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READING COMPREHENSION STRATEGIES OF COLLEGE STUDENTS: BRIDGING THE GAP

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ABSTRACT

Reading comprehension is central to student learning and to their learning outcome. Apart from the process of decoding information, reading comprehension depends on the construction of a coherent meaning-based mental representation of the situation described in a text. It is therefore necessary to activate a set of reading comprehension strategies that facilitate the representational construction of a text. Based on a self-reported study of a stratified sample of 400 students drawn from three colleges of education in Ghana, this paper explored teacher trainees' awareness and use of reading comprehension strategies Teacher trainees displayed an awareness of their cognitive processes during reading and claimed the ability to utilize a multitude of reading strategies to achieve comprehension. The result however contradicts an earlier study which suggests that students have difficulty understanding academic texts. The gap between awareness of and use of comprehension strategies need to be bridged. It is recommended that explicit explanation and modelling will help students to think about their reading processes and make clear what they should be doing, what they were not doing before, or what they are doing wrong. This will build their confidence to use their reported strategic knowledge to enhance their reading efficacy.

KEYWORDS: Reading, Academic Texts, Comprehension Strategies, College Students

INTRODUCTION

Reading is one of the most important academic tasks encountered by students in higher education. It is central to their learning, their success in school and ultimately to their success in life. Students in higher education are exposed to a number of texts that require independent reading, and they must know how to synthesize material from many different sources. Obtaining a university degree is not called 'reading for a degree' for nothing! This is especially true for higher education students who, in the context of their studies, often need to search for and use information in English. Reading requires comprehension. Reading comprehension has been variously described as a process of creating meaning by building relationships among ideas in a text, and between the text and one's knowledge, beliefs, and experiences (Van den Broek, 2010; McNeil, 2011; Zhang & Wu, 2009 among others). Van den Broek (2010) argues that successful reading comprehension depends on the construction of a coherent meaning-based mental representation of the situation described in a text. The reader constructs meaning by continuously updating information from the text and integrating this information with his/her background knowledge, as the text unfolds. Thus, reading comprehension is an interactive process that takes place between a reader and a text.

The role of the reader's background knowledge in the acquisition of information is important, considering that reading comprehension involves the process of forming connections between new information and existing knowledge networks. When textual information does not provide sufficient coherence, readers extend the representations with knowledge about the world. This results in a coherent, connected representation of the situations and events that are described in a text which enables readers to draw inferences. This contrasts with lower-order levels literal text representation restricted to the actual textual information. Apart from the process of decoding information, the purpose of reading comprehension is to construct a representation of the text that allows the reader to respond to different demands. It is therefore necessary to activate a set of reading comprehension strategies that facilitate the representational construction of a text.

Reading comprehension strategies have been described as conscious, deliberate and flexible psychological tools selected by readers to efficiently guide, control, supervise and evaluate the coherent representational construction of a text (Shanahan, 2006). Afflerbach, Pearson, & Paris (2008) define reading strategies as specific, deliberate, goal–directed mental processes or behaviours, which control and modify the reader's efforts to decode a text, understand words and construct the meaning of a text. The reader initiates them to solve a problem, to comprehend or learn something. Williams (2007) suggests that readers derive more meaning from texts when they use different strategies, techniques and methods during reading, and the literature suggests that different strategies and techniques are used for different purposes. A number of taxonomies of comprehension strategies have appeared in the literature. For example, while Block (1986) grouped strategic behaviour into general strategies and local strategies, Sarig (1987) identified four types of reader 'moves' and Davies (1995) grouped strategies into five main categories. Other researchers preferred to compile a list of observed or reported behaviours. This study will work with the three categories of strategies which help researchers to identify what type of strategy students use while reading.

The three categories are: *global reading strategies* which readers utilize to keep their focus on the reading act such as setting the purpose for reading, previewing, and predicting the text; *problem-solving strategies* used to deal with reading problems in understanding the text such as checking one's understanding when encountering conflicting information, reading slowly and carefully to make sure one understands what is being read, trying to get back on track when losing concentration, and include adjusting one's speed of reading when the material becomes difficult or easy, guessing the meaning of unknown words, and rereading the text to improve comprehension; and *support reading strategies* which readers employ to sustain responsiveness to reading and to help them in comprehending the text such as using a dictionary, taking notes, underlining, or highlighting textual information. These specific cognitive behaviours must be directed and monitored by higher levels of thinking or meta cognition (thinking about thinking). The issue is not just about what strategies can be used and how to use them, but also when to use then and for what purpose. Specific cognitive behaviours become metacognitive strategies when readers intentionally recruit them to meet various task demands.

The term meta-cognition can be described from two perspectives: knowledge about cognition which includes knowledge about the readers' cognitive resources such as conceptualization of the reading process and knowledge of the use of appropriate reading strategies on the one hand and the regulation of cognition which is related to the reader's self regulatory procedure for solving problems on the other hand. These procedures include monitoring the efficiency of reading strategies used, planning one's next step, revising strategies, and evaluating them during reading (Baker & Beall, 2009). Thus knowledge of cognition and regulation of cognition play an important role in comprehending text during

reading. The first meta-cognitive strategy is becoming aware of prior beliefs and their influence on the processing of text information. The second is monitoring for inter textual relationships and inconsistencies and thinking about argumentative relationships between texts. The third is about using prior knowledge for argument evaluation. Meta-cognitive strategies therefore refer to the activation of relevant background knowledge, guiding, monitoring and controlling the reading comprehension activity (Efklides & Misailidi, 2010). Through these strategies, the reader works efficiently toward effective meaning making. A strategic reader, from this perspective, is one who has knowledge about when and why to use one strategy or another and shows skill in applying the strategies by means of monitoring and control processes.

Competent strategic readers monitor their understanding, adjusting their reading speed to fit the difficulty of the text and fix-up any comprehension problems they encounter, such as identifying where in the text difficulty occurs, restarting a difficult sentence or passage on their own and looking back through the text (Lehr & Osborn, 2005). This implies that when readers monitor their comprehension, they understand that reading must make sense, and when it does not they try to use appropriate strategies to solve the problems. Comprehension monitoring strategy involves questioning whether understanding has occurred or not during the process of reading and at the end of the process (Zwiers, 2010). Question generation and answering of questions on texts are two different types of questions important in reading comprehension.

Generating questions helps readers to focus attention on what they are to learn, think actively as they read, monitor their comprehension, and review and relate what they have learnt to what they already know, improving reading comprehension in the process. Lehr and Osborn (2005) note how question generation as a comprehension strategy encourages learners to be actively involved in text processing as they ask themselves questions that require them to integrate information from different segments of the text to improve their comprehension. Students who ask themselves questions to monitor their cognitive level go back to re-read a part of a text that they do not understand, thereby regulating their reading. A self-regulating student is therefore aware of his or her general strengths and weaknesses as a learner, is able to modify his/her actions when demands change and is able to set goals and evaluate his or her own learning. Self-regulation is essentially relevant in higher education where students are considered independent learners and external support is limited.

The second type of questions, asking and answering of questions on the text is also important in developing strategic readers. Joubert, Bester & Meyer (2008) argue that the type of questions students become accustomed to and the way questions are asked can shape their understanding of texts. When literal questions which direct readers to information in the text dominate, students will focus on these during reading comprehension. Inferential questions which demand that readers read between the lines and determine what the writer means and critical questions which require readers to read beyond the lines and express their opinion on issues, make students aware that active readers question the author, the text, and themselves before, during and after reading. The ability to summarise a text is also useful as it requires sifting through large units of text, differentiating between important and unimportant ideas and synthesising those ideas to create a new coherent text that stands for the original.

Second language (L2) reading research has established the central importance of strategic processing in text comprehension (Ikeda & Takeuchi, 2006; McNeil, 2011; Zhang & Wu, 2009; among others). Various studies on first language (L1) and second language (L2) reading research have analyzed the role of meta-cognitive processes in

comprehension, comparing novice and expert readers. The findings show that an important difference between an expert reader and a novice reader who is struggling to understand a text is the way in which each goes about the reading task. Expert readers approach the reading task efficiently, having a wide range of comprehension strategies available to them. They intuitively, continuously, and almost unconsciously monitor what it is that they are reading as they work toward reading comprehension of the text. Expert readers who encounter difficulties in comprehending texts become cognizant of their performance limitations, weigh their options, and execute compensatory procedures. Novice readers use comprehension strategies very little and in an inflexible way, making them incapable of activating appropriate previous knowledge and building a structured representation of the text (e.g. Dermitzaki, Andreou, & Paraskeva, 2008), and using meta-cognitive strategies to achieve efficient performance on text comprehension (e.g. Horner & O Connor, 2007; Eme, Puustinen, & Coutelet, 2006).

McNamara, Ozuru, Best & O'Reilly (2007) observe that what distinguishes expert readers from struggling readers is their mastery and use of meta-cognitive reading strategies. Indeed, several critical strategies have been demonstrated to promote students' reading comprehension. These include but are not limited to drawing inference, identifying important information in the text, monitoring comprehension, summarizing, generating questions, and evaluating one's understandings (International Reading Association [IRA], 2007). This implies that the use of reading comprehension strategies is a major characteristic of competent readers. Hong-Nam & Leavell (2011) express the need for students to learn how to operate strategically and use multiple strategies that will allow them to develop a sense of conscious control over their cognitive processes.

Context and Purpose of Study

Students in higher education face many challenges as they transition from secondary school to post secondary environments (Francis & Simpson, 2009; Pawan & Honeyford, 2009). Among these challenges is the need to meet academic expectations, largely through independent reading and learning. In Ghana, students entering post secondary institutions have already, throughout their secondary education, studied content areas through the medium of English. They see themselves as accomplished readers of English, as shown by their success within the education system. They are expected to have developed effective ways to handle the barrage of information coming from the environment. Despite their secondary school success, most students are surprised by the critical role that texts play in discipline-specific study and indicate having little experience reading them extensively (Freebody & Freiberg, 2011). They expect to be given notes which leads to disappointment.

Consequently, students in colleges of education are taken through a course in English Language Studies aimed not only to bridge the gap that hinders students' academic achievement but also to provide them with the strategies that will help them to deal with challenges in their academic studies. This, notwithstanding, tutors report that students have serious problems in approaching reading, cannot read properly for the purposes of their courses and face several difficulties when performing a critical evaluation of their reading content (Amua-Sekyi & Nti, 2015). The abilities to read are no longer skills which tutors take for granted because they perceive the level of difficulties students face in approaching and understanding information from the texts.

Despite the steady growth in recognition of reading strategies, to the best of our knowledge, no research has been done on what strategies students, especially students in colleges of education, employ in their attempt to comprehend texts.

This area of research is important for L2 readers because effective reading strategies will result in improved reading comprehension (Sheorey & Mokhtari, 2008). Students in colleges of education are of interest in this study because upon graduation they will teach in basic schools. It is believed that if they are strategic readers, these skills will rub off in their reading lessons and they will nurture them in their pupils. This study attempts to find out how cognitively active teacher trainees are in drawing on a repertoire of comprehension strategies for processing texts as well as monitoring comprehension. The purpose of the study therefore is to explore teacher trainees' awareness and use of reading comprehension strategies when they read for academic purposes. Research questions to guide the study are:

- What are students understanding of reading comprehension?
- What specific comprehension strategies do students use?
- Are there any gender differences in strategy use among teacher trainees?

Gender has received much attention as a significant factor in second language learning. Although there is no conclusive evidence of gender differences in reading tests conducted in a second language, the use of some specific strategies emerge differently according to gender (Poole, 2005; Phakiti, 2003; Young & Oxford, 1997).

METHODS

A cross-sectional descriptive survey was designed to elicit information from the respondents. The taxonomy of reading strategies in Mokhtari & Sheorey's (2002) Survey of Reading Strategies (SORS) was adopted for this study because it is designed to measure the metacognitive reading strategies of L2 readers engaged in reading academic materials. The SORS measures three broad categories of reading strategies, namely: Global strategies, Problem Solving strategies, and Support strategies on a 5 point Likert scale ranging from 1 ("I never or almost never do this") to 5 ("I always or almost always do this"). The Likert-type questionnaire is considered the most appropriate and suitable instrument for measuring attitudes, feelings and perceptions since it offers respondents the opportunity to indicate the extent of their belief in a given statement. A result of 3.5 or above signify high frequency use, 2.5 to 3.4 represent moderate strategy use, and 2.4 or below characterize low strategy use. The Cronbach's Alpha score which was measured to examine the internal consistency of reliability for the SORS was .869.

Wu (2005) used the SORS to measure reading strategy use among 204 Taiwanese English as a foreign language (EFL) college students and reported moderate use of reading strategies. Al-Nujaidi (2003) modified the SORS to examine the use of reading strategies among 225 EFL first-year university students in Saudi Arabia and reported moderate use of reading strategies. A questionnaire like the SORS can be a good option for profiling students' typical reading strategy use. With the identification of the profile, teacher trainees could incorporate a wide array of reading strategies which they might not be aware of and therefore not taking advantage of into their teaching of reading.

Stratified random sampling based on gender and level of students was used to select teacher trainees from three colleges of education (A, B and C) in the central region of Ghana for the study. Questionnaires were administered to 120 teacher trainees from college A, a female college; 130 from college B, a mixed college; and 150 from college C, a mixed college. A total of 400 first and second year teacher trainees were sampled for the study. Out of the 400 questionnaires distributed, 394 were retrieved. This was made up of 115 from college A; 130 from college B and 149 from college C,

giving a return rate of 98.5% which was considered adequate for a survey of this nature. Respondents were made up of 59.9% (*n* = 236) females and 40.1% (*n*=158) males. First year students accounted for 49.7% (*n* =196) and second year students 50.3% (*n* = 198). This enabled us to compare the differences between male and female and also level of respondents with respect to their use of comprehension strategies. Statistical Package for Service Solution (SPSS) version 20 was used to analyse the quantitative data generated. Descriptive statistics employed to answer the research questions included means (*M*) and standard deviation (*SD*) of each strategy use, the overall use, and the use of three strategy categories. To see if there is a significant difference between reported strategy use of respondents by gender, an independent samples *t* test was applied. To determine significance throughout the study, the standard p<.05 was used.

FINDINGS AND DISCUSSIONS

What are Students Understanding of Reading Comprehension?

The research question sought to find out respondents' understanding of the reading comprehension act. They variously described reading comprehension as "*meaning making*", "a *process/ way of going through a text to understand what the text is about*", "*using your previous knowledge about a text to derive meaning from it*", "*reading to understand what the writer says*" and "*reading to understand*". The responses imply that respondents see reading comprehension as a process that requires a conscious and deliberate effort to understand a text (Shanahan, 2006 & Van den Broek, 2010).

What Specific Comprehension Strategies Do Students Use?

This research question sought to find out the frequency of strategy use among respondents, as well as the strategies used most often and least often by respondents as follows:

Table 1: Scores of Each Strategy Use (N = 394)

Name	Strategy	M	Sd	Level
GLOB 1	Setting a purpose in mind when reading	4.06	0.95	High
GLOB 2	Talking an overall view before reading	3.65	1.95	High
GLOB 3	Evaluating whether the content fits my purpose.	3.65	1.23	High
GLOB 4	Reviewing tests by noting its characteristics.	3.13	1.31	Moderate
GLOB 5	Deciding what to read closely and what to ignore.	3.25	1.39	Moderate
GLOB 6	Using tables, figures to increase understanding.	3.60	1.29	High
GLOB 7	Using context clues for better understanding.	3.77	1.09	High
GLOB 8	Using typographical features for key information.	3.25	1.41	Moderate
GLOB 9	Critically analyzing and evaluating information.	3.91	0.99	High
GLOB 10	Checking my understanding when I come across new information.	4.08	0.89	High
GLOB 11	Guessing what the content is about when I read.	3.77	1.08	High
GLOB 12	Checking if my guesses are right or wrong.	3.57	1.18	High
GLOB 13	Thinking about what I know to help me understand.	3.70	1.07	High
SUP 1	Translating from English in my mother tongue.	3.55	1.33	High
SUP 2	Reading aloud when the text becomes difficult.	3.12	1.47	Moderate
SUP 3	Underlining or circling information in the text.	3.95	1.15	High
SUP 4	Using reference materials	3.73	1.17	High
SUP 5	Paraphrasing for better understanding	3.66	1.15	High
SUP 6	Going back and forth to find relationship among ideas.	3.39	1.46	Moderate
SUP 7	Asking questions from the text	3.65	1.12	High
SUP 8	Thinking about information both in English and mother tongue.	3.72	1.14	High
SUP 9	Taking notes while reading.	4.28	0.99	High
PROB 1	Reading carefully and slowly to understand	4.17	0.94	High
PROB 2	Getting back on track when I lose concentration	3.94	1.03	High

Table 1: Contd.,				
PROB 3	Adjusting reading speed according to the text.	4.32	0.87	High
PROB 4	Re-reading the text when it becomes difficult	3.60	1.16	High
PROB 5	Stopping from time to time to think about the reading.	4.30	0.84	High
PROB 6	Guessing the meaning of unknown words.	3.70	1.16	High
PROB 7	Paying closer attention when text becomes difficult.	4.21	0.93	High
PROB 8	Picturing/visualizing information to help remember.	4.25	0.93	High

The means of the individual items ranged from a high usage level of 4.32 (PROB3**)** to a moderate usage level of 3.12 (SUP2) mean according to Mokhtari and Sheorey's (2002) category. No strategy was reported as low usage. Item means for global strategies ranged from 4.08 to 3.13, support strategies between 4.28 and 3.12, while problem solving strategies ranged between 4.32 and 3.60. The average scores of each category were 3.64 for Global Strategies (GLOB), 3.67 for Support Strategies (SUP), and 4.06 for Problem Solving Strategies (PROB). All the three categories of reading strategies were at the high level of usage, with Problem Solving strategy recording the highest mean. The average score of overall use of reading strategies was 3.79 (*SD* = 1.11) on the 5- point likert scale. This indicates that teacher trainees in Ghana are aware of and show "high" usage of reading strategies when reading for academic purposes.

The five most frequently used strategies by teacher trainees fell within problem solving 3, 5 and 7 strategies and support strategies 9 and 8. The five least frequently used strategies were at the moderate level of usage SUP 2, GLOB 4, 8, 5 and SUP 6. A comparison of the five most frequently used strategies and the five least frequently used strategies indicate that respondents tend to use problem solving strategies more during the reading process. This finding however runs contrary to the findings of Amua-Sekyi & Nti (2015) that students who performed both highly or poorly in the colleges of education English examination identified reading comprehension as one of the topics they find most difficult. If students use problem solving strategies to fix up comprehension problems they encounter as respondents claim, they should not have difficulties with texts as is claimed by their tutors and students themselves. Respondents' claim of awareness and use of reading strategies does not reflect in practice. Consequently, attention needs to be given to the strategic processing of students to bridge the gap between knowledge about and use of strategies. Table 2 below shows whether respondents' level of study significantly affects reported strategy use:

Table 2: Reported Use of Strategy Group and Overall Use According to Level of Students (N = 394)

Name	Year	N (394)	Mean	SD	Level
Global (GLOB)	FIRST	196	3.62	1.24	High
	SECOND	198	3.66	1.20	High
Support (SUP)	FIRST	196	3.69	1.23	High
	SECOND	198	3.6	1.14	High
Problem (PROB)	FIRST	196	4.0	1.00	High
	SECOND	198	4.05	0.96	High
Overall	FIRST	196	3.79	1.15	High
	SECOND	198	3.78	1.10	High

All the three categories of reading strategies according to level of students were at the high level of usage, with problem solving strategy recording the highest mean of 4.05 for first year teacher trainees. An independent sample T-test with 95% confidence interval was conducted to assess this significance. No significant differences were found. The average scores of overall use of reading strategies for both first and second years were high, with first year students recording the highest mean of 3.79. One might attribute this to the fact that first year students are still on the English

Language Studies course and therefore have a heightened awareness of these strategies.

A look at the five most frequently used strategies according to level of respondents showed that both first and second years were high users of the same category of reading strategy with first years using more of PROB 3 (adjusting reading speed according to the text), while the second years used more of PROB 5 (stopping from time to time to think about reading). The five least frequently used strategies indicate that both first and second year teacher trainees are moderate users of the same reading strategies, both use SUP 6 (going back and forth to find relationship among ideas) as the least fifth strategy. In order to determine whether significant difference exists with the use of reading strategies among levels of teacher trainees, an independent t–test with 95% confidence interval was performed. Some significant differences were found in GLOB 7, 8, 11, 12 and SUP 2. The results showed that grade level was related to ways that teacher trainees in Ghana employ the reading strategies. A significant difference between the two grade levels was found in the overall use of reading strategies. First year teacher trainees (M = 3.79) reported using reading strategies more frequently than Second year teacher trainees (M = 3.78). With regards to the reported use of strategy group, the story was not different. First year teacher trainees frequently used two of three strategy groups, namely, Problem-solving (M= 4.07) and Support (M=3.69) strategies, while Second year teacher trainees frequently use Global (M=3.66) strategy. This result is inconsistent with results of other studies (eg. Kung, 2007), which showed that higher grade college students use various reading strategies more than lower grade students.

Are There Any Gender Differences in Strategy Use among Teacher Trainees?

With regards to the gender differences among teacher trainees in the use of reading strategies, an independent sample t-test for each reading strategy was performed. The results are summarized in Table 3 below:

Table 3: Differences in Reading Strategy Use Between Males and Females (N=394)

Name	Category	Gender	N	Mean	SD	P-Value
GLOB 1	Setting a purpose in mind when reading.	Male Female	158 236	4.06 4.06	0.84 1.01	.026
GLOB 2	Taking overall view before reading	Male Female	158 236	3.56 3.56	1.14 1.16	.627
GLOB 3	Evaluating whether the content fit my purpose.	Male Female	158 236	3.63 3.66	1.33 1.16	.023
GLOB 4	Reviewing texts by noting its characteristics.	Male Female	158 236	3.09 3.15	1.27 1.34	.203
GLOB 5	Deciding what to read closely and what to ignore	Male Female	158 236	3.31 3.21	1.36 1.41	.763
GLOB 6	Using tables, figures to increase understanding.	Male Female	158 236	3.46 3.69	1.35 1.35	.067
GLOB 7	Using context clues for better understanding.	Male Female	158 236	3.68 3.82	1.15 1.05	.097
GLOB 8	Using typographical features for key information.	Male Female	158 236	3.29 3.22	1.41 1.41	.817
GLOB 9	Critically analyzing and evaluating information.	Male Female	158 236	3.96 3.88	0.91 1.04	.028
GLOB 10	Checking my understanding when I come across new information.	Male Female	158 236	4.06 4.09	0.87 0.91	.311
GLOB 11	Guessing what the content is about when reading.	Male Female	158 236	3.75 3.79	1.08 1.08	.502

GLOB 12	Checking if my guesses are right or wrong.	Male Female	158 236	3.55 3.58	1.19 1.17	.712
GLOB 13	Thinking about what I know to help me understand.	Male Female	158 236	3.60 3.76	1.11 1.04	.263
SUP 1	Translating from English to my mother tongue	Male Female	158 236	3.29 3.72	1.35 1.28	.376
SUP 2	Reading aloud when the text becomes difficult.	Male Female	158 236	2.86 3.30	1.48 1.43	.436
SUP 3	Understanding or circling information in the text.	Male Female	158 236	3.93 3.96	1.16 1.15	.965
SUP 4	Using reference materials	Male Female	158 236	3.82 3.68	1.17 1.17	.920
SUP 5	Paraphrasing for better understanding.	Male Female	158 236	3.53 3.74	1.22 1.09	.063
SUP 6	Going back and forth to find relationship among ideas.	Male Female	158 236	3.34 3.43	1.05 1.68	.076
SUP 7	Asking questions from text	Male Female	158 236	3.53 3.73	1.14 1.09	.387
SUP 8	Thinking about information both English and mother tongue.	Male Female	158 236	3.51 3.86	1.16 1.11	.443
SUP 9	Taking note while reading.	Male Female	158 236	4.24 4.22	0.92 1.03	.190
PROB 1	Reading carefully and slowly to understand.	Male Female	158 236	4.10 4.22	0.88 0.98	.036
PROB 2	Getting back on track when I lose concentration.	Male Female	158 236	3.93 3.95	0.97 1.06	.243
PROB 3	Adjusting reading speed according to the text.	Male Female	158 236	4.27 4.35	0.82 0.91	.197
PROB 4	Re-reading the text when it becomes difficult.	Male Female	158 236	3.44 3.77	1.17 1.14	.721
PROB 5	Stopping the text to time to think about the reading.	Male Female	158 236	4.17 4.38	0.84 0.84	.613
PROB 6	Guessing the meaning of unknown words.	Male Female	158 236	3.62 3.76	1.12 1.19	.697
PROB 7	Paying closer attention when the text becomes difficult.	Male Female	158 236	4.24 4.20	0.82 0.99	.042
PROB 8	Picturing or visualizing information to help remember.	Male Female	158 236	4.24 4.26	0.91 0.93	.759

Significant at .05 level

Five strategies showed significant gender differences, with females using three strategies more frequently while males used two strategies. The results showed that gender is related to ways that teacher trainees in Ghana employ reading strategies. A one-way ANOVA was conducted to determine the effect of gender on the overall use of reading strategies as shown in table 4 below:

Table 4: Overall Strategy Use by Gender (N=394)

Name	Gender	No.	Mean	SD
Overall strategy (SORS)	Male	158	3.72	1.12
	Female	236	3.83	1.09

A significant difference was found between male and female teacher trainees on the dependent measure, F (1,392) = 5.318, p<.05, η^2 = .045. This result suggests that gender was related to respondents' reading strategy use. A one-way

MANOVA was conducted to determine the effect of gender on the three dependent variables - scores of GLOB, SUP and PROB strategies as shown in table 5 below:

Table 5: Use of Each Category Strategy by Gender (N=394)

Category	Gender	No	Mean	S.D
GLOB	MALE	158	3.61	1.15
	FEMALE	236	3.66	1.15
SUP	MALE	158	3.56	1.18
	FEMALE	236	3.74	1.22
PROB	MALE	158	4.00	0.94
	FEMALE	236	4.11	1.00

Although female students reported using all three strategy categories more frequently than male students, no significant gender differences were found between male and female teacher trainees on the dependent measures, Wilks's Λ = 0948, F (3, 391) = 2.042, p = .112, η^2 = .052. In terms of the order of frequency of use of each strategy category, both males and females reported using Problem Solving strategies most frequently followed by Support strategies and Global strategies. This result indicates that gender is not related to the way that respondents use the three strategy categories. This ties in with the results of other studies in both EFL and ESL contexts (Al-Nujaidi, 2003; Wu, 2005) that both EFL and ESL students use Problem-Solving Strategies more than the other categories. Although results of studies on gender difference in reading strategy use have been inconsistent (Wu, 2005; Poole, 2005; Phakiti, 2003; Sheorey & Mokhtari, 2001; Young & Oxford, 1997), studies reporting significant gender difference consistently showed that females use reading strategies more frequently than males. In line with that, this study seems to support a common tendency of the gender difference in reading strategy use.

SUMMARY

Reading is a process that requires effort on the readers' part if they want to understand what they are reading. A considerable amount of research has been devoted to understanding the processes that contribute to reading comprehension and the literature indicates that an awareness of reading strategies and comprehension monitoring is an important characteristic of expert readers. Readers need to use their metacognitive knowledge about reading and invoke conscious and deliberate strategies. This may mean that if readers are not aware of certain strategies, they will not use them in their reading task.

The findings of this study suggest that teacher trainees in Ghana show an awareness of and high usage of reading strategies when reading for academic purposes compared to the results of other studies (Wu, 2005; Al-Nujaidi, 2003). One possible explanation for this might be the current trend of taking students through reading skills as part of the English Language Studies course in the colleges of education. This might have heightened students' awareness and/or use of reading strategies. Problem Solving strategies stand out as the most frequently used strategy. This is in tension with the findings of Amua-Sekyi & Nti (2015).

CONCLUSIONS

Teacher trainees acknowledged that reading comprehension is an active process. The reader has to work towards effective meaning making. They displayed an awareness of their cognitive process during reading and claimed the ability

to utilize a multitude of reading strategies to achieve comprehension. However, an awareness of reading strategies does not necessarily lead to actual use of these strategies while reading. The gap between awareness of and use of comprehension strategies need to be bridged. This underscores the importance of helping students to develop their metacognitive awareness of specific reading strategies deemed necessary for proficient reading. Discussions of the effectiveness of strategy training have often recommended that it be integrated into the normal curriculum and not handled in a piecemeal manner. Proficient adult readers seldom recall being explicitly taught how to comprehend texts. Nevertheless, they have become strategic readers by engaging in reading as an activity that occurs in many settings and for different purposes and thereby developing a multitude of strategies to comprehend texts regardless of the specific task or situation. Thus when a situation arises that requires comprehension of new material, they are able to reflect upon the strategies they know and determine which will be appropriate for helping in a given situation.

As the awareness and use of reading strategies have increasingly been identified as indicators of good reading comprehension, more emphasis has been placed on helping students to become strategic readers (Mokhtari, Sheorey & Reichard, 2008). Students need to be taught explicitly how to carry out appropriate strategies so that their reading comprehension improves. An integration of metacognitive reading strategy instruction and practice into the overall reading curriculum can help to promote an increased awareness of the mental processes involved in reading and the development of thoughtful and constructively responsive reading.

RECOMMENDATIONS

- It is recommended that teacher trainees are provided with explicit instruction that helps them to know what reading strategies are, how to use them, why to use them, and when to use them.
- The importance of employing problem-solving to enhance comprehension should always be made explicit. Explicit explanation and modelling will help students to think about their reading processes and make clear what they should be doing, what they were not doing before, or what they are doing wrong. This will build their confidence to use their reported strategic knowledge to enhance their reading efficacy.
- Students should be motivated in applying the strategies to an expanded range of learning activities so that the strategies transfer to new activities and are used.
- The importance of strategy use underscores the need for a strong emphasis on the development and maintenance of effective reading strategy use across the curriculum as not using the right strategy in reading might be one reason for educational failure.
- There are research-based comprehension strategies which tutors must know and model during reading. Capacity building for tutors is therefore needed, with appropriate guidelines on how to teach reading comprehension.

LIMITATIONS OF THE STUDY

This study obtained data from three out of the 38 colleges of education in Ghana, and in the central region of Ghana only. Although attempts were made to obtain a representative sample by assigning the same number of students from different academic levels, caution should be exercised when generalizing the results. We acknowledge the limitations associated with the use of student reflections for data collection. We also acknowledge that these reflections, as in the case

of all self-reported data, may not be true reflections of students' reading behaviours, may reflect response bias, and are restricted to those individuals who agreed to participate in this study. One cannot therefore tell with absolute certainty from the instrument alone whether students actually engage in the strategies they report using. Future research should therefore incorporate think-aloud protocols or interviews to further examine students' actual strategy use.

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