In the Light of Reading Strategies Comprehension improvement (Text Book, Online Material and Smartphone Application)

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Abstract  
The reading comprehension study is considered as one of the most important areas in language education. Since 1975 several matters took the attention to be discussed either the nature of reading comprehension as a process or might be the effective of reading comprehension instruction. Tracing the latest update by researchers shows that the new technologies are employed to make the process of reading easier. Special concerns should be giving to the soul of learning which is reading skill and the strategies of reading. Due to the variety of reading strategies in different environments, how do the learners react with the paper based texts are discussed and no gabs left in different societies; consequently the online reading process begins when the use of internet becomes a part of the students life in early of this century. Gradually, when the internet is accessible in the smartphones, knowledge and information are spreader in a massive way which leads us to find out and explore the differences between the traditional way of writing as mentioned or do the learners have others attitude when they engaged to the smartphones in terms of reading skills

Keywords: Reading strategies, paper based, online reading, Smartphone application
Introduction
As information is easily available in the internet, students are seen reading materials online more often than the printed materials. In fact, with the new gadgets like notebooks, tabs, and smartphones, they can access and read more materials as time passes by. With these new phenomena, one possible area of study is to assess how well or how effective their reading is, for instance, reading some materials to help them write a research paper or reading to help them understand more about their field of study. The new technologies (high-resolution screens, digital libraries, electronic books, etc.) are available, but readers need to learn to overcome old habits while, at the same time, exploiting the new possibilities offered in innovative ways.

Reading comprehension, as a process and as an instruction, provides a rich background of discussion that can be traced back to 1975 to highlight a long and enriching history. The progress made by reading comprehension is mainly attributed to the lack of controversy concerning its instruction. In other words, those who studied reading comprehension unlike decoding, oral reading and reading readiness, have significantly steered clear of the acrimonious work characteristics in other reading aspects.

In addition, a considerable part of studies dedicated to reading comprehension has its basis on the examination of good reader. Some of the findings from these studies highlighted the following about good readers. Good readers are characterized as active readers, with clear reading goals from the beginning of the task and they evaluate their reading progress. Prior to reading, good readers skim the text to note relevant text structure and sections. They predict what is to come from the text and they continuously make decisions concerning reading in terms of what to read carefully, quickly, what not to read, what to re-read etc. As good readers read, they construct, revise, and question the meanings of the text and they attempt to identify the meaning of new words and concepts in the text and make adjustment when needed. Good readers also retrieve, compare, and combine prior knowledge with new ones and they consider the authors, the text, style, beliefs, intentions, historical environment and others. Moreover, good readers keep track of their understanding of the text, evaluate the quality and value of the text and intellectually and emotionally respond to the text. Good readers read different texts in different ways; for instance, they read narratives by paying close attention to the setting and characters and they read expository text by constructing and revising the summary of the text. Furthermore, good readers undergo text processing when reading. Finally, good readers consider comprehension as a satisfying and productive activity despite the fact that it is often consuming, continuous and complex.

Research on Reading Strategy in an ESL/EFL Context

Majority of scholars believe that reading is a constructive process. Specifically, Wad (1990) considered reading as the active formation of meaning while McGeown and Getilucci (2007) referred to it as a covert process under which the readers give meanings to text (p.136). Anderson (1991), on the other hand, stated that reading strategies are deliberate, cognitive steps that learners go through in their acquisition, storage and retrieval of new information. In this regard, strategies can be viewed as the reader’s resource for understanding (Block, 1986).

Within the L2 literature, various definitions have been proposed concerning reading strategies. Cohen (1986) referred to reading strategies as mental process that readers voluntary select to utilize in reading tasks completion (p.7). Similarly, Brantmeier (2002) referred to reading strategies as the process of comprehension adopted by readers to comprehend what they read. Meanwhile, Mokhtari and Reichard (2002) described reading strategies as deliberate activities by
active learners often times to remedy perceived cognitive failure. In this regard, a reading strategy can be viewed as an action or actions undertaken to form meaning (Kletzien, 1991). Along similar lines, Carrell, Gajdusek and Wise (1998) referred to reading strategies as actions that readers chose and control for the achievement of specific objectives (p.97). Meanwhile, McGeown and Geilucci (2007) defined metacognition as the practice displayed by readers while engaged in the process of reading (p.136). Majority of studies dedicated to reading strategies acknowledge the role of metacognitive awareness in L1 as well as L2 reading comprehension (Carrell, 1989; Block, 1992; Singhal, 2001). Similarly, Auerbach and Paxton (1997) described metacognition as involving knowledge of processing texts strategies and the ability to monitor comprehension, and adjust required strategies (pp.240-241). In addition, Schramm (2008) stated that metacognition of reading entails the awareness of strategies and perceived strategy use, along with the actual regulation and control of the process of reading. This is similar to Block’s global strategies and such metacognitive strategies have a purpose behind them, e.g. revising the text for length and organization, or using typographical aids, tables, chart comparison, and figures.

On the other hand, cognitive strategies have to do with the reader’s usage of previous knowledge and different strategies in their attempt to develop meaning in the process of comprehension (Pang, 2008). Sheorey and Mokhtari (2001) also described cognitive strategies as the actions/procedures that readers make use of while reading the text (p.436). They added that these actions are localized, concentrated methods used when issues crop up in understanding textual information such as, adjusting the reading speed when the material becomes difficult or easy, gauging unknown words meanings, and re-reading the text to enhance comprehension.

Moreover, a quantitative study was conducted by Maghsudi and Talebi (2009) concerning reading strategy use and reading strategy awareness, among first year pre-university students in India. The sample study comprised of one 157 students possessing high and low proficiency in general English knowledge divided into two categories (monolinguals and bilinguals). The sample was requested to complete tests including a language proficiency test, a reading comprehension test and cognitive and metacognitive reading strategies questionnaire. They revealed that competence in the first language as well as general English language proficiency influence reading strategy use and awareness. They also revealed that bilingual students displayed significantly higher usage of metacognitive strategies/cognitive strategies compared to their monolingual counterparts. With regards to the association between proficiency level and strategy use, students having high proficiency outperformed those with low proficiency in cognitive, metacognitive and total metacognitive/cognitive strategies. They further showed that language background and proficiency showed no significant interactive effect, indicating that reading strategy use of students having high and low proficiency are not associated to their lingual background.

On the whole, the ESL/EFL reading strategy literature used dichotomized learners as unsuccessful or successful learners and queried them concerning the strategies that they often use and those that they seldom use. By comparing the commonly used strategies of native English learners and ESL learners, the latter were inclined to make use of more support reading strategies. With regards to the level of proficiency level of ESL learners and their strategies used, advanced ESL learners were inclined to use global strategies and metacognitive strategies often while those with a lower proficiency level were inclined to primarily use local strategies. Moreover, researchers concerned about the relationship between reading strategies used and
comprehension revealed that the more the ESL learner made use of reading strategies, the higher scores she/he obtained on comprehension tests.

Several scholars highlighted the successful and less-successful dichotomies in studying reading strategy use in the context of ESL (Hosenfeld, 1977; Carrell, 1989; Grabe, 1991; Shih, 1992; Saumell, Hughes & Lopate, 1999; Singhal, 2001). They claimed that successful readers view reading as an active meaning development process (Shih, 1992) and as an interactive process (Saumell, Hughes & Lopate, 1999). Proficient readers have a tendency to display superior strategy use and effective metacognitive skills compared to their counterparts (Grabe, 1991), and as readers, they are more inclined to have a positive self-concept (Hosenfeld, 1977). They make use of various strategies such as the top-down process based on previous knowledge and schemata (Carrell, 1989; Shih, 1992). On the other hand, less successful readers pay more attention to the decoding process and they view reading as a passive activity. In a similar way, Singhal (2001) characterized less successful readers as those who fail to monitor their comprehension, underutilize effective reading strategies and use fewer strategies of reading (p.7). They also have a tendency to depend on the bottom-up, text-based strategies.

**Reading Comprehension as a Process**

A reader is considered to have comprehended the text when he/she has read it with understanding. Nevertheless, comprehension may be better viewed as a process as opposed to a specific outcome or product, via which a reader interacts with a text to develop meaning. This notion concerning comprehension stresses the voluntary, strategic, problem-solving mechanism of the reader as he engages with a text. Therefore, the meaning the reader obtains from a text is affected by his knowledge (such as knowledge of language and print), experience and assumed reading objectives. According to Durkin (1993), this meaning-making process is the essence of reading.

Comprehension, conceptualized as a problem-solving process, has served as a guideline for a significant number of instructional researches during the past 3 centuries. These researches provided a clear insight on how to effectively help children’s acquisition and use of strategies and skills that encourage good comprehension. In addition, many general characteristics of effective strategy instruction have emerged from them.

First, we are aware of the importance of explicit instruction (Duffy, 2002; Palincsar & Brown, 1984). It is important for the teacher to make covert thought processes evident to the student with the help of modeling, demonstrations, and guidance. Second, the teacher should provide temporary support in the form of scaffolding to encourage the student to independently employ strategies and skills, and long-term maintenance goals over the years and generalization should be related to circumstances of reading (Palincsar & Brown, 1984; Duke & Pearson, 2002).

It is also critical to sustain instruction over time (Klinger et al., 2004; Pressley & Wharton-McDonald, 1997) where effective strategy instruction should be deemed as an integral part of reading instruction over time as opposed to just a ‘quick fix’. Finally, differentiated instruction is important (Mosenthal, 1984; Spiro, 2001) as readers view texts in various ways that represent their ability, reading purpose and overall context. Therefore, teachers have to cater to this individual student’s learning needs and provider different reading experiences that encourage individual student’s abilities in using strategic methods in a versatile manner.

Although solid research exists and reinforces comprehension instruction, large-scale studies dedicated to classroom practices in elementary schools revealed that overall, the teachers dedicate very little of their time to it (Durkin, 1978-79; Taylor et al., 2000). According to Kamil
(2004), effective comprehension instruction is not simple as issues may arise in part from lack of training and instructional resources. To respond to this need, a comprehensive program for improving reading comprehension ability of students (from Grades 1-6) called Making Connections was developed. This program deals with the mentioned themes by initially introducing successful reading strategies through explicit teacher led instruction. A clear procedure for scaffolding instruction is provided while children practice newly acquired strategies and skills in various reading situations with increasing independence. The program is created to assist teachers maintain their focus on comprehension instruction all through the school year and throughout grade levels. Finally, the program provides teachers with an array of options to assist them in providing differentiated instruction for their learners.

Reading Comprehension Strategies

According to literature, good readers of all ages make use of conscious, active comprehension strategies prior, during and after reading (Pressley & Wharton-McDonald, 1997). For instance, prior reading, readers may visualize their reading goals and think about what they already know of the topic and the text structure. While reading, they normally activate relevant previous knowledge and begin linking important ideas, constructing and testing hypotheses, paraphrasing key points and try their hand at resolving any issues of comprehension. They also make notes in the margins or underline some sentences from the passage. After reading the whole passage, students may reread it or skim it, summarize or take more notes. Moreover, good readers reflect on the meaning of the text even after reading it and they employ strategies in a flexible manner according to the type of text they are reading and their aims behind reading it.

A significant portion of literature concerning reading comprehension concentrated on answering the question of whether or not it is possible to enhance children’s understanding and recall of texts through explicitly instructing them to use the strategies of good readers. The answer is a definite yes. Specifically, from the National Reading Panel’s (2000) examination of 203 studies, they revealed a solid evidence for the strategies described below:

1. **Monitoring Comprehension:** This strategy involves various instructional methods that help students learn to know how their understanding of a passage is and to employ fix-up strategies to correct their comprehension problems. According to the National Reading Panel (2000), monitoring comprehension assisted children throughout their elementary grades to become highly aware of the difficulties they face in the subject. Evidence also revealed that strategies of comprehension monitoring are invaluable for students suffering from learning disabilities (Vaughn et al., 2000).

2. **Cooperative Learning:** Cooperative/collaborative learning can be deemed as a strategy as well as a social organization that encourages learning (Kamil, 2004). There are several effective approaches to strategy instruction entail students to work on comprehension-related activities in groups of few students (Palincsar & Brown, 1984; Pressley & Wharton-McDonald, 1997; Vaughn & Klinger, 1999) or in pairs (Fuchs et al., 2000). Current studies indicate that cooperative learning may enhance the comprehension of students who are in the process of learning English (Fung et al., 2003), with the inclusion of those who have learning disabilities (Klingner & Vaughn, 1996; Saenz, 2005).

3. **Graphic Organizers:** Graphic organizers, as revealed by many studies, have been useful in assisting students delineate relationships among structural elements found in the text. Graphic organizers are also known as story maps, concept maps or semantic organizers. In this context, majority of the studies reviewed by the National Reading Panel (2000) focused on upper
elementary and middle grade students but evidence shows that the use of such organizers as an element of a comprehension program is also helpful for students suffering from learning disabilities (Ae-Hwa et al., 2004) as well as young children showing signs of such difficulties (Williams, 2005). Graphic organizers studies emphasized on their use as a tool to help students comprehend text structure. In fact their use is often coupled by instruction to use ‘signal words’ or transitional expressions for identification; for instance, a framework of compare/contrast or cause/effective (Williams, 2005).

4. **Story Structure**: Studies dedicated to the reading comprehension of children in elementary grades like the ones conducted by Baumann and Bergeron (1993) and Idol and Croll (1987) attempted to identify key information in narrative text by focusing on teaching strategies. These strategies normally involve instructing children to ask themselves questions concerning basic elements of the stories they read; for instance, the characters, setting, characters’ goals, actions taken and the outcome. Some studies reported that children were instructed to note this information on their graphic organizers. These methods enhanced comprehension and recall of stories, particularly for poor readers (National Reading Panel, 2000). In addition, most children internalize the basic form of narratives as they read and listen to stories while struggling learners often develop slow awareness of the story structure (Montague et al., 1990) and are hence more likely to benefit from explicit instruction.

5. **Answering and Generating Questions**: Studies dedicated to strategy instruction concentrated on teaching children strategies for answering questions or producing questions on their own prior to, during and following reading. These questions assist students in engaging with the text, checking their comprehension, and constructing memory representations. According to a literature review of strategy instruction involving question-generation, Rosenshine et al. (1996) stated that students at all skill levels would gain a lot from being instructed these strategies (p.201). Question-generation particularly benefits students suffering from learning disabilities (Vaughn et al., 2000).

6. **Summarizing**: It is the identification of the main idea of a paragraph or the composition of a concise statement that encapsulates the central concepts of the paragraph (orally or in writing). Summarizing is a strategy, performed during or after reading that helps readers to concentrate on the main ideas or other skill concepts, and to ignore less important ideas. It encourages deeper engagement with a text and urges students to reread while constructing a summary (Kamil, 2004). Summarizing, instructed on its own (Armbruster, et al., 1987) or as one of many strategies (Palincsar and Brown, 1984) has been revealed to enhance comprehension and memory of the passage (National Reading Panel, 2000). It is a complex activity involving paraphrasing and reorganizing of text information. Moreover, children, especially weak learners, benefit from explicit instruction when it comes to identifying main ideas, a step involved in summary construction (Weisberg & Balajthy, 1990).

7. **Multiple Strategies**: Some studies concerning strategy instruction focused on a combination of two or more of the above methods (Palincsar & Brown, 1984; Pressley & Wharton; Vaughn & Klingner, 1999). It is evident that proficient reading entails more than the employment of one strategy as significant amount of studies has revealed the effectiveness of combining various strategies. The stress in multiple strategy instruction is on the adaptation of strategies and flexibly using them (Kamil, 2004). Many methods to multiple strategy instruction like reciprocal teaching (Palincsar & Brown, 1984) cover cooperative learning or peer tutoring.

8. **Vocabulary**: Vocabulary knowledge is strongly related to reading comprehension at all grade levels and in all languages all over the globe, with correlations on the order of .6-.7 (Anderson
and Freebody, 1983). In addition, the size of a child’s vocabulary in the early school years predicts his/her reading comprehension in high school (Cunningham and Stanovich, 1997). According to Nagy (2005), several reasons can be attributed to this relationship. First, vocabulary may represent the background knowledge of the reader where word knowledge and world knowledge develop side by side and influence comprehension. Second, the level of the reader’s vocabulary may indicate his/her aptitude for learning and language use. Finally, the word knowledge in its entirety, may allow readers to develop meaning as they read. Thus, there exists a reciprocal relationship between vocabulary and comprehension in way that being a good reader contributes to having a larger vocabulary. This may be explained by the fact that people who read extensively generally possess larger vocabularies and greater general knowledge compared to those who seldom do (Stanovich et al., 1998). Good and extensive readers read more words, receive more practice at using context to determine meanings and as time passes, this adds to their cognitive and linguistic skills (Stanovich, 1986).

New words from text are facilitated by good word reading skills. There is however evidence of the reverse – vocabulary knowledge adds to phonemic awareness (Metsla, 1999) and to word recognition (Dickinson et al., 2003; Nagy et al., 2003; Nation & Snowling, 2004). In this regard, Kamil (2004) stated that understanding text by employing letter sound correspondents to printed material happens if the word being read orally is a known word in the vocabulary of the reader (Neuman, 2001, p.214). Finally, students typically have limited second-language vocabulary particularly when they are in the process of learning English (Calderon et al., 2005) and this is a barrier that negatively impacts their reading comprehension.

9. Fluency: Fluent reading is described as the accurate and automatic word recognition and the suitable employment of prosodic features like stress, pitch and phrasing (Kuhn and Stahl, 2003). The outcome is a smooth, rapid reading of text with the text phrasing and expression that is attributed to oral language. Moreover, a reciprocal relationship exists between fluency and comprehension. In other words, the more fluent the reader is, the more probability that he/she will understand words in the passage and conversely, the better the comprehension of the reader is, the more fluent will be his/her reading (Jenkins et al., 2003; Kuhn & Stahl, 2003).

Despite the fact that automatic word reading does not, on its own, ensure fluency, it is evidently a crucial aspect. The process of developing automaticity in word reading is described in detail by Ehri and Wilce (1983). According to them, a young reader initially requires the use of strategies to recognize words (sounding, forming analogies to known words, etc.). When exposed repeated to the same words, the process of connecting the sound, spelling and the meaning becomes automatic. These connections enable the identification of words ‘by sight’.

On the basis of Chall’s (1996) reading model, when children become familiar with the basic sound-letter correspondences, they need to work on becoming automatic in their word reading in order to transition from learning to read to reading to learn. Similarly, LaBerge and Samuels (1974) postulated that without this automatic processing, children would spend a significant amount of time and attention on decoding, which would confine their cognitive resources meant for comprehension. Furthermore, readers are not the same when it comes to the ease with which they develop word reading automaticity. Children with reading difficulties generally require more word exposures compared to average readers before they can form word reading automaticity (Ehri & Wilce, 1983).

According to the National Reading Panel (2000), there is no concluding evidence of the effectiveness of efforts to encourage independent silent reading through Accelerated Reader and programs like it. In addition, while encourage children to read more is a worthy effort (Stanovich
et al., 1998), it may not be enough. The National Reading Panel revealed that various practices involving oral reading with feedback and guidance led to enhancements in word recognition, fluency and comprehension for both good readers and challenged readers. Meanwhile, metacognition is currently one of the most highlighted words in educational psychology. However, the length and abstract nature of the term makes it an intimidating concept although in actuality, it not as intimidating as it seems. Individuals engage in metacognitive activities in their daily lives. In fact metacognition allows people to be successful learners and it has often been linked to intelligence (Borkowski, Carr & Pressley, 1987; Sternberg, 1984, 1986a, 1986b). Metacognition is described as higher order thinking involving active control over the cognitive processes engaged in learning. Activities including planning the way to approach a learning task, monitoring comprehension, and evaluating progress towards task achievement are all metacognitive in nature. Owing to its role in successful learning, it is crucial to examine metacognitive activity and development in order to identify how students can be taught to apply their cognitive resources effectively with the help of metacognitive control.

While metacognition is often defined as ‘thinking about thinking’, in actuality its definition is not as simple and straightforward. In addition, although metacognition is a term that has been part of the vocabulary of educational psychologists for the last twenty years, and the concept has existed for as long as humans have been able to think about their cognitive experiences, there is still significant debate over its meaning. This ambiguity stems from the fact that there are several terms that are employed to describe the same phenomenon (self-regulation, executive control), or to describe an aspect of it (e.g. meta-memory). More importantly, the above terms are used synonymously in literature. Some distinctions exist between proposed definitions (see Van Zile-Tamsen, 1994, 1996 for details) but all of them stress on the role of executive process in the cognitive processes oversight and regulation.

Metacognition is a term that is related to John Flavell’s (1979) study. According to Flavell (1979, 1987), metacognition is categorized into metacognitive knowledge and metacognitive experiences/regulation. The former is described as the acquired knowledge concerning cognitive process or knowledge that can be utilized to control cognitive process. This is further divided into three namely, knowledge of person variables, task variables and strategy variables.

**Metacognitive Knowledge**

Knowledge of person variables is considered as general knowledge concerning the way human beings learn and process information and knowledge concerning one’s learning processes. For instance, a person may be aware that his study session may be more productive if he worked in the quiet ambiance of the library as opposed to working at home where there is multitude of distractions. On the other hand, knowledge of task variables refer to knowledge concerning the task nature and the processing demands placed upon the individual. For instance, an individual may be aware that it will take him more time to read and comprehend a science text compared to a novel. Finally, knowledge about strategy variables refer to knowledge concerning cognitive as well as metacognitive strategies and the conditional knowledge concerning when and where it is suitable to use these strategies.

**Metacognitive Regulation**

Metacognitive experiences entail the use of either metacognitive strategies or metacognitive regulation (Brown, 1987). Metacognitive strategies refer to sequential process that an individual makes use of to control cognitive activities and to guarantee that a cognitive goal
(understanding a text) has been achieved. These processes assist in regulating and overseeing learning, and they comprise of planning and monitoring cognitive activities and confirming activities outcome.

A case in point, after reading a paragraph in a text, a reader may ask about the concepts within the paragraph; in other words, her goal is to understand the text. This method of self-questioning is a typical metacognitive comprehension monitoring strategy. If the questions are left unanswered or the material discussed is not understood, recourse has to be thought of to meet the cognitive goal. The reader may re-read the paragraph once more with the aim of answering the questions generated. Following the re-reading activity, if the questions are answered, the material is understood. Therefore, metacognitive strategy of self-questioning is employed to make sure that the cognitive goal (comprehension) is achieved.

**Strategies for Online Reading Comprehension**

There are various purposes behind reading – sometimes readers read for pleasure, other times they read for information. The aim behind reading influences the manner of reading. Individuals may skim or read carefully according to why they are reading. While reading, the readers monitor the meaning being conveyed and when the text seems useless to them, they may turn to another text. Readers expect sense from what they are reading and they make use of various strategies like re-thinking, re-reading or reading to clarify ideas, and ensuring comprehension to achieve aims.

To reiterate, when the text does not serve the reader’s purpose, he/she may turn to another text. In this context, if the type of text that the students are encountering in online travels is cluttered with links and media, and if such clutter is not linked to other pages, the act of reading online becomes an act of searching for good material, with such clutter diverting the reader’s attention. Thus, it is important for educators to take a closer look at online reading and help students navigate their comprehension and understand the underlying structure.

This can be explained through an examination of the ways in which two reading environments are distinct from one another. In other words, how is traditional, in-class reading different from online reading? A collaboration of teachers through crowd-sourcing effort on Twitter in August 2010 led to the following results;

In traditional reading, the texts are primarily narrative while in online reading, they are mostly informational. In the former, reading takes place in whole-class or small groups reading activities where readers can be grouped together according to their level. On the other hand, in the latter reading is more individualized, with one student using one computer. In addition, in traditional reading, writers/sources are considered to be authoritative given that their works have been published. On the other hand, in online reading, owing to the easy publishing online, the authority of information depends on evaluation. Moreover, information in traditional reading basically comprises of text with images while information in online reading comprises of hyperlinks, images, audio, and video. As such, information in traditional reading flows sequentially from the first word to the last, whereas in online reading, the flow of information is non-sequential as a word may lead to an entire new piece of reading through a hyperlink. Finally, in traditional reading, reading is focused on one page at a time (limited reader choice), whereas in online reading, reading is interactive with limitless possibilities and decisions.

It is crucial for educators to identify ways to teach young people how to process information with precision and understanding given the online environment, where they experience fluid
information. A few ideas ranging from a simple tool available online to a whole unit of instruction may be used to achieve such a feat.

One of the easiest ways for a teacher to address young people’s reading online is to cut out the clutter or eliminate clutter on the web pages. An online tool known as ‘readability’ may help in doing this. The tool is free and simple to use. For its installation, the ‘readability’ button is dragged up to the browser’s tool bar. When the students are browsing the website where the reading content is in, they can click on the button to convert the page into a simple black-text-on-white-background format. The settings can also be adjusted in terms of text size, narrow margins, and color changes. Readability really assists in transforming the page and its invaluable use and benefit can be discussed in class. This awareness of the construction of a web page is valuable knowledge for readers who read online.

**Online Reading**

*Print Texts vs. Online Texts*

The increasing use of Internet for learning highlights the question of what is the reading process in the online environment, and do the readers reading online make use of the same reading strategies that they use when reading printed materials? These questions are related to what online reading strategies should teach. According to researchers, the characteristics of print texts are distinct from those of online texts. While print texts are linear, bounded, static, unchanging, hierarchical, sequential and have a fixed format and limited information (Henry, 2005; Kymes, 2005; Slatin, 1991; Sutherland-Smith, 2002), online texts are unbounded, multilinear, open-ended, discontinuous, and unconstrained in the amount of information (Burbules and Callister, 1996; Henry, 2005; Kymes, 2005; Slatin, 1991; and Sutherland-Smith, 2002).

**Online Reading Process**

The cognitive process of reading online text has been investigated by some studies (Chun and Plass, 1997; Jacobson and Spiro, 1995; Konishi, 2003; Lomicka, 1998; Niederhauser et al., 2000; Oostendorp and Mul, 1996; Ridder, 2000; Rouet et al., 1996). Online texts characteristics as provided in the previous section are evident in online reading process. For instance, reading in hypertext is a discontinuous or non-linear process rather than a sequential process attributed to the conventional text (Slatin, 1991), where the seamless movement from one text to the next is possible (Burbules and Callister, 1996).

The differences in both texts led Sutherland-Smith (2002) to reveal that different strategies apply when reading print text compared to when reading digital text. Reading web-based text allows non-linear strategies of thinking, non-hierarchical strategies, non-sequential strategies, and visual literacy skills to comprehend multimedia elements. It is also interactive as the reader can add, change, or move text.

Similarly, Henry (2005) stated that reading on the Internet is basically different from reading a traditional printed text and thus searching the Internet calls for distinct literacy skills and higher-order thinking skills. She stressed on the role of higher order thinking skills as they are crucial for the successful Internet use. In the context of online reading, reading strategy is an important variable that influences the reading process.
Conclusion

In this vein, two decades have passed, and we have seen nothing but the development of methods in the area of reading, which hails as a cornerstone of education at any given level. In the past, developments in reading would have come in the form of printed materials in black and white and in colours with various lay-outs, but the growth of the Internet and communications technology (ICT) has marked a shift in how reading materials are presented and more importantly, how they are accessed, or if they do carry advantages or disadvantages. Reading increasingly has little to do with books or paper, and not all have been supportive of the growth of screen reading (reading digital texts from computer screens). It has been noted that opponents have argued that ‘electronic text ultimately diminishes both the personal growth of individuals and the stability of our society.’ Despite those and other reservations, screen reading has become so integrated into society and education that students accustomed to reading from a computer screen have trouble engaging with traditional paper books and the assumption that electronic texts will increasingly dominate reading seems a safe one.

The previous briefing of reading strategies showed the process gone through different strategies from very tradition style of reading. Proceeding efforts from researcher make the process easier to gain information or more data by applying the online strategies or online learning. For better and more flexible life nowadays mobile taking place in terms of learning and as a part of this filed reading skill should be considered.

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