

Hidden Curriculum Activities on Numeracy and Literacy Development in Early Grade Education: Perspectives from Elementary School Teachers in Ghana

Abstract

This paper synthesizes the perspectives of five elementary school instructors on hidden curriculum activities in basic education in Ghana. These opinions were expressed during an interview conducted to determine the effect of a hidden curriculum on the development of numeracy and literacy among Ghana's early-grade learners. Qualitative analysis was used to analyze the data collected through open-ended queries and semi-structured interviews. The findings of this study indicated that early-grade educators are well aware of hidden curriculum activities and engage in various extracurricular activities to develop their pupils' numeracy and literacy skills. Therefore, the hidden curriculum contributes to a more holistic education by expanding the scope of learning beyond the curriculum's prescribed subjects. The study concludes with suggestions that education is not limited to textbooks and lesson plans but includes a wide range of experiences that shape learners' perspectives, skills, and character development; therefore, teachers should provide an environment that creates learning opportunities for students to improve retention, engagement, and enjoyment of the learning process.

Keywords: *literacy skills, numeracy skills, hidden curriculum, hidden curriculum activities*

Introduction

The traditional perception of the school curriculum is that it is a clear, thoughtful, professionally organized program with predetermined goals. In addition to this didactic curriculum, students also encounter a hidden curriculum, which refers to many sorts of knowledge acquired in elementary and secondary school settings and is typically associated with negative connotations that highlight the injustices that have been caused as a result of its presence. Schooling plays a

role in socialization because it imparts knowledge, ambitions, social conventions, and behavioural patterns that support the assumption of particular roles. The influence of desired values permeates every aspect of daily life. Instructors use hidden curricula to create social reproduction in the classroom. In light of this, an effective way for teachers to implement the hidden curriculum would be to incorporate the desired values into their lesson plans through the use of games or examples in the classroom. These qualities include tact, predictability, perseverance, reliability, postponing gratification, timeliness, obedience to authority, and perseverance (Bowles & Gintis, 1976:37). Since the school environment is essential to the development of a school community, administrators need to gain a comprehensive awareness of the educational environment through an investigation of the representational character of the hidden curriculum.

The school environment has an impact on every student there. Teachers need to be aware of the impact of their perspectives and the strength of their influence on the institutional **culture to understand** the school. In the new basic school curriculum, the hidden curriculum has been acknowledged as the socialization process of education (MOE, 2019). The learning environments created by the hidden curriculum are mass-produced and available to all or even the majority of students in that setting. For instance, a teacher might post a song, game, or picture on the wall that serves a function and is a part of the school's or classroom's hidden curriculum. These hidden curriculum activities can be deduced from discussing the classroom's physical setup, including its layout, the materials available, and the children's placement in clusters or rows while an adult directs them toward activities like reading, writing, and math (LeCompte, 1978). Our educational system continues to focus on clearly defined activities like arithmetic, **science and technology, literacy, etc. Additionally**, having high-quality hidden curricular experiences at school will help students improve their literacy and numeracy skills as they progress through nine years of elementary school, three years of secondary school, and a four-year university program.

Early acquisition of sufficient literacy and numeracy abilities will encourage young people to pursue educational opportunities in English language and Mathematics-related fields. Mathematics is a difficult subject that provides access to numerous courses in the biological, social, and engineering sciences. Students can calculate, think logically, solve problems, and

examine issues thanks to mathematics, which is more than simply numbers. The majority of employers highly regard this skill set since it appropriately prepares students for the workplace (Augustine, 2007). Student options can be expanded simply by taking a few advanced-level math courses. An excellent foundation in numeracy and literacy is required for students who want to succeed in courses like anthropology, sociology, law, business, and medicine. Additionally, strong numeracy and literacy instruction will help children comprehend science, technology, and the impact they have on our world.

Literature Review

To build up not just the cognitive aspects of the "microcosm," but also the emotive consequences, the school's culture, values, and ethos become more and more significant concepts (Dewey, 1926). According to Lynch (1989), schools are the setting where the government must make sure that the conditions needed for capital accumulation are replicated. Throughout the application of the formal curriculum in the classroom, knowledge, norm, and value transmission occur between the teacher and the students. Teachers can, however, use their students' everyday knowledge to interpret the curriculum and allow them to discuss what they have learned to promote socialization. The hidden curriculum is without a doubt one of the most significant components in nurturing kids' social education in school (Norouzi et al., 2014). Students are introduced to a variety of scientific, social, historical, economic, and political knowledge through curricula, particularly hidden curriculum, as well as a variety of skills and attitudes, such as respect, honesty, open-mindedness, empathy, patriotism, commitment and responsibility, attention to the public interest, equality, and observance of law and regulations (Amini & Saeedkia, 2018).

Schools are not the only institutions in charge of social reproduction, though one can question whether they are doing a good job at times. Families may be better able to handle social reproduction because socialization starts in the family. In fact, families can convey ideals that national curricula are unable to. However, a society's pedagogical responsibility makes cultural reproduction more likely. In general, pedagogical duty and required education are considered to be the same. According to Lundgren (1983), compulsory schooling implied submission to both society's common values and knowledge and the dominant social stratum's values and

knowledge. In this regard, Bloom's (1972) emphasis on the hidden curriculum as opposed to the evident one can aid in our understanding of how compulsory education contributes to the formation of values. According to him, the hidden curriculum is probably more effective than the manifest curriculum in many ways (quoted in Gordon, 1983). For instance, the use of characteristic sets of activities, such as giving credit to the well-mannered student group in the classroom and inspecting the student's name on the chart if they did a good job on their academic work, generates patterns of interpersonal interaction (Acar, 2012).

According to Martin (1976), a hidden curriculum is a collection of learning activities. In the end, one must determine what is learned as a result of the cultural laws, customs, relationships, structures, and physical features that make up a particular context. Since hidden curriculum cannot be directly discovered, the researcher must investigate it and look for justifications for the happenings. As stated by Lynch (1989), schools feature both general and unique **hidden curricula** that promote an imbalanced atmosphere for children. Some components of hidden curriculum are concealed, such as social and reward systems, which may be accepted as specific, while others are obvious, such as curriculum outlines, school hours, and test procedures.

According to Dreeben (1968), every kid comes from a unique set of parents, and when they **enroll** in school, they are forced to deal with the institutional norms that will prepare them for life in the public arena. **To** ensure that children are completely assimilated into society, he characterized these principles as independence, achievement, universalism, and specificity. There are three contexts for hidden curricula, according to Vallance (1973). These are;

- Contexts of schooling—such as the classroom structure, student-teacher interaction, and the overall organizational structure of the educational institution—as a microcosm of the social value system
- processes operating in or through schools, such as the socialization of students and the preservation of the class system.
- The investigator's degree of concealment and intentionality

As noted by Anyon (1980), how pupils are taught depends on how lessons are carried out and what assignments they are given. According to Anyon's research, students who attend

professional and executive schools acquire the most worthwhile education. In those institutions, teachers encourage students to think creatively and form their own opinions rather than merely imparting knowledge. Repetition, memorization, and relentless copying have been replaced with writing, creative projects, analysis, and opinion formation. If instructors build welcoming classroom environments for experiencing hidden curriculum activities that assist in learning numeracy and literacy, it may be possible to reduce the amount of variation in how hidden curriculum is handled in basic schools. If teachers **do not** demonstrate this trait while they are teaching, it will affect students' judgments of their own talents and may lead them to select careers that don't use a lot of math-related concepts. Students are inspired to take risks and engage freely in the learning process if teachers establish a supportive learning environment. Additionally, it instils in children a sense of safety and support and increases their passion and respect; as a result, students' levels of academic accomplishment are significantly raised (Pierce, 2001). The purpose of this article was to synthesize teachers' perspectives on hidden curriculum activities that aid in the teaching and learning of literacy and numeracy in Ghanaian basic schools. **Additionally, the outcome of the study will add to the limited literature on the area of hidden curriculum-related issues in the country.** The study was guided by the following research questions:

1. What is the basic school teachers' level of awareness of the hidden curriculum?
2. What are the hidden curriculum activities that help develop basic school learners' **numeracy** acquisition?
3. What are the hidden curriculum activities that help develop basic school learners' **literacy** acquisition?

Method

Design

The narrative inquiry framework served as the foundation for the research design for this study. According to Connelly and Clandinin (1990), people are storytelling organisms that lead storied lives both individually and socially. This justifies the use of narrative in educational research. It is an examination of the various worldviews held by people. In addition to identifying the hidden

curriculum activities that teachers in schools could use to enhance students' learning of numeracy and literacy, the purpose of this study was to determine the degree of awareness of the hidden curriculum among basic schoolteachers.

Participants

Five teachers participated in the study. Teacher 1, thirty years old, has been teaching at the preschool level for the past five years. She has a Diploma in Basic Education. Teacher 2 is 35 years old and has a bachelor's degree in Early Childhood Education. She has been teaching Early graders for the past nine years. Teacher 3, 42, has a second degree in the English language. He has been teaching the English language in the basic school for the past ten years. Teacher 4, 33 years old, has been teaching Mathematics in the basic school for the past eight years. He has a bachelor's degree in pure mathematics. Finally, Teacher 5, who is twenty-eight years old, has been teaching Early graders for the past three years. She holds a Diploma in Mathematics.

Data Collection

An interview was conducted after a questionnaire with open-ended questions served as the initial data source. A senior lecturer at the University of Education, Winneba, then approved the questionnaire that the researchers had created. The purpose of the questionnaire was to determine the level of basic schoolteachers' knowledge of hidden curriculum, which could help guide the development of primary education in Ghana, as well as to identify hidden curriculum activities that teachers in schools could implement to enhance students' learning of numeracy and literacy. A preliminary review of the data from the first stage of data collection helped to create the second round of data collection, which involved interviewing the teachers to address any discrepancies in their responses to the questionnaire. 30 minutes were spent interviewing each participant.

Data Analysis

Teachers' responses were coded and then categorized per pertinent themes as part of the data analysis, which was based on an analytical-inductive methodology. Data coding started with pre-generated codes from the literature, such as (1) awareness of hidden curriculum activities; and

(2) literacy development. To find themes in the data, the inductive technique of data coding was applied on a case-by-case basis. Using this method, the replies from each teacher were compared and examined for shared themes. The frequencies of related instructor replies were grouped into pertinent themes. Individual teachers' answers to the open-ended questions and the interview questions were compared because the data were double-folded to look for consistency and inconsistency. After the data sets had been coded, a domain analysis was done to help comprehend the relationships between the main themes that had been discovered throughout the coding process (Spradley, 1979).

Results and Discussion

The findings of the study are presented in this section, which is divided into three themes. Themes related to hidden curriculum activities that promote the development of numeracy education in Ghana; those that promote the development of literacy education in Ghanaian basic schools; and the current awareness level of teachers about hidden curriculum activities that adequately prepare learners for the future were considered in reporting the results, even though data were collected from each teacher.

Awareness of hidden curriculum

Teacher 1: Hidden Curriculum: Topics or activities that are not in the curriculum but that learners still experience during learning.

Teacher 1's comments indicate that the existence of a hidden curriculum implies that topics or activities outside of the prescribed curriculum are presented to learners. This suggests that pupils have access to informal learning options that could aid in their overall growth and education. Implicit learning about social standards, values, and attitudes is frequently part of hidden curricula. Learners may develop significant social and cultural skills through these unexpected experiences that go beyond the curriculum's explicit content. They might discover things like teamwork, deference to authority, or cultural diversity.

Teacher 3: Hidden curriculum is something teachers do not teach in the classroom, but children learn anyway.

Teacher 3's comment shows that the concept of a hidden curriculum underscores the importance of informal learning environments within and outside the classroom. Children absorb knowledge and values not only from textbooks and structured lessons but also from their surroundings, interactions with peers, and observations of authority figures. Educators and parents should recognize the significance of informal learning opportunities and create spaces where positive values and behaviours can be encouraged and reinforced. This might include promoting open discussions, nurturing a respectful classroom culture, and providing opportunities for social interaction and collaboration.

Teacher 4: These are the things teachers and learners do in the classroom that are not in the official curriculum.

Teacher 4 acknowledges that a hidden curriculum emphasizes the idea that there is more to education than the formal curriculum. It highlights the importance of varied learning opportunities that occur in the classroom context. While not always clearly stated in the curriculum, teachers and students participate in activities, discussions, and behaviours that support the overall learning process and outcomes. This acknowledgement makes possible a more inclusive and lively learning environment that encourages involvement and fruitful educational experiences.

Teacher 5: These are how children learn through play and the teacher's interactions with them in schools.

Teacher 5, through these remarks, realizes that the hidden curriculum, which is characterized by play and interactions between teachers and learners, provides an atmosphere for the growth of critical social and emotional competencies. Children can practice self-control, cooperation, communication, problem-solving, and self-regulation through play in a nurturing environment. Additionally, the interactions between teachers and students help students develop empathy, connections, and emotional health. Schools can promote holistic development and give pupils essential life skills beyond academic knowledge by including these elements in the hidden curriculum.

Promoting Literacy learning

Teacher 1: Daily greetings and asking learners how they are doing in the morning encourages communication among learners, thereby improving their listening and speaking abilities. The use of signs and actions teaches children about non-verbal forms of communication.

This strategy promotes interaction among students, giving them frequent opportunities to hone their speaking and listening skills. Students are better able to express themselves, articulate their ideas, and collaborate effectively with their classmates in a supportive and engaging learning environment. Additionally, children's knowledge of nonverbal cues and expressions will be significantly impacted by the way nonverbal forms of communication are taught to them through signs and actions. This exercise teaches students that nonverbal cues like body language, facial expressions, gestures, and other signals can also be used to communicate. Students have a greater knowledge of the significance of nonverbal clues in delivering messages, comprehending people, and improving overall communication efficacy because of exposure to and education in this area.

Teacher 2: Children learn the alphabet and sound from some of the styles of clapping, e.g., the Indian clap (aaaa, bbbbb, cccc). Classroom posters and designs on walls help learners learn the letters of the alphabet with their corresponding sounds even in the absence of the teacher.

The employment of various clapping patterns to teach alphabets and sounds suggests a multiple-sensory learning strategy. Children are simultaneously engaged in their auditory, visual, and kinesthetic senses when physical actions like clapping are incorporated into the learning process. This multimodal experience may enhance their ability to remember and recall information. Additionally, it offers a more interactive and interesting learning environment and accommodates various learning styles.

The availability of wall decals and classroom posters that teach students how to associate alphabet letters with their associated sounds emphasizes the value of autonomous learning and resource use. In the absence of the teacher, students can learn and practice letter-sound correlations with the help of these visual aids. Successfully utilizing the resources at their disposal, empowers students to take control of their learning process and promotes self-directed learning. This encourages a sense of independence, accountability, and engaged participation in the learning process.

Teacher 3: Storytelling in their leisure time I tell learners stories and give them opportunities to tell stories they know of. I give them opportunities to ask questions in the process of storytelling.

The practice of storytelling in leisure time, as well as allowing students the chance to share their own experiences and pose questions, has important effects on the development of language and communication. By telling stories, teachers can motivate students to use language actively as both storytellers and listeners. Learners can enhance their vocabulary, comprehension, and expressive language abilities by listening to stories and telling their own. They further develop their communication skills by posing and responding to questions while presenting stories, which encourages critical thinking and language proficiency.

Students' imaginations and inventiveness are fostered through storytelling. Students are given the chance to exercise their imagination as they are introduced to a variety of stories and encouraged to tell their own. They can also develop original characters and plots that are interesting. In addition to making learning more pleasant, this creative expression aids in students' grasp of narrative aspects and storytelling frameworks. The development of imagination through storytelling can also apply to other areas and facets of life, encouraging creative problem-solving and imaginative thinking.

Teacher 4: Seating arrangement, that is, pairing learners, encourages communication and the development of 'turn-taking' skills. We engage learners in quizzes. While learners enjoy the activity, they also learn to organize their ideas and put them into words, thereby encouraging the development of listening, speaking, and writing skills and creativity.

Pairing up the students fosters an environment that promotes peer engagement and conversation. This setup gives students the chance to converse with one another, share ideas in turns, and pay attention to what their partners have to say. Students gain vital social skills through these interactions, including respectful turn-taking, good communication, and attentive listening, which are useful in both academic and practical settings. Moreover, students must effectively organize and communicate their **thoughts to succeed** in quizzes. Students enhance their speaking, listening, and writing skills while crafting answers, as well as their writing abilities as appropriate. Quizzes also frequently require students to solve problems and exercise critical

thinking, both of which foster creativity and innovation. This participatory and interesting approach to learning supports the growth of language, creativity, and cognitive abilities simultaneously.

Teacher 5: To prevent or minimize noise in the classroom, teachers tell learners to draw or write a portion of any story they know. Learners learn to read and write through the act of writing their names on their personal belongings. This activity encourages the development of learners' creativity and writing abilities.

Teacher 5 admits that it helps to lessen distractions and noise levels by getting children to engage in a quiet, solo activity like sketching or writing. This promotes a more favourable environment for learning and enables students to focus on their tasks. While reducing interruptions that can hamper learning, it encourages introspection, creativity, and independent thought. Moreover, students who practice writing their names gain a sense of ownership and individuality in addition to crucial practical skills like letter formation and spelling. The ability to generate written language and the growth of fine-motor skills are all supported by this exercise. Additionally, allowing pupils to write on their possessions promotes creativity and self-expression, giving them the confidence to take pride in their work and find their own writing identity.

Promoting Numeracy Learning

Teacher 2: The use of musical chairs during their leisure period teaches learners subtraction. Some of the songs they sing to get them active help them to do calculations and additions, e.g., the song Ten Little Monkeys teaches the children subtraction. When they play the 'double double' game, they subconsciously learn addition as well.

The likelihood that students will actively participate in the learning process increases when these interactive exercises are used, which boosts motivation and aids in the recall of mathematical concepts. Math instruction is given a dynamic element using music and games, which makes the subject more approachable and interesting for students. This approach highlights how math may be used in many real-world situations and aids students in understanding the value of mathematical ideas outside of the confines of the traditional classroom. It fosters the application

of mathematical thinking to real-world problems and supports a comprehensive understanding of mathematics.

Teacher 3: Learners unconsciously learn to count by putting stickers in their books as positive reinforcement. At the end of the week, each child counts how many stickers they have in their books. I use songs to teach children to count in ascending and descending order.

Teacher 3 agrees that when counting is linked to positive reinforcement, students become intrinsically motivated to participate in counting activities. Students can practice one-to-one correspondence, number recognition, and counting in a relevant setting by counting stickers. This strategy helps children develop their early numeracy abilities and lays the groundwork for challenging concepts in math.

Songs offer young children a rhythmic and memorable method to interact with numbers and develop their counting abilities. The songs' use of ascending and descending order aids students in comprehending how numbers are ordered sequentially. Teachers may create a fun, multisensory learning environment that enhances auditory processing, memory retention, and arithmetic knowledge by fusing music and numeracy. This method encourages youngsters to build a solid foundation in math while fostering a positive link with counting.

Teacher 5: During outdoor activities, they play hopscotch, which enables them to learn counting and skip counting from Skipping. When learners engage in the 'shopping center' game, they learn about money, which involves addition and subtraction.

Students study mathematics in a tactile and interesting way by fusing physical activity with math lessons. Hopscotch and skipping give students systematic counting exercises, help them build number sense and reinforce skip counting patterns. This fusing of math and movement encourages a deeper comprehension of mathematical ideas and improves the overall learning experience.

The 'shopping center' activity suggested in the **response allows students to** use math in a practical setting. As they conduct transactions and determine totals in this game, children practice addition and subtraction while gaining practical experience with money. This exercise

encourages the growth of mathematical reasoning, analytical thinking, and financial literacy. It also emphasizes how important arithmetic is in daily life, giving students the knowledge, they need to manage their finances and make wise decisions.

Conclusion

Teachers in elementary schools are aware of the hidden curriculum activities that are close to their teaching. This highlights the significance of developing a comprehensive and stimulating learning environment. Teachers can accommodate various learning styles and encourage active involvement by introducing a variety of activities such as storytelling, discussion, outdoor games, and music. Learning becomes more important and useful for students as a result of this integration, which eliminates the gap between theory and practice. Additionally, it encourages the growth of critical life skills like literacy, numeracy, and social interaction. These developments support the growth of a variety of abilities, including language, communication, numeracy, and problem-solving, while encouraging creativity, critical thinking, and social engagement. In addition, hidden curriculum activities give students the chance to learn through aural, visual, and kinesthetic means, which enhances their learning delight and retention.

Limitations

First of all, because teachers were chosen from the same region, the sample size was not diverse. A diversified sample from numerous schools would have been more indicative, enhancing the validity of the results. Second, additional inquiries regarding the qualitative data may have influenced teachers' replies over a period of time. According to the literature, many ideas resulting from qualitative processing could not become apparent for some time after the study was over (Greenberg, Rice, and Elliot, 1993). As a result, teachers probably experienced the qualitative-based processing's effects more significantly months after the procedure had ended than they did on the day the data was gathered.

Ethical Approval:

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

Consent

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

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