Models and the process of reading

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Abstract
Linguists have continued to examine different aspects of reading over the years and suggest ideas on how it is or should be done and the factors involved if it is to be done effectively. Reading is a complex activity relating to thought and cognition in a complex way, involving "the use of complex skills if what is read is to be meaningful to the reader" (Jackson and Stockwell, 2011: 146). Part of what linguists have tried to suggest is the role that language plays in reading. This paper takes a look at what some experts have said about the relationship between language and reading, reading as a psycholinguistic process, sociolinguistic factors in the reading process and the top-down, bottom-up and interactive models of the reading process. Models provide the patterns that reading should take and process describes what happens when a reader is interacting with a text in order to derive meaning. The paper concludes that the interactive model is preferred to the other two because it reveals more appropriately what happens or should happen when a reader reads effectively.

1.0 Introduction

Our society has become more and more dependent on the ability to read whether in the first (Ll) or second language (L2). So it has become important to read effectively regardless of the purpose for which one engages in the activity. Although reading has always been engaged in, its origin has remained problematic and unresolved. As Bahago in Mohammed (2000:85) states:

> Researchers have not been able to point out precisely the origin of reading. In modern times research on reading relating to literacy has been carried on in a concentrated fashion ... and the findings tend to remain unintergrated, sometimes contradictory and in most cases unrelated to linguistic approach.

However, scholars have continued to examine the reading process with particular emphasis on certain problems associated with it. Some experts in the field have written about language as it relates to reading postulating ideas on whether the problem with reading is the lack of the knowledge of the language or with the reading activity itself.

Alderson and Urquhart (eds) (1989:65) opine that many teachers insist that students are unable to read well in English because they cannot read well in their native languages, suggesting that if the students can read well in their first language, the probability of their reading well in English is high. According to them this means that language itself is not necessarily a barrier to effective reading but proficiency in it. Jolly (1978:48) is of the same opinion and goes further to emphasise that a person's ability to read well in a foreign language is crucially dependent on his ability to read in his first language rather than on his level of English. He asserts that skills are transferred from the first language (L1) into the second language (L2) and that a person who is unable to read well in a foreign language is unable to do so either because he has failed to transfer the skills into the new language or he does not possess such skills at all.

Coady (1979:43) shares Jolly's (1978:48) view and insists that reading in a foreign language is a reading problem not a language problem. Goodman (1973:56) who put forward a 'reading universals' hypothesis supports Coady, a hypothesis reinforced by the work of linguists like Pat Rigg (1977:52) whose miscues analyses of foreign learners from divergent backgrounds showed considerable similarities in reading miscues. Clarke (1979:39) points out that if the reading process is similar in all languages, the reading ability should transfer across languages and good readers should always be expected to maintain the

advantage they have over poor readers in L2. The implication is that the transfer of strategies or ability across languages does not take place and that competence in a foreign language is a prerequisite for any such occurrence of transfer. Yorio (1971: 151) claims that reading problems of foreign learners are mainly from an imperfect knowledge of the language and native language interference. Lack of adequate knowledge of the target language and native language interference, he says, make reading much more complex.

Although these views are mainly speculations without much empirical evidence backing them, they raise very important points. Reading is reading; once a person can read in a particular language it will be easier to read in another language because the basic skills needed for reading are generally the same. An athlete who runs 100 metres needs only to improve on his skills in order to run 400 metres. The probability that this is true of language is high. Similarly, the possibility of a person who can read well in L1 doing better at reading in L2 than a person who cannot read in L1 is high depending on the individuals involved and the complexity of the L2. But what seems to happen is that somewhere along the line both level up with hardly any advantage over the other person.

Cowan and Sarrnad (1976:34) studied bilingual English Farsi children who could not read well in both L1 and L2. Their study nullifies the idea of complete transfer of reading ability across languages. They state, in what they call 'parallel processing of reading', that the strategies readers employ while processing texts must to some extent be language-specific. Therefore, different strategies will be required for processing texts written in languages that have markedly different structures. The consequence of the parallel processing theory Alderson and Urquhart (eds) (1989:69) observe is that the development of foreign language strategies will be affected by knowledge of the foreign language. The less of the foreign language a person knows, the more likely he is to read in his first language. However, Ulijn (1978:44) contradicts Cowan and Sarmad's (1976:34) theory by evidence produced through his study that suggests that contrasting structures (between foreign language and first language) are much less problematic for the foreign language reader as

Cowan's theory predicts. Ulijn did not find that comprehension difficulties or slower reading was caused by linguistic contrast. Ulijn and Kempen (1976:51) conclude:

> Under normal conditions reading comprehension is little dependent on a syntactic analysis of the text's sentences. It follows that second language reading comprehension is possible without mastery of contrasting parts of the second language's syntax. Usually, the reader's conceptual knowledge will compensate for the lack of knowledge about linguistic contrasts between **L1** and L2.

Conceptual knowledge, Alderson and Urquhart (eds) (1989:65) say, seems to refer to both the reader's knowledge of the text's subject area and knowledge of the meaning of words. Consequently, according to Ulijn (1978) and Ulijn and Kempen (1976), lack of conceptual knowledge and not insufficient knowledge of grammar is responsible for poor foreign language comprehension. Alderson and Urquhart (eds) (1989:67) argue that the assumption that foreign language readers who are incompetent in the language will find it difficult to make use of contextual constraints is consistent with the hypothesis that foreign language ability will be affected by competence or lack of it in the first language. Cziko (1978:53) holds that contextual constraints, syntactic, semantic, discourse are crucial to the reading process and the extent to which foreign language readers are able to utilise these constraints determines whether they are effective or adequate readers or not.

Cummins (1979:40) suggests the idea of a 'threshold of linguistic competence' giving empirical evidence to Clarke's (1979:42) hypothesis. Both of them conclude that foreign language readers will be unable to read as well in the foreign language as in their first language until they have reached a certain level of proficiency in the particular foreign language. Language is the vehicle of communication so adequate knowledge of the language will enhance comprehension and vice versa. A certain level of linguistic competence must be reached for reading to be a fruitful exercise in any language L1 or L2.

2.0 The reader and the text

Although there seems to be a little controversy over whether reading is a product or process, the most current general approach is that it is a process in which the reader and the text interact. As rightly stated by Harmer (1984:43), the student's task is to grasp the message of a text by interacting with it. Similarly, Tinuoye in A1iyu (et al) (eds)(1991:48) says "reading should be seen as enabling students to interact with the text so as to negotiate meaning" Wallace (1992:41) reports that researchers in both Ll and L2 reading have recently argued against the fact that texts are self- contained objects and the reader's job being to discover meaning. These researchers have suggested that there is a dynamic relationship between the text and the reader. Texts, they argue, do not 'contain' meaning but 'have potential for' meaning. This potential is realised as the reader and the text interact thereby suggesting that meaning is created while reading as the reader draws on both his background knowledge, what he already knows about the language and the input given by the written text.

2.1 Reading as a psycholinguistic process

Since reading is supposed to be more of an interaction between the text and the reader, it is considered a psycholinguistic process in which language and thought interact: the writer "encodes thought" as language and the reader decodes language as thought"Carrell et al (1990:28). (For this reason, it was necessary to look at the role language plays in the reading process in the introductory section of this paper.) This suggests that the mind is actively involved in both the encoding of the message in a text and the decoding of that message. Furthermore, the fact that a person's attitude to a text or its writer can influence the meaning he derives from a text enhances the view that reading is a psychological process. If one has a positive attitude towards a writer or a text, he is likely to make greater effort to decode the message even where the text is a difficult one. Smith (1971:24) is reported by Wallace (1992:43) as being one of the first researchers to describe reading as a

process by mapping the reader's path through a text rather than judging comprehension on the basis of the outcomes of reading. Smith (1971:25) describes reading as a 'reduction of uncertainty'. As a reader goes through a text his choices of what to select are often largely constrained by features which are both internal and external to the text.

2.2 Sociolinguistic factors in the reading process

There are socio-linguistic factors related to reading Wallace (1992:48). The way language is used (written language in this case) is influenced by the immediate communicative situation between the writer and the reader and the broader socio-cultural and institutional context because social factors, not just psychological, cognitive or affective factors, influence our interpretation of texts. As Kress (1985:36) says:

> …so although from the individual point of view his/her reading is just my 'personal opinion', that personal opinion is socially constructed.

Fish (1980:33) argues in a similar way when he says readers are members of "interpretative communities". "The social milieu in which we were brought up and the social group to which we belong " (Jackson and Stockwell, 2011:146) influence our language use, reading inclusive.
The reading process describes what is assumed to happen when a reader engages a text in order to derive meaning from it.Factors involved in this exercise are mainly the reader's mind and his social background. Our thoughts and responses are to a large extent shaped by or filtered through our socio-cultural background. A model of the reading process however provides an archetype of how reading is effectively carried out. In every reading exercise a personnot only actualizes a model consciously or otherwise, but is actively involved with the writer as he wades through the text in an attempt to understand the writer's thoughts or ideas.

3.0 Models of the reading process

Davies (1995:57) uses the word 'model' to refer to

> …a formalised, usually visually represented theory of what goes on in the eye and the mind when readers are comprehending (or miscomprehending) a text.

Several models of the reading process have emerged as linguists made attempts to figure out what goes on in the visual system and the brain when one engages in reading. Two contrasting views are particularly outstanding Gough's (1972:39) bottom-up view and Goodman's (1969, 1970, 1973, 1988) top- down view because according to Davis (1995:62) they have been very influential.

3.1 Bottom-up

Nunan (1991:46) opines that

> the central notion behind the bottom-up approach is that reading is basically a matter of decoding a series of written symbols into aural equivalents.

The reader processes each letter as it is encountered. These letters/graphemes are matched with the phoneme of the language that it is assumed the reader already knows. These phonemes arethen blended together to form words. The derivation of meaning is the end of the process in which language is translated from one form of symbolic representation to another. However, the criticisms raised against this view are:

(a) it is not a logical explanation of what happens when we read;
(b) it is possible to decode without meaning;
(c). the correspondences of spelling-to-sound are complex and unpredictable;
(d) the serial processing of every letter in a text would slow down reading up to a point where it would be difficult to retain meaning.

Evidence for the bottom-up view of the reading process was drawn from Gough's (1972:41) laboratory studies of adult readers involved in letter and word recognition tasks. Using these studies as a basis, he characterizes reading as a letter-by-letter progression through a text: first, letters are identified; second, the sound of the letters until words, third, their syntactic features and then meanings are finally assessed. Gough (1972:43) objects to guessing in learning to read, a point emphasised by the top-down model. Whatever the criticism of this model might be, it provides the explanation of how most people learn to read whether in L1 or L2. They first learn to recognize the letters and their sounds and then build words, phrases and sentences. But once a person has learnt to read it does not really provide the best pattern for reading at any level.

3.2 Top-down

The top-down view has been developed within a psycholinguistic framework, especially the theory of Smith (1971:34) and Goodman (1990:57), which emphasises higher order of sources of information much more than the letter sound correspondence in reading. Goodman's (1990:58) approach represents the reading process as a series of four primary cycles: optical, perceptual, syntactic and meaning, with meaning playing the controlling role. He says,

> ... the reader's focus, if they are to be productive is on meaning. soeach cycle melts into the next and the reader leaps towards meaning.

Smith (1971:38) expresses a similar view in the following words,

> …anticipation and prediction are the driving forces and the task of processing visual information is reduced merely to the recognition of a graphic display as written language.

Gough's (1972:52) model presents the reader as one who plods through a text, contrasting sharply with Goodman's (1990:64) view of a reader as one who leaps through a text to arrive at meaning. Goodman's (1990:66) emphasis on prediction at the expense of

attention to detail has caused it to be rejected in some educational contexts in favour of more simplistic models such as Gough's (1972:54). Carell (et al (1990: 41) observe that the application of top-down approach to L2 learning

> … has resulted in many useful insights, but lack of attention to decoding problems has… produced a somewhat distorted picture of the true range of problems second language learners face.

While the bottom-up model emphasizes that reading is propelled by a process of mastering sounds, letters, words etc. that results in meaning, the top-down model emphasizes that meaning is the primary objective of reading, therefore, the recognition of each word is not important for the overall meaning of a text. People read because they want to get some meaning from a text. Adopting the bottom up model would be too cumbersome for both extensive and intensive reading, in my opinion. The top-down model describes what should happen when adults read- from the whole to the details or parts- if they are to be termed effective extensive and intensive readers.

3.3 Interactive

The interactive process is an alternative to the bottom-up and top- down models and currently has the greatest influence and strengthens approaches to reading in both L1 and L2. Rumelhart's model (1977:48) and McClelland (1986:37) represent the first of such models. Rumelhart's, the most outstanding proponent of the model, aim was to propose a parallel processing approach. This process involves the simultaneous processing of information from more than one source. Empirical evidence was derived from laboratory research on fluent skilled readers that shows interaction between sources of information. According to Rumelhart 's (1977:49), model reading is "at once a perceptual and cognitive

process" in which the reader is seen to be drawing simultaneously, but selectively on a range of information sources-- visual, orthographic, lexical, semantic, syntactic and schematic. The improved model pays more attention to the part semantics play in processing, suggesting a 'schema-theoretic' account of the process of comprehension. The schema theory assumes that a reader can only interpret visual information and words by relating them to his previous knowledge and experience. The focus of the interactive process is on higher level of information processing though lower level processing is not ignored. It attempts to combine useful insights of the top-down and bottom –up models. As a matter of fact, it recognizes the fact that both interact simultaneously when reading is being done. For me, this is a more acceptable archetype of the reading process.

3.4 Affective factors

Davies (1995:59) is explicit in her prediction about affective factors in the reading process. The process takes real world context of reading into account in ways that others do not. These affective factors are attitude, motivation, affect (moods. sentiments, emotions) and physical feelings. Attitude represents values, beliefs and interests. It also includes the reader's attitude to such textual features as content, format, visuals, form (register, style, dialect) and general attitudes to reading such as like and dislike. Motivation involves such ideas as belongingness, esteem, self-actualisation, the desire to know and understand and aesthetic need. Affect has to do with emotions and others as mentioned above. Physical feelings coming from external sources or physical feelings related to the meaning of the text sometimes intrude into the reader's consciousness.

4.0 Conclusion

Reading is mainly a psycholinguistic process in which the reader attempts to decode the writer’s message by adopting either the top-down,

bottom-up or interactive model. Of the three models, the interactive model which combines insights from the other two is a more appropriate model to consciously adopt as adult or young learners, and especially for pedagogic purposes, because efforts at getting to the meaning of a text would be less cumbersome thus making reading more of a delight than a burden. Moreover, the interactive model seems to be the most attractive as it takes lower- level as well as higher level sources into account and also adds a new dimension, the schematic theory, making Rumelhart's model more comprehensive. The role that affective factors play in the reading process, no matter what view of the reading process is adopted, is significant in any consideration of reading.

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