



MISCONCEPTIONS AND PERCEIVED IMPORTANCE OF LITERACY ACROSS THE CURRICULUM AMONG STUDENT TEACHERS IN GHANA

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Abstract:

The study sought to ascertain misconceptions and perceived importance of Literacy Across the Curriculum (LAC) among student teachers of Basic Education, University of Education, Winneba. Out of a targeted population of 1,386 student teachers of Basic Education, 490 were selected using a stratified random sampling technique. A closed-ended questionnaire was used to gather data and frequencies, percentages, means, standard deviations, independent samples t-test, ANOVA, and Pearson's correlation were used to examine the data obtained. The results, among others, revealed that the misconceptions held by Basic Education students at the University of Education, Winneba, was the fact LAC should be restricted to the Arts, and not the Sciences. They were of the view that students from the arts background should focus on developing their literacy skill in order to excel in their field. However, the students were of the view that LAC is important since through the use of language, symbols, and text, literacy is promoted across the curriculum to give students the ability to share information about themselves and their experiences. Based on these findings, it was suggested that literacy should be integrated in all aspects of the curriculum. Listening, speaking, reading, and writing are to be taught to students as fundamental abilities for many facets of daily life, not only in English Language lessons. Lecturers and student teachers should ensure that

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literacy across the curriculum is promoted regardless of the course(s) they teach and study respectively.

Keywords: misconceptions, importance, literacy, across, curriculum

1. Introduction

Literacy is important to the curriculum and comes before everything else. It is created and then expanded into subjects such as history, literature, mathematics, social studies, government, physics, and biology. This viewpoint is reflected in the way schools are currently organized, with emphasis on reading and related language skills such as spelling, vocabulary, and writing. It is considered that after children have established appropriate reading and writing skills, they can transfer those skills to other subject areas, particularly at the Basic School level, High school, and, eventually, at the tertiary.

Nonetheless, researchers and educators are concerned about pupils' literacy. Given the importance of literacy in the twenty-first century, it is critical that both students and teachers develop literacy skills and the ability to teach literacy in their subject areas. This will assist children in becoming self-motivated learners (Quinn et al., 2015). The term literacy across the curriculum (henceforth, LAC) refers to a combination of knowledge and skills applied throughout the curriculum in a variety of academic areas (Savage, 2010). LAC is also known as inter-subject, cross-disciplinary, integrated inquiry teaching, cross-curricular approach and curriculum integration (Lervg et al., 2018). Teachers can use the cross-curricular approach to add creativity and relevance to their lessons. In this study, the terms cross-curricular approach, teaching/learning throughout the curriculum, integrated teaching/learning, and infusion all relate to the concept, literacy across the curriculum. Content area literacy refers to the concept of integrating literacy across the curriculum. This common set of literacy abilities can be used by students to study knowledge from various topic areas (Chauvin & Theodore, 2015). Because language is the vehicle for teaching content areas, reinforcing literacy skills when various topic areas are taught assists students in improving the literacy skills required to improve learning in content areas (Kirsten, 2019). Furthermore, students must be able to read in order to absorb complex instructional materials in particular subject areas. Science and mathematics, for example, include complex and distinct texts that necessitate explicit reading skills in those professions or domains.

For example, a mathematics student may question the utility of reading and writing tasks, believing that they divert attention away from the course's principal goal, which is the learning of scientific knowledge. Resistance may also arise from content-area instructors who believe that teaching reading and writing skills is not part of their job description, or from English language teachers who see literacy development as their primary responsibility but are uncomfortable with disciplinary bodies of knowledge (Bruce & Davidson, 2006). Surprisingly, many educators working on literacy across the curriculum initiatives find that their days are becoming more disorganized than ever.

Because cross-curricular activities are now needed in addition to reading and mathematics time, the curriculum has grown even more fractured.

When literacy is introduced into other fields of study or subject matter, it does not always result in a stronger grasp of communication. Many educators believe that the assumption that literacy may readily move into other subject areas does not lead to a unified picture of learning across the curriculum. As a result, there are considerable disputes among specialists in several domains about literacy teaching. One such example is certain scientific instructors' strong anti-text bias, as well as their rejection of textbook-based science instruction and desire for more hands-on activities. Thus, literacy is considered as the capacity to read and write. The underlying causes of such bias are not well understood by many reading and writing educators, and they have not come up with an effective response to it. As student-teachers prepare to take up their profession in the future, there is a need to find out their conceptions about literacy across the curriculum to inform lecturers' instructional pedagogy. This study sought to ascertain the misconceptions and importance of Literacy Across the Curriculum (LAC) among student teachers of Basic Education at the University of Education, Winneba

1.1 Purpose of the Study

The study sought to ascertain misconceptions and perceived importance of Literacy Across the Curriculum (LAC) among student teachers of Basic Education, University of Education, Winneba.

1.2 Research Objectives

The objectives of the study were to:

- 1) find out the misconceptions of Literacy Across the Curriculum (LAC) among student-teachers of Basic Education, University of Education, Winneba.
- 2) ascertain the perceived importance of Literacy Across the Curriculum (LAC) among student teachers of Basic Education, University of Education, Winneba.

1.3 Research Questions

The research questions were:

- 1) What are the misconceptions of Literacy Across the Curriculum (LAC) among student-teachers of Basic Education, University of Education, Winneba?
- 2) What is the perceived importance of Literacy Across the Curriculum (LAC) among student-teachers of Basic Education, University of Education, Winneba?

1.4 Research Hypotheses

The following hypotheses were tested at a 0.05 significance (2-tailed) level.

H₀₁: Students' misconceptions about Literacy Across the Curriculum will not differ significantly based on their area of specialism.

H₀₂: Students' perceived importance of Literacy Across the Curriculum will not differ significantly based on their area of specialism.

H₀₃: Students' misconceptions about Literacy Across the Curriculum will not differ significantly based on their age bracket.

H₀₄: Students' misconceptions about Literacy Across the Curriculum will not relate significantly to their perceived importance of literacy across the curriculum.

2. Literature Review

2.1 Theoretical Model

2.1.1 The Inquiry Model of Literacy Across the Curriculum

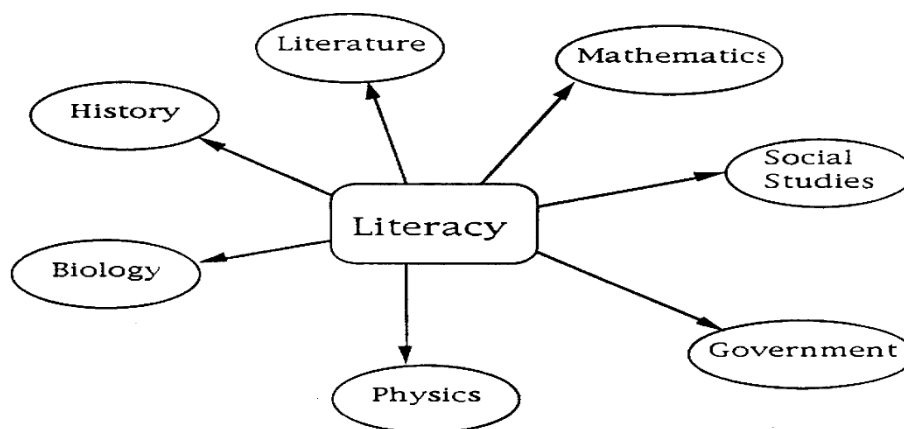
The investigation was based on the Inquiry Model of literacy across the curriculum. The Inquiry Model assumes that knowledge is created through purposeful activity, which includes but is not limited to typical literacy tasks. According to Lervg et al. (2018), conventional literacy abilities include decoding, oral reading, fluency, reading comprehension, writing, and spelling. These abilities are used in all literacy practices, and it is obvious that they are important or valuable components of literacy. As a result, literacy throughout the curriculum movement is necessary because literacy and curriculum are inextricably linked. If knowledge is produced on the basis of what one now knows, it tends to be student-centered because one must begin from the student's existing position rather than with some independently developed curriculum (Bruce & Davidson, 2006). This viewpoint contends that all learning processes, not just those found in the text, are valuable. In any specific learning activity, reading does not always have an edge over other learning modalities such as dialogue, discussion, or observation. Beginning with knowledge or questions, the learner grows through dialogue, contemplation, mathematical creation, and reading to generate new questions and information.

The proponents of this model believes that knowledge is gained, but only via involvement in rich, meaningful activities. They indicate that for effective LAC practices to take place, there should be the need for a meaningful activity. In this regard, Burkins and Yates (2021) indicates that more significant byproducts of LAC may include the development of a love for the activity or an understanding of its significance in relation to all of life's activities. For example, literacy should be seen as key in all subject areas and must be reinforced in all learning areas. However, in doing this, LAC practitioners must find out how students perceives and conceive LAC before they begin its integration (Burkins & Yates, 2021). Since the meaning of experiences is determined by the student's own knowledge, beliefs, and goals, the curriculum must be student-centered and inquiry-based. Teachers will continue to play critical roles in encouraging inquiry. This study also follows this model of inquiry to first fin out the perception and perceived importance of LAC among student teachers at the Department of Basic Education, UEW.

2.1.2 Literacy Across the Curriculum

When a student is acquiring literacy skills while learning other subjects like mathematics, integrated science, social studies, etc., they are said to be engaging in literacy across the curriculum (LAC). Literacy across the curriculum means the integration of literacy skills in subject areas (Burkins & Yates, 2021). Each student's potential to thrive and develop in a classroom is directly proportional to his or her equal language aptitude, whether for listening to instructions, reading a chapter, writing a response, or defending a point of view. Students must use reading, writing, speaking, and listening methods in all subject areas. These techniques are necessary at every level in the world of formal education. Effective reading, writing, speaking, and listening skills are essential for success in every subject, grade, and class these students will ever take. Whether internal or external, every standardized text is first and foremost a reading assessment. As a result, a learner cannot solve mathematical problems if they cannot be read. Students will fail the test item if they cannot comprehend simple instructions like "division," "multiplication," or "square root" since explanations of mathematical principles and procedures are given in words and sentences. Literacy is, therefore, central to all learning as captured by Bruce and Davidson (1996) in the diagram below:

Figure 1: Literacy Across the Curriculum



Source: Bruce and Davidson (1996)

2.1.3 Misconceptions of Literacy Across the Curriculum

Although reading and writing are still important parts of literacy, our understanding of it today goes much beyond than what was once assumed to be the case. Literacy is defined as the ability to recognize, comprehend, interpret, produce, communicate, and compute using printed and written resources related with varied environments. Literacy is a continuum of learning that helps people fulfill their goals, extend their knowledge and potential, and actively participate in their community and greater society (UNESCO, 2004; 2017). We can see how reading provides children with immense personal power by enabling them to achieve their goals, extend their knowledge and potential, and actively participate in their local community and society. According to UNESCO (2017),

connecting literacy education to other topic areas promotes learning in all subject areas. However, there are a lot of myths and false beliefs about literacy training that might harm students' literacy development. Teachers mistakenly believe that print text is where a child's ability to read begins, according to Burkins & Yates (2021). Others should require that the language teacher bears sole accountability for their students' literacy development. These misconceptions hold that a child can only begin to comprehend written texts until they can read and write words in the language classroom. According to Bruce and Davidson (2006), some students do not perceive the value of reading across the curriculum and believe that literacy skills are not necessary to succeed in the sciences. For instance, a physics student might dispute the value of reading and writing assignments and feel that they take focus away from the course's main objective, which she perceives to be the acquisition of scientific knowledge (Bruce & Davidson, 2006). Teachers believe that teaching literacy is a waste of time when there are numerous topics to cover and that it is impossible to integrate literacy across the curriculum. These fallacies are congruent with Bruce and Davidson (2006)'s claim that many instructors involved in literacy-across-the-curriculum activities are finding their days more fragmented than ever. Because cross-curricular activities are now needed in addition to reading and mathematics time, the curriculum has grown even more fractured. Many teachers delay teaching reading comprehension to children until they can decode it because of these beliefs.

2.1.4 Importance of Literacy Across the Curriculum

Literacy requirements vary depending on the subject. Teachers of topics other than English should demand that the work they grade has proper spelling, grammar, punctuation, and usage. To act otherwise, such as ignoring English grammar, implies that linguistic standards are irrelevant. Literacy is essential in all fields of study since it allows access to a wider range of subjects. The ability to read and write expands people's chances in all aspects of life, lays the framework for further education and employment, and notably aids in curriculum development. Scarborough (2001) states that progress in all subject areas is dependent on pupils having a good foundation in literacy, which includes competency in grammar, spelling, and spoken language. Because of this, encouraging the development of language and literacy is the responsibility of all teachers. Every teacher should look for opportunities to enable students to discuss their ideas, engage in debates about them, and read and write at a level that will help them advance their language abilities. According to Fenty and Brydon (2017), integrating subject and literacy training improves students' interest in and engagement with their coursework. Literacy experiences and outcomes foster the development of critical and creative thinking, as well as proficiency in speaking and listening, reading and writing, and interpersonal, teamwork, and personal skills, all of which are essential in daily life and the job. The framework offers comprehensive explanations of the variety of learning experiences that will contribute to the development of literacy, particularly critical literacy, for students, parents, and instructors. Literacy experiences and outcomes foster the development of

critical and creative thinking, as well as proficiency in speaking and listening, reading and writing, and interpersonal, teamwork, and personal skills, all of which are essential in daily life and the job. By linking literacy training to other subject areas, learning in all subject areas is strengthened.

3. Methodology

The research methodology encompasses the research approach, design, population, sample and sampling technique, data collection and instrumentation, pilot testing, quality controls and method of data analysis procedures.

3.1 Research Approach

The quantitative technique was used in the investigation. Babbie (2015) describes quantitative research as a data-collecting and analysis technique that emphasizes quantification. The quantitative approach was used in response to the purpose of the study, and the researchers' attempt to determine students' misconceptions and the impact of literacy across the curriculum using numerical data that was statistically examined. According to Kivunja and Kuyini (2017), quantitative research is the systematic observation and description of the qualities or properties of objects or occurrences in order to identify correlations between an independent (predictor) variable and a dependent (outcome) variable within a population.

3.2 Research Design

The descriptive survey research design was used in this study. The descriptive survey design, according to White and Millar (2014), comprises obtaining data in order to test hypotheses or answer questions about the current state of the subject of the study. Best and Bryman (2012) contend that descriptive design is concerned with existing circumstances or levels of performance, attitudes held, processes in progress, effects that are evident or emerging trends. According to Creswell and Plano-Clark (2017), survey research designs are processes in quantitative research in which investigators administer a survey to a sample or the entire population in order to describe the attitudes, opinions, behaviors, or characteristics of the population. Descriptive design can supply or receive information from a large number of people. It is applicable and beneficial since it describes a current condition and points to current requirements. Because the researcher attempted to explain some aspects of the population by selecting an impartial sample of persons who were invited to fill out questionnaires, the descriptive survey was deemed appropriate for this study. The descriptive sample survey design was also chosen because, given the study's purpose, research questions, and the size of the target population, it was the best option for allowing the researchers to achieve the goal and draw significant conclusions from the study.

3.3 Sample and Sampling Procedure

Out of a targeted population of 1,386 students from the Department of Basic Education, University of Education, Winneba, the study sampled 490 students using the Yamane formula for sample size determination in quantitative research as shown below:

$$n = \frac{N}{1 + N(e \times e)}$$

where,

n = sample size;

N = target population; and

e = error margin

$$n = \frac{1386}{1 + 1386(0.05 \times 0.05)}$$

$$n = 310.4$$

Thus, the minimum sample required for this study is 310. However, the researchers sampled 490 students in the quest to ensure that the results of the study are very accurate and devoid of biases and to take care of incomplete questionnaires. The sample consisted of 182 males and 308 females from level 100 to 400. According to Creswell and Plano-Clark (2017), a study sample is any portion of a population chosen for the study and from whom information for the study is acquired. Creswell and Plano-Clark (2017) further stated that a sample size of at least 10-20% or more of the target population is adequate for a descriptive study. The sample size for this study represents 35.4% of the targeted population of the study.

The sample was chosen using a stratified random sampling approach. A stratified random sample is one that is generated by separating the population into mutually exclusive, non-overlapping sets of sample units known as strata and then selecting a simple random sample from each stratum (Omona, 2013). In this study, the target population was divided into four (4) strata, with samples drawn from each stratum using simple random sampling. The purpose of stratified random sampling is to pick a sample so that the target sub-groups are represented in the sample in the same proportion as they are in the population.

3.4 Data Collection and Instrumentation

A self-designed closed-ended questionnaire was used to collect data. A questionnaire is a research tool used in surveys that consist of carefully written questions designed to elicit self-reported responses about general and personal issues (Babbie, 2015). The questionnaire has items organized into three (3) sections (A-C). Section A elements, in particular, were utilized to collect data on the respondents' demographic information. Section B items sought information on misunderstandings about Literacy Across the

Curriculum (LAC), and Section C data on the importance of Literacy Across the Curriculum (LAC). The questionnaire's basic structure was a five-point Likert scale. For both descriptive (means and standard deviations) and inferential (correlation, regression) statistics, a five (5) point Likert scale is ideal (Creswell, 2017). In survey research, the Likert scale is frequently used to measure respondents' attitudes by asking how much they agree or disagree with a statement or question (Creswell, 2017). The five-point Likert scale was weighted discerningly and interpreted as follows: 5 = Strongly Agree (SA); 4 = Agree; 3 = Uncertain; 2 = Disagree (D); 1 = Strongly Disagree (D) (SD).

3.5 Pilot Testing

The validity, reliability and appropriateness of the research instruments were ascertained through pilot-testing at the Department of Early Childhood Education, University of Education, Winneba. The choice of the Department of Early Childhood Education for the pilot-testing was influenced by the fact that students in the department take almost the same courses and belong to the same faculty. The pilot test was conducted to find out whether the instruments would obtain the required responses and also to ensure that the instruments were devoid of ambiguity and that they were relevant to the purpose of the study.

3.6 Validity and Reliability

Our research validity is concerned with whether the instrument is credible and true, as well as whether it is evaluating what it is supposed or purports to evaluate. It essentially has to do with the adequacy of the data-gathering instruments as well as the study's conclusions. To that end, various research professionals reviewed the research instrument and data. In response to the reviewers' concerns, the imprecise and ambiguous questions were changed, and the challenging questions were reworded. Expert judgment, according to Creswell (2014c), is one of the most dependable means of ensuring the validity of a research instrument. The Cronbach coefficient was obtained following the pilot test to assess the questionnaire's reliability.

3.7 Data Analysis Procedure

At the conclusion of the data collection process, reliable checks were performed to modify and guarantee error-free data. As a result, all incomplete and inconsistent questionnaires were suitably removed prior to coding and data processing. After that, the error-free data was analysed with the Statistical Package for Solution and Service (SPSS) version 20. Furthermore, the processed data were quantitatively examined utilizing descriptive and inferential statistical methods as percentage, frequencies, means, standard deviations, independent samples t-test, and correlation. The demographic data was analyzed using percentages and frequencies, the data obtained on the study topics were analyzed using means and standard deviations, and the hypotheses were checked using the independent samples t-test, ANOVA, and correlation.

4. Results and Discussions

Table 1: Gender of Respondents

Gender	Frequency	Percent
Male	182	37.1
Female	308	62.9
Total	490	100.0

Source: Field Data, 2022.

The results in Table 1 show that 182 (37.1%) of the respondents are male and 308 (62.1%) are female. The number of female students outnumbered the male students by 126. This implies that the majority of respondents who took part in the study were female students.

Table 2: Age Bracket of Respondents

Age Bracket	Frequency	Percent
Below 21 years	14	2.9
21-30 years	453	92.4
31-40 years	16	3.3
Above 40 years	7	1.4
Total	490	100.0

Source: Field Data, 2022.

Table 2 presents the results of the age distribution of respondents. The results show that 14 (2.9%) of the respondents were below 21 years, 453 (92.4%) were within the age range 21-30 years, 16 (3.3%) were within the age range 31 to 40 years and 7 (1.4%) were above 40 years. This implies that the majority of the respondents were between the age range 21-30 years.

Table 3: Level of Specialism of Respondents

Level of Specialism	Frequency	Percent
Upper primary	147	30.0
JHS	343	70.0
Total	490	100.0

Source: Field Data, 2022.

Table 3 presents the results of level of specialism of respondents. The results show that 147 (30%) are Upper Primary specialist and 343 (70%) are JHS specialist. This implies that majority of the respondents are JHS specialist.

4.1 Results and Analysis

The findings from the primary data analysis. The major data results are presented in accordance with the research questions developed for the study. The analysis and discussion were carried out in order to answer the research questions and test the research hypotheses.

Research Question 1: What are the misconceptions of level students of the Department of Basic Education about Literacy Across the Curriculum?

The purpose of this research question was to find out misconceptions of students on literacy across the curriculum. The data was analysed with mean and standard deviation and presented in Table 4. A mean score of 3.0-5.0 indicates agreement to a statement while a mean score of below 3.0 indicates disagreement. A standard deviation of below 1.0 indicates the homogeneity (similarity) in responses while a standard deviation of 1.0 and above indicates the heterogeneity (difference) in responses.

Table 4: Descriptive Statistics of Misconceptions of Literacy Across the Curriculum

Statement	N	Mean	Std. Dev.
Students from the arts background should focus on developing their literacy skill in order to excel in their field.	490	3.57	1.28
I need some special skills to be able to integrate literacy across the curriculum.	490	3.15	1.28
Literacy across the curriculum is all about language learning.	490	2.95	1.42
Developing literacy skill should necessarily be the sole responsibility of the language teacher.	490	2.77	1.53
Integrating literacy across the curriculum is too difficult to be done.	490	2.56	1.24
I do not need literacy skills to do well in the Sciences.	490	1.93	1.27
I am not a language teacher so there is no need given corrective (language) feedback to my students.	490	1.87	1.18
It is a waste of time to teach literacy when you have a lot of sub-strand to cover.	490	1.84	1.23
Valid N (listwise)	490		

Source: Field Data, 2022.

Table 4 presents descriptive statistics of misconceptions of literacy across the curriculum. The results show that the majority of the respondents agreed ($M = 3.57$, $SD = 1.28$) that students from the arts background should focus on developing their literacy skill in order to excel in their field. The standard deviation of 1.28 shows the heterogeneity or difference in responses. Similarly, the majority of respondents agreed ($M = 3.15$, $SD = 1.28$) that they need some special skills to be able to integrate literacy across the curriculum. Again, the standard deviation shows that the responses were not similar or homogeneous. Conversely, the majority of the respondents disagreed ($M = 2.95$, $SD = 1.42$) that literacy across the curriculum is all about language learning. The standard deviation of 1.42 shows the difference in responses to the statement. Similarly, the majority of the respondents disagreed ($M = 2.77$, $SD = 1.53$) that developing literacy skill should necessarily be the sole responsibility of the language teacher. The standard deviation of 1.53 shows that the responses differ. The mean and standard deviation of the statement, "Integrating literacy across the curriculum is too difficult to be done" had a mean and standard deviation of 2.56 and 1.24. The mean score shows that the majority of

the respondents disagreed to the statement. The difference in the responses was evident in the standard deviation of 1.24. Responding to the statement, “I do not need literacy skills to do well in the sciences”, the majority of the respondents disagreed (M = 1.93, SD = 1.27). The standard deviation of 1.27 shows that the responses differ. Similarly, the majority of the respondents disagreed (M = 1.87, SD = 1.18) that they are not a language teacher so there is no need to give corrective (language) feedback to their students. Again, the responses to this statement were different. Finally, the majority of the respondent disagreed (M = 1.84, SD = 1.84) that, it is a waste of time to teach literacy when one has a lot of topics to cover. The standard deviation of 1.84 shows that the responses were not similar but different. The results provide evidence to suggest that student-teachers of Basic Education, University of Education, Winneba, hold the misconception that one needs some special skills to be able to integrate literacy across the curriculum. They also believe that students from the arts background should focus on developing their literacy skill in order to excel in their field. According to Bruce and Davidson (2006), a mathematics student may question the significance of reading and writing tasks in physics class, seeing them as detracting from the course's primary goal of mastering mathematical concepts. Teachers believe that teaching literacy is a waste of time when there are so many topics to cover, and that integrating literacy across the curriculum is impossible.

Research Question 2: What is the importance of Literacy Across the Curriculum by students of the Department of Basic Education about?

The purpose of this research question was to find out the perceived importance of literacy across the curriculum by respondents. The data was analysed with mean and standard deviation and presented in Table 4. A mean score of 3.0-5.0 indicates agreement to a statement while a mean score of below 3.0 indicates disagreement. A standard deviation of below 1.0 indicates the homogeneity (similarity) in responses while a standard deviation of 1.0 and above indicates the heterogeneity (difference) in responses.

Table 5: Descriptive Statistics of perceived importance of Literacy Across the Curriculum

Statement	N	Mean	Std. Dev.
Literacy across the curriculum promotes in learners the skills to make use of language, symbols and text to exchange information about themselves and their life experiences.	490	4.50	.77
Literacy is central to all subject in the new Curriculum.	490	4.43	.88
Integrating literacy skills in my class will help my learners actively participate in sharing ideas.	490	4.38	2.39
I will integrate literacy skills in my subject because learning in any subject requires language skills.	489	4.35	.91
Literacy across the curriculum is critical for effective communication across disciplines.	490	4.31	.96
Integrating literacy in my lesson will help my learners produce rich text/responses in other subject areas.	490	4.26	.88

Connecting literacy learning to other content areas reinforces learning in all content areas.	490	3.97	1.00
Valid N (listwise)	489		

Source: Field Data, 2022.

Table 5 presents the results of descriptive statistics of the perceived importance of Literacy Across the Curriculum (LAC). The results show that the majority of the respondents agreed ($M = 4.50$, $SD = 0.77$) that literacy across the curriculum promotes in learners the skills to make use of language, symbols and text to exchange information about themselves and their life experiences. The standard deviation of 0.77 shows that the responses to the statement were homogeneous. Also, the majority of the respondents agreed ($M = 4.43$, $SD = 0.88$) that literacy is central to all subjects in the new curriculum. The standard deviation of 0.88 indicates that the responses were homogeneous. Similarly, the majority of the respondents agreed ($M = 4.38$, $SD = 2.39$) that integrating literacy skills in their class will help my learners actively participate in sharing ideas. However, the standard deviation of 2.39 shows that the responses were heterogeneous. The statement, "I will integrate literacy skills in my subject because learning in any subject requires language skills" had a mean and standard deviation of 4.35 and 0.91 respectively. The mean and standard deviation scores show that the majority of the respondents agreed to the statement and their responses were homogeneous. In responding to the statement, "Literacy across the curriculum is critical for effective communication across disciplines", the majority of the respondents agreed ($M = 4.31$, $SD = 0.96$). The standard deviation of 0.96 indicates that the responses were homogeneous. Furthermore, the majority of the respondents agreed ($M = 4.26$, $SD = 0.88$) that integrating literacy in their lesson will help their learners produce rich text/responses in other subject areas. The homogeneity of responses was evident in the standard deviation of 0.88. Finally, the majority of the responses agreed ($M = 3.97$, $SD = 1.0$) that connecting literacy learning to other content areas reinforces learning in all content areas. The standard deviation of 1.0 shows that the responses were not heterogeneous. The results imply that the respondents perceive Literacy Across the Curriculum (LAC) as very important because learning in any subject requires language skills. Literacy Across the Curriculum also encourages learners to use language, symbols, and text to exchange information about themselves and their life experiences; it is central to all subjects in the new curriculum, and it also encourages learners to actively participate in sharing ideas, among other things. This research collaborates with the claim of Fenty and Brydon (2017) that combining content and literacy education boosts student interest and engagement in learning courses.

4.2 Test of Hypotheses

H₀₁: Students' misconceptions about Literacy Across the Curriculum will not differ significantly based on their area of specialism.

Table 6: Independent Samples T-Test for misconception of literacy across the curriculum

Level	N	Mean	Std. Dev.	T	df	Sig-Value
Upper Primary	147	19.9	5.2	2.182	488	.030
JHS	343	21.0	5.3			

Source: Field Data, 2022.

From the results in Table 6, the sig (2-tailed) value is 0.030. This value is less than the cut-off point of 0.05 ($P < 0.05$). The p-value (sig=0.030) shows that there was a statistically significance difference between the misconceptions of students specializing in Upper Primary and JHS. From the results, students specializing in JHS had higher misconceptions compared to their Upper Primary counterparts. Based on this, the null hypothesis was rejected.

H₀₂: Students' perceived importance about Literacy Across the Curriculum will not differ significantly based on their area of specialism.

Table 7: Independent Samples T-Test for Perceived Importance of Literacy Across the Curriculum

Level	N	Mean	Std. Dev.	T	Df	Sig-Value
Upper Primary	147	30.4	3.9	.467	488	.641
JHS	343	30.1	5.0			

Source: Field Data, 2022.

From the results on Table 7, the sig (2-tailed) value is 0.641. This value is greater than the cut-off point of 0.05 ($P > 0.05$). Therefore, there was no statistically significance difference between the mean score of students specializing in Upper Primary and JHS. Based on the findings, the null hypothesis (H₀₂) was retained. The results imply that students specializing in Upper Primary and JHS had similar levels of perceived importance about LAC.

H₀₃: Students' misconceptions about Literacy Across the Curriculum will not differ significantly based on their age bracket.

Table 8: ANOVA of Age of students and their Misconceptions about Literacy Across the Curriculum

Misconceptions	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	413.794	3	137.931	5.138	.002
Within Groups	13047.531	486	26.847		
Total	13461.324	489			

Source: Filed Data, 2022.

The results in Table 8 show one-way ANOVA (Analysis of Variance) based on the age of students and their misconception about LAC. The one-way ANOVA (analysis of variance) was conducted to find out group differences between the age of students and

their misconceptions about LAC. The results show that there was a statistically significant difference at the $p < 0.05$ level in misconceptions of 4 groups [$F(3, 486) = 5.138$; $p < 0.05$]. This implies that the age of students influences their misconception about LAC. Hence the null hypothesis (H_{03}) was rejected.

H₀₄: Students' misconceptions about Literacy Across the Curriculum will not relate significantly to their perceived importance of literacy across the curriculum.

Table 9: Correlations Between Misconception of LAC and Perceived importance of LAC

Variable	N	Mean	Sd	R	P
Misconception of LAC	490	20.7	5.2	-.254	.000
Perceived Importance of LAC.	490	30.2	4.7		

Source: Field Data, 2022.

Table 9 presents the results of Correlations matrices between Misconception of LAC and Perceived Importance of LAC. The $p < 0.05$ (Sig. = 0.000) means that there is a statistically significant relationship between students' misconception of LAC and the perceived importance of LAC. Based on the findings, the null hypothesis (H_{03}) was rejected. The Pearson correlation coefficient, $r = -0.254$ shows that the relationship between misconception of LAC and perceived importance is small. The r-value of -0.254 suggests that the relationship between the two variables is in the opposite direction. That is, students' misconceptions about LAC increase, their perceived importance about LAC decreases and as their perceived importance of LAC increases, their misconception decreases. The results provide evidence to suggest that there exists a significant relationship between misconception of LAC and the perceived importance of LAC, hence the null hypothesis (H_{04}) was rejected.

5. Findings

It was found that:

- 1) Student-teachers of Basic Education, University of Education, Winneba hold the misconception that students from the arts background should focus on developing their literacy skill in order to excel in their field. Another is that they need some special skills to be able to integrate literacy across the curriculum.
- 2) The perceived importance of Literacy Across the Curriculum (LAC) includes the fact that learning in any subject requires language skills. Literacy Across the Curriculum also encourages learners to use language, symbols, and text to exchange information about themselves and their life experiences; it is central to all subjects in the new curriculum, and it also encourages learners to actively participate in sharing ideas, among other things.

6. Conclusion

It is concluded that student-teachers of Basic Education, University of Education, Winneba hold some worrying misconceptions about Literacy Across the Curriculum (LAC). However, they perceive Literacy Across the Curriculum (LAC) as very important because it is critical for survival and effective communication across disciplines.

6.1 Contribution to Knowledge

The study contributes to existing literature related to literacy across the curriculum. The study highlighted specific issues relating to student teachers' misconceptions about literacy across the curriculum. It also contributes to providing policy direction for (English language) teachers or lecturers in providing valuable and adequate information on integrating literacy in the classroom. The ability to communicate through language, symbols, and text to share personal knowledge and life experiences will be encouraged in learners as a result of this. Also, the findings of the study contribute to providing a theoretical basis to further understanding of student teachers' misconceptions and perceived importance of literacy across the curriculum.

6.2 Recommendations

The study's findings and conclusion demand that appropriate actions be taken. As a result, the researchers provide the following suggestions. It is recommended that:

- 1) All facets of the curriculum should include literacy instruction. Students should be made to learn that listening, speaking, reading and writing are essential skills for many aspects of daily life and are not simply for English classes. This does not imply that teachers must neglect their other topics in order to do this. Instead, they should broaden their definition of literacy to include the capacity to comprehend a wide range of non-traditional texts, such as mathematical expressions, scientific symbols, Web pages, signs, cartoons, artwork, and graphs.
- 2) English language lecturers in the Department of Basic Education should take steps to sensitize their student-teachers on the fact that integrating Literacy Across the Curriculum is important to all the student populace and that one does not need some 'special skills' to be able to integrate literacy across the curriculum.
- 3) Student teachers of Basic Education should endeavor to integrate literacy across the curriculum in their various areas of specialization. Lecturers should ensure that literacy across the curriculum is promoted regardless of the course (s) they teach.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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