [14] described as mesosystems—the intersections between two or more microsystems—on the participants' early and current literacy experiences. Factors such as personal characteristics, interactions at home, school, and in the community, as well as contextual and historical influences, may interact to impact individuals' literacy experiences [61]. Future research might consider exploring these factors, particularly among preservice teachers who are learning to become effective educators in the future.

#### 5. Conclusions

Two potential conclusions can be drawn from the findings of this study: First, the various influences on preservice early childhood teachers' early and current literacy experiences reflect an intricate process involving a host of social and contextual factors, including socializing agents, reading and writing abilities, identities as readers and writers, literacy dispositions, and literacy habits. This conclusion underscores the need to continuously ex-

amine the dynamic social and contextual influences on human development, as suggested by Bronfenbrenner’s socioecological theory [13,14].

Second, most of the preservice teachers exhibited enthusiasm for reading and writing, possessed a positive identity as readers and writers, and perceived their reading and writing abilities as strong. For these individuals, the Peter Effect, as described by Applegate and Applegate [11] and Applegate et al. [12], may not apply. In contrast, for the small percentage of preservice teachers who lacked a combination of conditions, such as good literacy habits, enthusiasm for literacy, and strong reading and writing abilities, the Peter Effect could potentially manifest in their future teaching. However, this interpretation should be approached with caution, as poor literacy dispositions and habits (e.g., aliteracy and a lack of enthusiasm for literacy) in teachers do not always or necessarily beget the same in their students. This is because literacy experiences are influenced by a variety of factors throughout life transitions, as revealed by this study and supported by the time element of Bronfenbrenner’s socioecological theory concerning human development [17].

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### Appendix A. The Coding Scheme of the Open-Ended Questions about Early and Current Literacy Habits and Practices

Question	Coding
Please describe what influenced your EARLY reading and writing development the most when you were a child.	1 = Parents 2 = Teachers/School 3 = Sibling 4 = Self-motivation 5 = Not Reading 6 = Others
Please describe what influences your CURRENT reading and writing development the most.	1 = Academic work (reading for college courses) 2 = Self-motivation 3 = Seeking information (e.g., newspapers) 4 = Not reading 5 = Others
Do you like to read? <input type="checkbox"/> Yes; why? <input type="checkbox"/> No; why?	1 = Yes (without giving reasons) 2 = Yes (seeking information) 3 = Yes (fulfilling interest/pleasure) 4 = Yes (acquiring knowledge) 5 = No
Do you like to write? <input type="checkbox"/> Yes; why? <input type="checkbox"/> No; why?	1 = Yes (without giving reasons) 2 = Ye (fulfilling course assignments) 3 = Yes (fulfilling interest/pleasure) 4 = Yes (expressing creativity and learning) 5 = No

Question	Coding
Approximately how many hours do you spend reading during a typical week?	1 = 1–5 2 = 6–10 3 = 11–15 4 = 16–20 5 = 21
What kinds of materials do you usually read?	1 = Magazines or newspaper 2 = Academic-related (textbooks) 3 = Books (fiction/non-fiction) 4 = Bible and religious materials 5 = Others
Approximately how many hours do you spend writing during a typical week?	1 = 1–5 2 = 6–10 3 = 11–15 4 = 16–20 5 = 21
What do you usually write about?	1 = Creative works (poetry/stories) 2 = School assignments
Please describe your ability as a reader.	1 = Poor 2 = Average 3 = Strong
Please describe your ability as a writer.	1 = Poor 2 = Average 3 = Strong

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