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A Comparative Study of Public and Private Universities Students Printed and Online Academic Texts Reading Strategies Uses The Case of ASTU and Saint Mary's University

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Abstract

Reading strategies are essential for readers to comprehend academic materials. Mature readers are distinguished from struggling readers by the types of reading strategies they apply while reading both printed and online materials. Besides, the application of online reading strategies requires additional skills and strategies from readers. Without appropriate training and experience, it is difficult for students to apply both the offline and online strategies effectively. However, there is no available research on the reading strategies uses of higher learning students in Ethiopia for both types of reading strategies. This study, therefore tried to inspect the level of reading strategies uses and the existence of differences or similarities of online and printed reading strategies uses of ASTU and Saint Mary's University students in both printed and online forms. It also tried to examine whether there was a difference in terms of gender and departments regarding online and printed reading strategies uses. Additionally, the study attempted to look into the existence of similarities or differences between the uses of online and printed reading strategies uses. To answer the above questions, 400 students were selected randomly from the two universities (200 from each university), applying simple random sampling. The study applied a quantitative method. It used closed ended questionnaires as data gathering tools. T-test, ANOVA and Pearson correlation were used to analyze the data. And the study revealed that the level of the two universities students' online and printed reading strategies uses were medium, and the finding revealed that there was no statistically significant differences in the uses of online and printed reading strategies between the two universities students. Besides, the relationship of online and printed materials uses of the two university students was found to be significantly and positively correlated. There was statistically significant difference in the uses of printed reading strategy and online reading strategy uses as a result of department but not gender. Hence there is a need to raise the level of online and printed reading strategies uses from medium to high. There is also a need to narrow the gap regarding online

and printed reading strategies uses observed among departments through training and reading strategies teaching.

Key Words: Printed Reading Strategies; Online Reading Strategies, and Academic Texts

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1. Introduction

1.1 Background

English is the medium of instruction in Ethiopian high schools and tertiary education system. For students to pursue their study and communicate effectively, they should have English language competence. This is because English is the language of literature, science, research, technology, etc. The proficiency of the language users can be manifested in the ease that the students display while learning and communicating using the language. Even if all the four skills are important to acquire the skills, attitude and practice of university learning, effective reading skill is the most important of all the skills (Grabe, 1991). This is because if learners are mature readers, they can plan, regulate and evaluate their reading and make progress and attain their educational objectives independently by constructing and extracting meaning about the courses they read.

In higher learning, one's reading ability makes a difference in either succeeding or failing in one's academic performance. Comprehension has its own levels (Herber, 1978; Vecca and Vecca, 1999; Readence, Bean, and Baldwin, 1998). Generally speaking, even if the uses of terminologies differ from one author to another, there are three types of reading comprehension: literal, interpretative and applied. At the literal level, readers extract the gist of the text by "reading the lines". It is text explicit where by readers attempt to understand the directly stated information, from the text. At the second level or interpretive comprehension, readers extract meaning by reading "between the lines". By putting together information, readers infer and perceive message which are not stated directly. They draw their own conclusions in response to unstated issues, which can be cause effect, comparison contrast and opinion reason. That is why it is called it is text implicit. Applied comprehension refers to the construction of meaning reading "beyond the lines". It involves critical discovery and reflection. It

refers to the use of information to come up with fresh ideas and opinions grounding on one's experience. "When constructing meaning from the text at the applied level, learners are able to synthesize information, to question and evaluate the author, to think critically and to form new, fresh ideas from the text" (Vecca and Vecca,2009, pp.25-27).

The above levels refer to the quality of meaning extraction from the text, and a good reader should exercise all the three levels comfortably (Ruddell, 2001). According to Rasinski et al (2000, p.1) "Comprehension involves what the reader knows as well as the nature of the text itself. It involves the type of text to be read—narrative, expository, poetry, etc. It involves the purpose for reading". In relation to this, Snow (2002) claim that reading comprehension involves three elements: the reader, the text and the activity. The reader is the person who is engaged in creating meaning and understanding. To understand, the reader should be motivated to read and should utilize his /her cognition and background knowledge. With regards to motivation, the reader should have a purpose for reading. He should also have self efficacy and interest for the text. As to cognition, it entails factors like memory, analysis and inference skills. In addition, a comprehender requires lexical knowledge, background of the topic, linguistic, discourse knowledge and a repertoire of comprehension strategies and skills and how to apply them while reading. The text features whether their being difficult or simple and the exposure of the reader to different difficulty level of texts can determine the comprehending ability of the reader. Experienced reader can easily decode the words; extract message and make use of mental models represented in the text. In other words, it is the level of the reader which determines the difficulty of the material being read. The activity which involves formulating a reading purpose is an essential component of reading comprehension. The purpose of the study can be student generated; having an internally or externally driven motivational objective, or it can be generated by external body such as instructors. For Snow (2002) the purpose of reading is affected by the before, during, after and reading process of reading.

In fact, mature or proficient readers are distinguished from less mature or proficient readers by the type of strategies they implement before, during and after reading (Trehearne and Doctorow, n.y.). Before reading, proficient readers set goals and know their purpose, preview text, reflect on the subject

they read, utilize their background knowledge, make prediction about the text and decide to read the whole text, part of the text or none of the text. During reading, successful readers monitor comprehension, apply fix up strategies when there is comprehension breakdown, use text structures and text features to construct meaning, generate questions about the text, react intellectually and emotionally to the text, continue to reflect, predict, confirm or correct expectations, read carefully or quickly, reread or avoid reading. As to after reading, mature readers evaluate whether reading goals were attained or not; compare what they read with their background knowledge, summarize the gist of the text, and react to the text either intellectually or emotionally. At this stage, they may even seek additional information for better understanding of the topic.

Pearson, Roehler, Dole, and Duffy (1990) also summarized studies done on strategies which make readers proficient so as to construct and extract meaning from text. Pearson and his associates point out that proficient readers search constantly for connection between their background knowledge and the new ideas they read; monitor regularly the sufficiency of the models of text meaning they build; take action to amend faulty comprehension, distinguish early significant ideas from less significant ideas, are skilful at synthesizing information, make inferences during and after reading to get the whole picture of their reading and ask questions either consciously or unconsciously.

In relation to this issue, Paris, Lipson and Wixon (1994) in Ruddell (2001, p.86) define strategic reading as reading where by the reader knows what to do; how to do it, and when to do what. Knowing what to do is labelled as declarative; knowing how to do is classified as procedural, and knowing what to do when refers to conditional issues. Skilled readers know the nature of the task and apply the appropriate techniques, and yet this is not the case for less skilled readers.

The availability of technology and the variety of uses within educational settings has brought an additional asset and challenge to readers. The huge materials found on the Internet in the form of electronic materials such as e-books, e- journals, research articles have opened a new opportunity to students to facilitate their learning. The Internet enables students to find information for their studies, verify information or facts use an online dictionary and read news online; e-mail their research work to their

instructors, share books and hand-outs with their friends, browse the web for academic and non-academic reading purposes, engage in music related activities, and play games (Lebo, et al., 2009). All of these uses require additional literacy and technology skills and efficient reading strategies that influence both academic and personal growth.

Several authors note that new devices have increased the frequency of reading, as students use the Internet to search for information on different issues (Alvermann, 2008b; Donath & boyd, 2004; Enyon & Malmberg, 2011; Lenhart, 2012; Rideout, 2012). In higher learning, digital reading has become the norm rather than the exception. As the reading landscape changes from only print to both print and digital media, readers are required to adjust their reading strategies in a manner which enable to extract meaning effectively in both circumstances. In other words, it is not only print reading strategies and skill that students need but they should equally be skilled in digital reading skill and strategies (Levine, Ferez and Reves, 2002).

As far as students achievement signal, students appear ineffective readers which may be linked to the application of wrong reading skills and strategies. The personal observation of the present researchers that they encounter while teaching reading and the lack of research in the area of print and digital academic reading strategy uses are the driving forces to raise this topic for investigation.

1.2 Statement of the Problem

Reading strategies are essential for readers to comprehend a reading material. Mature readers are distinguished from struggling readers by the types of reading strategies they apply while reading both print and online information. Studies have also shown that language proficiency determines the difference in reading strategy uses in such a way that effective readers can use strategies in a collaborative manner depending on the difficulty level of texts (Anderson, 1999; Carrell, 1991; Mokitari & Reichard, 2002). They plan, monitor and evaluate their reading. Effective reading occurs when there is an interaction among the text, reader and the reading context. Hence, effective readers are expected to employ various reading strategies in different contexts and types of texts by regulating their reading and adjusting their styles to optimize their understanding.

University students are expected to take four to six courses per semesters and each course require a lot of readings which can be either print or digital. However, there is no available research on the reading strategies uses of higher learning students in Ethiopia for both types of readings. Besides, the application of online reading requires additional skills and strategies from readers. Internet search processes appear to incorporate new navigation strategies along with a greater use of inferential reasoning and efficiency beyond what is usually expected from offline information searches (Coiro & Dobler, 2007; Leu et al, 2004; Sutherland-Smith, 2002). New reading skills and strategies may be required, for example, to generate effective keyword search strategies (Bilal, 2000; Eagleton & Guinee, 2002; Kuiper & Volman, in press); to read and infer which link may be most useful within a set of search engine results (Henry, 2006); and to efficiently scan for relevant information within websites (McDonald & Stevenson, 1996; Rouet, 2006). The amount of information on the Internet is also so diverse that readers should evaluate critically the materials they are reading to separate the wheat from the chaff. Online readers are expected to check the credibility, relevance, accuracy and motive of an author. They should as well keep record of the website location for later use which one way or another requires higher level strategies use. Besides, readers are expected to manage process and filter multiple online documents while synthesizing information (Bulger, 2006). On top of these, on line reading requires collaborative web pages, email, blogs, wikis, and instant messaging (Castek, 2004; Leu et al, 2005; Lewis & Fabos, 2005). Without appropriate training and experience, it is difficult for students to apply both the offline and online strategies effectively. The present research, therefore, tries to address the following questions:

1. What kind of reading strategies do Adama University and Saint Mary's University students employ for online and print reading?

2. Does students' use of print reading strategies have positive or negative relationship with their use of online reading?

3. Is there significant difference in the use of print reading strategies among the two university students?

4. Is there significant difference in the use of online reading strategies among the two university students?

5. Is there significant difference in the use of print and online reading strategies as a result of gender?

6. Is there significant difference in the use of print and online reading strategies as a result of department?

1.3 Objective of the Study

The major objective of the study is to examine whether there is a difference between students print and online academic texts reading strategies use. The specific objectives of the study are:

To examine the types of strategies of Adama University and Saint Mary's University employ while reading online and print academic reading text

To examine the relationships between online and print academic reading texts strategies use of the two universities students

To see whether there is significant difference in the use of online and print reading strategies use among the two university students

To see whether there is significant difference in the use of online and print reading strategies use in terms of department and gender

1.4 Significance of the Study

Being equipped with the required print and online reading skill and strategies pave the way for learners to enhance their understanding and perform better in their academic performance. By exploring the types of print and digital reading strategies students apply while searching information, it is possible to identify their strengths and weaknesses and suggest effective strategies and skills to improve their reading ability. This is because based on the personal experience reports of students, it is possible to identify the profile of readers and suggest possible solutions for the problems they encounter in relation to their reading strategies and skills. English instructors can also adjust their instructional strategies not only in line with print reading strategies but also in relation with the new online reading strategies and skills. Further, course developers can also benefit from the study since the findings can provide new insights about the contemporary strategies and skills needed by the present university readers. The course developers can pinpoint the types of strategies essential to carry out a certain reading. The study can also serve as a spring board for additional study to be carried out in the area of reading strategies and skills.

1.5 Scope of the Study

The study is delimited to two purposely selected universities: Adama Science and Technology and Saint Mary's University fresh man students. In our country, most studies are conducted either in public or private institutions. Without looking the reality of both parts of the country's institutions, the researchers believe that the findings cannot give the full picture of the reality of Ethiopian university students. Hence, the present researchers' wants to see the reading strategies that learners apply while reading in both public and private higher learning institutions. Adama Science and Technology enrolls learners from all over the country who want to specialize in science and technology. It is the first University which specializes in science and technology. And knowing the level of learners reading maturity appears essential since the students are the future inventors and problem solvers of the country who can make the country competitive with the rest of the world in the fields of science and technology. When it comes to Saint Mary's Universities, it is not only one of the highest enrolee's institutions, but it is also a university which is ranked first from all private universities in terms of quality maintenance and assurance that the country has, and the findings can represent the true picture of the private sector higher learning institutions. It is due to the above reasons that the exceeding universities are selected for the present study.

1.6 Limitations of the Study

The study does not study the cause effect relationship of the variables under consideration. It is a descriptive survey which tried to identify the types of print and digital reading uses, examining the similarities and differences regarding the strategies used in the two universities.

2. Research Methodology

2.1 Design of the Study

The main purpose of the study was to investigate the similarities and differences of reading strategies uses used by the students of Adama Science and Technology University and Saint Mary's University while reading print and online reading academic texts. Hence, the study applied an exploratory descriptive design. It utilized quantitative method. Descriptive designs such as correlation, t-test and ANOVA were applied.

2.2 Sources of Data

The source of data for this study was primary data. The target population of this study were freshman students of the two universities. A closed ended questionnaire was distributed to gather data regarding students' print and online academic texts reading.

2.3 Sampling Procedure

Four hundred students were selected from Adama Science and Technology University and Saint Mary's University. From each university Faculty 200 students were selected applying simple random sampling. Students then were stratified on the basis of sex and department to examine if there were differences in the use of print and online reading strategies.

2.4 Instruments of Data Collection

A closed ended questionnaire was employed to gather data from students. The questionnaire had two components: reading strategy uses for print reading and reading strategy uses for online reading, and students self-reported about their cognitive and metacognitive reading strategies uses that they applied while reading digital and print academic texts.

The questionnaire items for print reading strategy uses were adapted from Phakiti (2006). The questionnaire applied a five point Likert Scale, ranging from 1 to 5 (1= strongly disagree, 2=disagree, 3=neutral, 4= agree, 5= strongly disagree). Eighteen strategies from cognitive and fifteen from metacognitive were used to appraise students' print reading strategy use.

With regards to online academic reading strategy use, the standardized instrument developed by Mokhatriy and Sheory (2002) were applied. The strategies contained 33 items which served to measure global, problem solving and support strategies. The questionnaire for online text reading applied a five point Likert scale, ranging from 1 to 5 (1= strongly disagree, 2=disagree, 3=neutral, 4= agree, 5= strongly disagree).

The standardized instruments were used after piloting the questionnaire using Cronbach alphas on 30 students to ensure the reliability coefficient. The questionnaires were distributed to the subjects' after adjusting the components of the questionnaires.

2.5 Method of Data Analysis

The quantitative data were analyzed using both descriptive and inferential statistics. Mean and standard deviation from descriptive statistics and correlation, T- tests and ANOVA from inferential statistics were applied while analysing the data.

3. Analysis and Findings

This chapter presents the major findings of the study. It points out the similarities and differences of online and printed reading strategies uses. It also spells out whether there is a difference in terms of gender regarding online and printed reading strategies uses.

3.1. Background of the Respondents

This topic of the research section displays the background of the respondents as per the distribution in gender whereby it was treated and investigated as variable. The frequency and percentage are presented here under.

A. Gender

Table 3.1.1: Gender Distribution of Respondents from SMU

		Frequency	Percent
Gender	Male	66	37.1%
	Female	112	62.9%
	Total	178	100%

The majority of the respondents were females from SMU due to gender distribution of population of the study in the university.

Table 3.1.2: Gender Distribution of Respondents from ASTU

		Frequency	Percent
Gender	Male	129	76.3%
	Female	40	23.7%
	Total	169	100%

Unlike SMU samples, at ASTU male participants were the majority due to gender distribution of population of the study in the university. Generally, 347 participants were the respondents of this research of which 195 (56.2%) were males and 152 (47.8%) were females.

3.2. Online Reading Strategies Uses

In this part of the research, the uses of online reading strategies are illustrated as per the finding. Keys for scoring responses of participants on online reading strategies of academic texts are shown below.

Key for Ratings:

1= Never (N); 2= Seldom (SD); 3= Sometimes (ST); 4= Often (O); and 5= Very Often (VO)

According to Oxford (1990) the level of reading strategies can be classified in to high, medium and low in such a way that mean of 3.50 and above refers to the high application of reading strategies; the mean of 2.50 to 3.40 implies medium uses of reading strategies, but the mean of 2.40 or lower is conceived as low uses of online reading strategies. When we look at the responses of ASTU and SMU, they ranged between medium and higher levels. In other words, there are not low level online reading strategies users. Besides, the means of the two university students are close to each other, but there are differences between the two university students. The lowest means were observed for item 2, item 7 and item 22 such as " I participate in live chat with other students"; "When online text become difficult, I read aloud to help me understand when I read", and "I use typographical features like boldface and italic to identify key information" respectively, but the highest means were observed for items 9 and 16 which read "I read slowly and carefully to make sure I understand what I am reading online"; "I stop reading a moment when I am feeling stressed or confused" respectively.

Table 3.1.3: Mean and Standard Deviation of Responses on Strategies of Reading Online Academic Texts Reponses from SMU and ASTU

	ASTU		SMU	
Variables	Mean	Std. Deviation	Mean	Std. Deviation
I have a purpose when I read online	3.26	1.23	3.21	1.19
I participate in live chat with other students	2.83	1.26	2.72	1.26
I take notes while reading online to help me understand what I read	3.21	1.31	3.11	1.27
I think about what I know to help me understand what I read online	3.51	1.19	3.38	1.15
I take an overall view of the online text to see what is all about before reading	3.02	1.24	3.02	1.84
When online text become difficult, I read aloud to help me understand when I read	2.75	1.36	2.76	1.35
I think about whether the content of the online text fits my reading purpose	3.3	1.26	3.32	1.55
I read slowly and carefully to make sure I understand what I am reading online	3.63	1.28	3.67	1.27

I review the online text first by noting its characteristics like length and organization	2.93	1.07	2.86	1.18
I try to get back on track when I lose concentration	3.29	1.18	3.29	1.24
I print out a hard copy of the online text then underline or circle information to help me remember it	2.75	1.35	2.84	1.35
When reading online text, I think about information in both English and my mother tongue	3.38	1.25	3.28	1.28
I adjust my reading speed according to what I am reading online	3.38	1.27	3.32	1.29
I use reference material (e.g. an online dictionary) to help me understand what I read online	3.21	1.32	3.28	1.29
I stop reading a moment when I am feeling stressed or confused	3.58	1.33	3.62	1.84
I use table, figure, and pictures in the online text to increase my understanding	3.19	1.37	3.09	1.36
I stop from time to time and think about what I am reading online	2.93	1.21	2.85	1.22
I use context clues to help me better understand what I am reading online	3.21	1.19	3.33	1.75
I paraphrase (restate ideas in my own words) to better understand what I read online	3.48	1.77	3.42	1.5
I try to picture or visualize information to help remember what I read online	3.29	1.33	3.27	1.29
I use typographical features like boldface and italic to identify key information	2.88	1.31	2.89	1.29
I critically analyze and evaluate the information presented in the online text	3.13	1.18	3.05	1.16
I go back and forth in the online text to find relationships among ideas in it	3.11	1.18	3.13	1.48
I check my understanding when I come across new information	3.43	1.13	3.49	1.15
I try to guess what the context of the online text is about when I read	3.37	1.19	3.33	1.21
When online text become difficult, I reread to increase my understanding	3.41	1.27	3.26	1.32
I ask myself questions I like to have answered in the online text	3.3	1.21	3.23	1.25
I check to see if my guesses about the online text are right or wrong	3.35	1.21	3.22	1.27
When I read online, I guess the meaning of unknown words and phrases	3.48	1.31	3.49	1.23
I scan the online text to get the basic idea of whether it will serve my purpose before choosing to read it	3.22	1.21	3.17	1.25

I critically evaluate the online text before choosing to use information I read	3.33	1.18	3.22	1.24
I can distinguish between fact and opinion in online texts	3.33	1.2	3.23	1.24
When reading online, I translate from English into my native language	3.31	1.27	3.2	1.3
Before reading, I look at the picture or diagrams along what is under the pictures	3.22	1.89	3.32	1.59
Before reading, I read the introduction and the conclusion of the passage to figure out what the passage is about	3.62	1.85	3.52	1.58
While reading, I will predict the context of the text	3.72	2.33	3.49	1.82
When I read, I will recognize the failure/success to understand the portion of the text	3.52	1.76	3.59	1.98
When I read, I will pay more attention to the meaning of the reading passage	3.92	1.67	3.81	1.41
While reading. I will pay more attention to the meaning of each individual word	3.35	1.11	3.3	1.14
While reading, I break down larger clauses into smaller parts to help me understand difficult sentences in the passage	3.35	1.09	3.29	1.17
While reading, I will adjust reading rate to increase comprehension	3.35	1.06	3.37	1.46
While reading, I will identify the grammatical function of the unknown word before guessing the meaning	3.42	1.06	3.26	1.15
While reading, I will use word roots and affixes (prefixes and suffixes) to understand the meaning of the words	3.21	1.02	3.11	1.13
While reading I will use an English - English dictionary to find out the meaning of unknown words	3.64	1.82	3.55	1.56
While reading, I will use English - my native language dictionary to find of the meaning of unknown words	3.3	1.17	3.27	1.19
When I read, I will skim the whole text for the main idea	3.49	1.05	3.35	1.11
When I read, I will read a phrase or a sentence at a time	3.29	1.13	3.32	1.47
When I read, I will look for transitional words that help explain the relationship between sentences such as although, due to and so	3.37	1.12	3.3	1.09
When I read, I will imagine the image and sounds described in the article	3.33	1.16	3.29	1.17

When I read, I will analyze the syntactical structure of the sentences	3.27	.98	3.2	1.49
When I read, I will pay attention to every detail	3.45	1.09	3.42	1.15
When I read, I will read word for word	3.18	1.11	3.21	1.16
When I read, I will scan for useful words or phrases	3.44	1.07	3.37	1.17
When I read, I will reconsider the difficult part of the reading material to help me understand its meaning	3.53	1.15	3.47	1.11
When I read, I will translate the words or sentences into my native language	3.44	1.14	3.4	1.2
When I read, I will use paraphrasing techniques to help me comprehend	3.33	1.11	3.17	1.14
When I don't understand texts, I will retained myself by underlining the words or phrases	3.49	1.19	3.43	1.19
I frequently check if I don't understand the contents	3.37	1.19	3.44	1.17
When the texts are ambiguous, I will recheck it for comprehension	3.79	2.25	3.57	1.78
When I read, I will use contextual rules to interpret a word of phrase	3.39	1.12	3.38	1.11
When I read, I will respond to the genre and organization of the text	3.28	1.06	3.43	2.28
When I read, I will read for further clues	3.38	1.09	3.28	1.12
When I read, I will use the background knowledge to help me comprehend	3.45	1.12	3.54	1.47
When I read, I will analyze the grammatical structure to help me comprehend	3.23	1.09	3.27	1.09
When I read, I will use signal words to help comprehension	3.32	1.09	3.26	1.14
While reading, I critically analyze and evaluate the information appeared in the texts	3.84	1.77	3.72	1.75

Table 3.1.4: Paired Samples Statistics

		Mean	Std. Deviation
Pair 1	Online in St. Mary's University	3.3	0.79
	Online in Adama Science and Technology University	3.24	0.75

3.3. Printed Reading Strategies Uses

Here under, the findings of printed reading strategies uses of academic texts are presented.

Key for Ratings:

1= Never (N); 2= Seldom (SD); 3= Sometimes (ST); 4= Often (O); and 5= Very Often (VO)

According to Oxford (1990) the level of reading strategy can be classified in to high, medium and low in such a way that mean of 3.50 and above refers to the high application of reading strategies; the mean of 2.50 to 3.40 implies the medium uses of reading strategies, but the mean of 2.40 or lower is conceived as low uses of online reading strategies. When we look the responses of ASTU and SMU, they ranged from medium to high. From medium range, the lowest mean is observed for number 19 in the case of ASTU which read that "When I read word for word (3.18). As to Saint Mary's students the lowest mean is observed for number 17 which says "When I read, I will analyze the syntactical structure of the sentence. Saint Mary's students mean is also medium (3.21) for reading word-for-word.

Table 3.1.5: Printed Materials Reading Strategies Uses

	ASTU		SMU	
Variables	Mean	Std. Dev	Mean	Std. Dev
Before reading, I look at the picture or diagrams along what is under the pictures	3.22	1.89	3.32	1.59
Before reading, I read the introduction and the conclusion of the passage to figure out what the passage is about	3.62	1.85	3.52	1.58
While reading, I will predict the context of the text	3.72	2.33	3.49	1.82
When I read, I will recognize the failure/success to understand the portion of the text	3.52	1.76	3.59	1.98
When I read, I will pay more attention to the meaning of the reading passage	3.92	1.67	3.81	1.41
While reading. I will pay more attention to the meaning of each individual word	3.35	1.11	3.3	1.14
While reading, I break down larger clauses into smaller parts to help me understand difficult sentences in the passage	3.35	1.09	3.29	1.17
While reading, I will adjust reading rate to increase comprehension	3.35	1.06	3.37	1.46
While reading, I will identify the grammatical function of the unknown word before guessing the meaning	3.42	1.06	3.26	1.15
While reading, I will use word roots and affixes (prefixes and suffixes) to understand the meaning of the words	3.21	1.02	3.11	1.13
While reading I will use an English - English dictionary to find of the meaning of unknown words	3.64	1.82	3.55	1.56
While reading, I will use English - my native language dictionary to find of the meaning of unknown words	3.3	1.17	3.27	1.19
When I read, I will skim the whole text for the main idea	3.49	1.05	3.35	1.11
When I read, I will read a phrase or a sentience at a time	3.29	1.13	3.32	1.47
When I read, I will look for transitional words that help explain the relationship between sentences such as although, due to and so	3.37	1.12	3.3	1.09
When I read, I will imagine the image and sounds described in the article	3.33	1.16	3.29	1.17
When I read, I will analyze the syntactical structure of the sentences	3.27	.98	3.2	1.49
When I read, I will pay attention to every detail	3.45	1.09	3.42	1.15
When I read, I will read word for word	3.18	1.11	3.21	1.16

When I read, I will scan for useful words or phrases	3.44	1.07	3.37	1.17
When I read, I will reconsider the difficult part of the reading material to help me understand its meaning	3.53	1.15	3.47	1.11
When I read, I will translate the words or sentences into my native language	3.44	1.14	3.4	1.2
When I read, I will use paraphrasing techniques to help me comprehend	3.33	1.11	3.17	1.14
When I don't understand texts, I will retained myself by underlining the words or phrases	3.49	1.19	3.43	1.19
I frequently check if I don't understand the contents	3.37	1.19	3.44	1.17
When the texts are ambiguous, I will recheck it for comprehension	3.79	2.25	3.57	1.78
When I read, I will use contextual rules to interpret a word of phrase	3.39	1.12	3.38	1.11
When I read, I will respond to the genre and organization of the text	3.28	1.06	3.43	2.28
When I read, I will read for further clues	3.38	1.09	3.28	1.12
When I read, I will use the background knowledge to help me comprehend	3.45	1.12	3.54	1.47
When I read, I will analyze the grammatical structure to help me comprehend	3.23	1.09	3.27	1.09
When I read, I will use signal words to help comprehension	3.32	1.09	3.26	1.14
While reading, I critically analyze and evaluate the information appeared in the texts	3.84	1.77	3.72	1.75

Table 3.1.6: Paired Samples Statistics

		Mean	Std. Deviation
Pair 2	Printed reading strategies uses in St. Mary's University	3.49	0.76
	Printed reading strategies uses in Adama Science and Technology University	3.48	0.9

3.4 Bi-virate Correlation among Reading Strategies Variables

Table 3.1.7: Bi-virate Correlation among Reading Strategies Variables

	ON- SMU	PR-SMU	ON-ASTU	PR-ASTU
Online materials reading SMU	1			
Print materials reading SMU	.434**	1		
Online materials reading ASTU			1	
Print materials reading ASTU			.563**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3.1.7 indicates that when learners' online material reading strategies and print materials reading strategies were correlated for both universities, the results reveals significant positive relationships between learners' online reading strategies and print materials reading strategies (r=.434) for St. Mary's University learners and (r=.563) for ASTU students.

3.5 Online Materials Reading Strategies Mean Comparison by Sex for ASTU

Table 3.1.8: Online Materials Reading Strategies Mean Comparison by Sex for ASTU

	Sex	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Online Material reading	Male	129	106.17	24.345	.114	.910
	Female	40	106.65	19.654		
Print materials reading	Male	129	111.94	19.800	1.037	.301
	Female	40	108.23	19.737		

As shown in Table 3.1.8 comparison of learners reading strategies by their gender did not reveal significant variation between students due to their difference in gender (t= .114, $P \leq .05$) for online reading strategies and (t= 1.037, $P \leq .05$) for print materials reading strategies, signifying that the observed mean differences are due to chance error.

3.5 Online Materials Reading Strategies Mean Comparison by Sex for ASTU

Table 3.1.9: Online Materials Reading Strategies Mean Comparison by Sex for ASTU

	Sex	N	Mean	Std.	t	Sig. (2-tailed)
Online materials reading	Male	66	105.03	19.221	.836	.404
	Female	112	102.51	19.560		
Printing Materials reading	Male	66	108.05	22.025	.233	.816
	Female	112	108.80	20.369		

Table 3.1.9 reveals that when reading strategies were compared by their gender for St Mary's students, the results did not reveal significant variation between students due to their difference in gender (t= .836, P≤ . 05) for online reading strategies and (t= .233, P≤ . 05) for print materials reading strategies, signifying that the observed mean differences are due to chance error.

3.6 ANOVA Summary for Comparison of Reading Strategies by Department for ASTU

Table 3.1.10: ANOVA Summary for Comparison of Reading Strategies

		Sum of Squares	df	Mean Square	F	Sig.
Online materials Reading	Between Groups	17937.804	9	1993.089	4.341	.000
	Within Groups	72996.563	159	459.098		
	Total	90934.367	168			
Pint materials Reading	Between Groups	9403.324	9	1044.814	2.946	.003
	Within Groups	56390.084	159	354.655		
	Total	65793.408	168			

Comparison of mean difference for online materials reading strategies among ASTU students by their departments reveals significant difference (F=4.341, P<.05) at alpha level of .05. Thus, the null hypothesis stating that there is no statistically significant difference among students in their reading strategies due to their being from different departments is rejected. And the observed difference is beyond the chance error. Moreover, when post hoc test was employed, Tukey test for significance of difference indicates significant mean differences for online materials reading between Department of Management and Department of ITIM (P=.027); Department of Horticulture

and Department of ITIM (P= .044); Department of Animal Science and Department of and ITIM (P= .002); Department of Animal Science and Department of LSCM (P=.022); Department of Pre-Engineering and Department of ITIM (P=.004). Department of ABUM and Department of ITIM (P=.007); Department of ABUM and Department of LSCM (P=.039); Department of Management and Department of Marketing Management (P= .027); Department of Management and Department Of Horticulture (P= .044); Department of Management and Department of Animal Science (P=.002); Department of Logistics and Department of Animal Science (P=.022)

Similarly when mean scores for print materials reading strategies were compared among ASTU students by their departments results revealed significant difference (F= 2.946, P<.05) at alpha level of .05. Thus, the null hypothesis stating that there is no statistically significant difference among students in their print materials reading strategies due to their being from different department is rejected. And the observed difference is due to their actual variation in the departments. Moreover, when post hoc test is employed, Tukey test for significance of mean difference indicated significant mean differences for print materials reading strategies between department of Horticulture and department of ITIM (P= .039); department of pre-engineering and department of ITIM (P=.020); department of management and department of Horticulture (P=.039).

3.7 ANOVA Summary for Comparison of Reading Strategies by Department for SMU

Table 3.1.11: ANOVA Summary for Comparison of Reading Strategies by Department for SMU

		Sum of Squares	df	Mean Square	F	Sig.
St. Mary Online material reading	Between Groups	1657.050	2	828.525	2.22	.111
	Within Groups	65086.889	175	371.925		
	Total	66743.938	177			
St. Mary print material reading	Between Groups	2961.363	2	1480.681	3.47	.033
	Within Groups	74645.048	175	426.543		
	Total	77606.410	177			

When mean scores for online materials reading strategies were compared among SMU students by their department, the results did not reveal significant difference (F=2.228, P<.05) at alpha level of .05. Thus, the null hypothesis stating that there is no statistically significant difference among students in their online reading strategies due to their being from different departments is accepted. And the observed difference is due to chance error. In contrast comparison of mean difference for print materials reading strategies among SMU students by their departments revealed significant difference (F=3.471, P<.05) at alpha level of .05. Thus, the null hypothesis stating that there is no statistically significant difference among students in their reading strategies due to their being from different departments is rejected. And the observed difference is beyond the chance error.

Moreover, when post hoc test was employed, Tukey test for significance of difference indicated significant mean differences for print materials reading strategies only between department of Accounting and Department of Management (P=.025).

3.8 T-test for Mean Comparison of Online and Print Materials Reading by University

Table 3.1.12: T- test for Mean Comparison of Online and Print Materials Reading by University

	University	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Online material reading	SMU	178	103.44	19.419	1.237	.217
	ASTU	169	106.28	23.265		
Print material reading	SMU	178	108.52	20.939	1.158	.247
	ASTU	169	111.06	19.790		

Table 3.1.12 reveals that when students online materials reading and print materials reading were compared by their university, the results did not reveal significant variation between students due to their differences of university (t= 1.237, P≤ . 05) for online reading strategies and (t= 1.158, P≤ . 05) for print materials reading strategies, signifying that the observed mean differences are due to chance error.

4: Conclusions and Recommendations

4.1. Conclusions

- The two university students reading printed and online strategy uses ranges are medium. There are no low levels reading strategy users of printed and online reading.
- The relationship of using online and print materials is found to be significantly and positively correlated.
- There is significant difference in the uses of printed reading strategy and online reading strategy as a result of department, but there is no significant difference in the uses of printed reading strategy and online reading strategy as a result of gender.
- A t-test was used to examine whether there were differences between ASTU and SMU in the uses of online and print reading strategies, and the findings revealed that there was no statistically significant differences in the uses of online and print reading strategies between the two universities students.

4.2 Recommendations

- The uses of print and online reading strategies of the two universities' students are medium. So there is a need to increase learners' strategies into high level. Reading strategy is very vital for self-regulated reading to occur. Students plan, monitor, evaluate and adjust their reading if they are equipped with the required reading online and printed reading strategy uses. Thus, there is a need to augment the knowledge and actual uses of learners on how to use reading strategies so as to increase their reading ability.
- There is significant difference in the uses of printed reading strategy and online reading strategy as a result of department. To narrow this gap there is a need to form reading club so as to create a platform to exchange reading strategy uses among students of different departments. Besides, English instructors and other course instructors should give training to all departments on how to use reading strategies.
- Online reading strategies require additional training since it requires a different form of skills, compared to printed form of reading strategies. Thus, English instructors should offer training on how to use online training strategies during reading.

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