Phenomenology of Reading in Printed and Electronic Formats: The Lived Experiences of Iranian Students

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Abstract

Purpose: This article demonstrates how students experience reading in printed and electronic formats and what factors are involved in selecting reading materials.

methodology: This study was performed by quality approach and interpreted with phenomenological method. Participants were Master students (17 students) of Kharazmi University in Tehran, Iran. In order to gather information, individual deep and un-structural interview was implemented and this process continued until data saturation. Data analysis was performed using grounded theory followed by triangulation method for validating of the findings.

Findings: Student who experienced printed context reading were grouped into 27 categories, where causes, fields and format selection interventions for reading were extracted based on participated analysis experience.

Conclusion: This analysis showed that causal factors (instrumental and value beliefs), field conditions (cognition and perception, access and comfort) and intervening condition (feeling) have basic roles in selecting reading formats. It was realized that participants followed approaches based on subject and context value for selecting format and the results of these approaches were pleasure and behavior which will create for readers.

Keywords: Reading, Phenomenology, Lived experience, Printed material, Electronic material, Iranian students

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Introduction

In parallel with the development of new information technologies, practices, styles and behaviors of texts, readers have changed in interaction with these technologies. During a few centuries ago, printed book has fixed its position among professional readers as the most useful media. However, it seems that this position has changed now due to the emergence of technology and eagerness and tendency of readers to read digital texts has increased. This issue and debates about its benefits and deficiencies in recent years has created an opportunity to study in the fields of linguistics, cognitive science, computer and information science and communication. Most researchers in many areas believe that the process of reading is a two-dimensional combination of language–cognitive skills (Mousinho and Correa, 2009). In the language skills, the ability to recognize written representations of words is important. To understand the mechanism of language processing, language side, memory capacity and their interconnectedness to short-term memory and its task are considered (McEneaney, 1997). In the cognitive dimension, extracting meaning from spoken and written representations happens. Therefore, for reading, language skills and cognitive are both the elements that are necessary. Although these two elements are individually necessary to find out and understand the content of the text, it is not sufficient due to weaknesses in any of the enumerated skills, which leads to the lack of comprehension of the text. Success in reading depends not only on these two skills but also it requires learning other skills (Wren, 2000). Thus, by considering the skill set, reading can be considered as a complex, multi-dimensional and multi-stage process that its success requires comprehensive nobility, especially in the lingual -cognitive aspect. What is important in this process is the effect of format (printed or electronic) on the strength and weaknesses of these two dimensions.

For example, we can refer to the studies that address the impacts of this technology change (online, offline and hypertext) on the reading

process, and the change the cognitive processes of reading. Keat and Ismail (2011) argue that the process of reading in electronic and online texts may come up with difficulty in reading the text, because of a simultaneous processing. Simultaneous processing is a cognitive process that integrates multiple various stimuli in a total. In this process, a person must have an ability to make the connection among all of the concepts. In this process, the individual must have the ability to comprehend all concepts. The fundamental point here is that the reader must be able to see the separate elements in an internal relation with each other, and obtain a general concept out of it, but inattention and distraction of readers can cause difficulty in reading or mis-understanding of the content.

Obviously, the ability to make a connection among the concepts varies according to the type of text, features and capabilities of different people. To check this, choosing a homogeneous population is necessary to achieve valid results, a population that has the experience of reading both printed and electronic texts and has the relatively similar rate of environmental, cultural, and educational qualifications.

In Iran, considering the interest of young adults, especially students who spend a significant part of their study time on reading both print and electronic texts, examining the experience of reading printed and electronic materials would help to apprehend the phenomenon of reading and to analyze the processes involved in the phenomenon and the extent of their involvement in reading based on book format. Hence, the present study problem statement is the phenomenology of lived experience of students in reading both printed and electronic format in order to apprehend how reading happens in two format and to identify causes and grounds for choosing a book format for reading.

Literature Review

A review of the process of reading in printed and electronic texts and their comparison has attracted the attention of researchers (since from the 1990s). The first research studies paid attention to nature, advantages and disadvantages of reading in hypertext environment (Tryphonopoulos, 2015). Researches of the last two decades have focused on reading differences in printed and various electronic formats, and have examined the effect of the nature and features of a format on the reading and understanding of the content. Background of previous researches in the field can be categorized in two aspects of cognitive and linguistic dimensions and considering the type of formats in the reading process.

Cognitive approach to reading based on format

Most researches in this category focus on the relationship between reading skills and cognitive processes. Some of them (For example Keat and Ismail, 2011) examined the role of cognitive processes in reading performance. Others (such as Tryphonopoulos, 2015) focused on examining the relationship existed among strategies of readers in reading and comprehending the content, they showed that the strategies are affected by hypertext features. Brain features as the main source of cognition and its changes in reading hypertext have been studied in another group of studies such as comprehension of texts which studied focused readers and showed that this strategy is influenced by the characteristics of hypertext. Features of the brain as the main source of knowledge and changes in reading hypertext have been considered in a number of studies of this type (Baddeley, 1986; Chaun and Mayer, 2003; DeStefano and LeFevre, 2007; and Fitzsimmons *et al*., 2013). The results of these studies showed that when the brain is involved in performing two tasks at the same time, more cognitive resources are overlapped. The effect of this overlap and its role in relation to the cognitive capacity of individuals and complicated work, such as reading of the subject has been proposed in some other researches of this

category (Daneman and Merikle, 1996; Lee and Turley, 2003; Lin, 2003 and 2004; and DeStefano and LeFevre, 2007). The findings of the researchers in this field revealed that people have significant differences in storage and processing verbal information. The difference is associated with verbal working memory of persons. People with higher memory capacity of the sector are more skillful readers and demonstrate more ability in comprehending content. The role of form and format of comprehension were examined in some other researches (Ridder, 2002; Aksan and Kisac, 2009; and Fitzsimmons *et al*., 2013). Results of these studies showed that type of form and their apparent features are influential on the quality of the comprehension of people. This dimension has attracted the attention of especially language learning researchers. The studies in this area examine the impact of new technologies on learning language in attempts to find out the best ways to teach language to learners. The question whether electronic training or paper training is better is the main concern of researchers to address the issue of "reading web pages" (Fitzsimmons *et al*., 2013).

Examining reading from language point of view

The first studies in this domain focused on the issue of reading in various printand non-print formats through the lingual angle, and pay attention just to the role of language in comprehending the content of texts (McEneaney, 1997). Continuing these studies and their maturation has rooted from other disciplines particularly learning and psychology. Some of the researches such as Aksan and Kisac (2009), Verezub and Wang (2008), and Zandi et al., (2015) examined the association of these attributes with some factors related to reading such as speed, time, comprehension, and so on. Some others such as Liu (2007) and Abdi (2013) studied the effect of these features on learning. A number of studies in this field have focused on the relationship between text content and prior knowledge of the reader. Studies of Potelle and Rouet (2003) and Amadieu et al. (2010) are examples of studies that show that type of format and appearance features are effective in comprehension.

Review of the researchbackground reveals that despite the widespread studies in this area throughout the world, little attention has been given to this area in our country. A few research such as that of Danaie Moghadam, et al. (2013) and Zandi et al. (2015) have been conducted in Iran. in addition, a few studies have examined phenomenological dimensions of reading based on the type of format. Also not much attention has been paid to lived experiences of readers ranging from traditional to new formats. Hence, this study has addressed this topic to delve into causes, issues and interventions of format selection by readers with the intention to cover some of the shortcomings in this area.

Methodology

This study was conducted with a qualitative approach and phenomenological style. Phenomenology is accompanied with philosophy and is the way in which the nature of the phenomena is explored: the exploration of what changes things to what they are without which the thing could not be what it is now (Mohammadpour, 2012). In this way, the most important purpose is acquiring and analyzing data about the lived of experience the participants. This method is used in the case of phenomena that by their nature are not measurable. In a phenomenological study, it is needed to study subjects who have had experience with the studied phenomenon (Bazargan, 2014). For this purpose, criteria-based or targeted sampling was used to select the appropriate participants (Mohammadpour, 2012). For the population of the present study, Undergraduates of the Kharazmi University of Iran were selected As the target populationof which students interested in reading and participation in the study were selected. After selecting these individuals, they were informed about the present study . The required information was collected through unstructured interviews. In these interviews, participants shared their experiences of reading printed and electronic books. With the saturation of information, interviewes were completed. Saturation is achieved

when the researcher feels that new data merely repeats the previous results and does not create new categories (Strauss and Corbin, 2008). The number of participants in this study , thus, reached 17 people. Audio recordings of the interviews were done with their consent while they were assured that their views would remain confidential. Each interview took between 20 to 30 minutes..

To analyze data, the obtained text data was input into the MaxQDA v.12.1.2. Interviews analysis was done by a three-stage approach of grounded theory (Mohammadpour, 2009). In the initial encryption, 167 codes were obtained. At the axial coding, 27 axes were extracted, that after comparison and categorization, they were grouped into 8 axes (selective) in order to help formation of the grounded theory in line with answering the research question.

Analyse, findings and discussion

As mentioned above, 167 codes were extracted from the interviews. These codes are shown in Table 1. Extracted codes were categorized based on content into 27 axes; 16 axes for print books (including self-confidence, curiosity, identification, the sense of communicating with the author, ownership, value of printed book as a tangible object, induction of belief in increasing the knowledge and tools to promote the study, enjoyment of confrontation with reality rather than virtuality, the joy of touching the reality and proximity to the persistence of memory, improving concentration, better and a deeper understanding of text, physical interaction with books, promoting reading and the impact on the ways of reading) and 11 axes for electronic books (including the ownership, bounding to tools, sense of being unreal, authorized unpleasant touch, tedious and boredom, lack of charm and tame of the book, help to understand the text through a combination of sound and image, reducing the psychological burden of reading long texts, increasing willing to share views and changing ways of reading).

After selective coding, 8 axes were extracted: 5 axes for printed books (including feeling, belief, fun, perception and cognition, and behavior) and 3-axes related to e-books (including sensation, perception, cognition, and behavior).

Table 1: Results of the analysis and coding experience of students about printed and electronic books

	The main categories (selective coding)	Sub-categories (Axial coding)
Printed book	Feeling	Self Confidence
		curiosity
		Identification
		Sense to communication with the author
		Ownership
	Belief	Value of printed book as a tangible object
		Creation Belief in increasing knowledge
		A tool to promote reading
	Pleasure	Pleasure to deal with reality rather than virtuality
		Enjoying a touch of reality and closeness to it
	Perception and Cognition	The persistence of memory
		Increasing focus
		A better and a deeper understanding of the text
	Behavior	Physical interaction with the book
		Promoting reading
		Impact on ways of reading
e-book	Feeling	Lack of ownership
		Dependence on tools
		No real feeling
		Touching unpleasant virtuality
		Boredom and impatience
		Lack of charm and tame of the book
	Perception and Cognition	Help to understand the text through a combination of sound and image
		Reduction of the psychological burden resulted from reading long texts
	Behavior	Increased willing to share views
		Changing ways of reading

Lived experience of reading printed and electronic books

As mentioned earlier, the main categories of experiences of participants in research are the results of analysis of the conducted interviews with these people. The categories and subcategories are presented below. We have tried to quote what people exactly mentioned in connection with the issue in connection.

Feeling

Readers of printed books experience a variety of feelings when dealing with work and study: a sense of confidence, stimulation of curiosity, identification, the sense of communicating with the author and ownership. The feelings associate readers with themselves in different layers: in the innermost layer, the person is present. The feeling that the person has for "obtaining confidence" when reading shows "self" is a major issue in feelings arising from the printed book:

> "When I read printed books, generally when I take the printed book in hand, first I feel confident".

In this growth process of inner trust to self-revives the feeling of "curiosity and adventure" for the reader:

> "When reading paperback book, if I am involved with it, I think more to see what happens at the end, when I page the book, I like to know what the author will say next".

It seems that in the process of reading, in addition to development of sense of confidence in the reader, the dare to release "mind" is formed in the reader as well, and s/he would like to let it free, and go ahead with the book and make "twin concept":

> "When I read a printed book, I feel that I am in the situation".

In this way, it allows the author to complete this company with his/her voice and ease discovery of this wonderland:

> "It seems that printed book has a soul, as if the author himself is there and calls for you. E-books do not feel that way to me".

By holding a book, reader sees himself as the owner of the book, without fear of losing book:

> "I feel that you always have the printed book, it is something that you will always own".

It seems that this sense of ownership is ensuring the survival of other lived emotions in the reader and eliminates the probability of their temporality. The participants had different feelings about e-books, no ownership, being bownded to tools, the feeling of not being real, unpleasant allowed touch, tedious and boredom, lack of charm and tame of the book were the most important ones. The students' views show the reader wishes to have the property of book without intermediaries. What makes the book away from the reader is "dependency on tools":

> "For reading e-books, PC, laptop or mobile must be on. I feel that physical freedom is easier with printed book".

What participants raised about their feelings about e-books indicates that this format belongs to them is in the virtual world rather than in "reality":

> "I feel that it is not a living thing, it is virtual. I cannot communicate with it".

It seems that "touching this virtual" is dull and unpleasant to them:

> "It seems like it does not have spirit, and you merely read it. I do not have an unpleasant feeling about it…e-book is same as printed book, but I cannot have the same feeling to touching screen as I have when touching a paper. The pleasant feeling that printed book has, virtual book does not have".

Most participants emphasized on the "boredom and impatience" when reading e-books and "being less attractive" than the printed book. They stated that generally, their first choice is printed book. But for some texts, such as books for reading once, general information and generally content requiring a superficial understanding, they prefer e-books:

> "I think e-book is good for general information, for example story books, but it is not good for fiction and specialized science books"

And for long texts they said:

> "If the book is longer, meaning that the number of pages is more, I feel more comfortable with printed books, and my eyes do not get tired".

Students also choose printed books for scientific and technical texts that are challenging to understand or for the books that are written in non-Persian:

> "When I want to read an English novel, I prefer it to be printed, so that I can underline the words I do not know the meaning, of and look up in dictionary. I do not like to read something in PDF when it is not in Persian".

Belief

The value of printed book and considering it as a means to promote reading is one of the beliefs of these individuals interacting with printed books. Analyzing the experience of participants in the research about value of printed book has two aspects; the first aspect is related to the "value of book in the form of a tangible object":

> "If book is electronic, I ignore it, but if it is printed, I try to pay more attention, because I give more value to printed book rather than e-book".

It seems that for some of these people, outer nature of object is more important than its inner nature and its content, the outer nature adds value to it. The outer nature makes an induction for "reader" as the second aspect of this belief, "instilling belief in enhancing knowledge":

> "When I have a printed book in my hand, I think my knowledge is added" …"when I start reading a printed book, it is always a good thing about it that even if it is thick, it gives me a mental state that my knowledge is increasing. It means that it

psychologically tells people that you are learning and comprehending".

Using printed book as a means of developing culture of reading shows that reader is not ignorant of development of this belief in community, and considers it as one of the features of this format. It is a feature that seems impossible in the view of these people due to multitasking feature of electronic means:

> "It seems to me when I read a printed book, a couple of children would probably watch you. They understand that you are reading a book, and it is culturing. However, when you get the phone, the person does not know what you are doing on the phone. It is very nice that all people keep a printed book in their hands and keep reading it".

Pleasure
The pleasure that comes with the experience of reading a printed book for these people can be placed in two categories: "the pleasure of dealing with reality instead of virtual" and "the joy of touching reality and closeness to it". Analysis of students' ideas shows that reading printed book is enjoying for most of the participants. These views suggest that the root of the fun is at the "touch of reality":

> "When I come to college, I may not be able to carry the printed book with me, so I read the e-book. However, the experience of reading printed book is more pleasant than the e-book".

The significant point in the statements is that they see themselves to be involved with virtual world more than the real world, however they still prefer to face the reality rather than the virtuality :

> "When I get a printed book, what I can feel is the sense of being real. We spend most of our time in virtual world, not a little of our time. We must keep our distance from this world. Anyway, when I read a printed book, I feel great ".

The result of this encounter with reality and a willingness to read the printed book is a pleasure that a substantial part of it is due to the

physical characteristics face and the nature of the book itself. The most important of these features is "the touch of paper and going through pages it". Although simple, this feature is considered as an important reason for these people who choose printed book:

> "The feeling when you are going through pages of a book, I cannot really describe the feeling, but it is so good and cheesy".
> ... "the feeling I have when I'm reading a book, and has been with me since my childhood is something that people all experience even if reading it, the tablet, laptop or whatever, or when reading newspaper".

Perception and Cognition

A part of the analysis of participants' experiences was related to perception and cognition and the most important codes for printed books in this section are lasting in memory, a better comprehention, and a deeper understanding of text. The emphasis of participants on "lasting in memory" about printed books shows that some readers make an association between shape and physical characteristics of this format with memory enhancement. This issue happens for these people at least from two aspects:

1- Ownership and possession of a book because of ease of remembering its content:

> "For instance, when you have a library, you see its books, touch them, and you remember the cover design, and its pages. In addition, you remember the content, If there is a picture in the book. However, in e-books, there are just written texts, so you just browse and forget them".

 2- Increased focus when reading book:

> "When I'm going through pages of a book, I am usually very much focused, and can concentrate on it very much".

"A deep comprehention and a better understanding of the text": Apparently these students make a more vivid connection with the book,

when reading a printed book, thereby, they comprehend the depth of content better:

> "Suppose there are both printed and electronic formats of a book, but I understand the printed one better, as if its texts are closer to me… I try to think about what I read and involve my mind with it. I feel that if I do not see the content on paper, and do not touch it, I do not get its meaning".

A review of these people's view shows that deep comprehension of text does not happen just about printed books, but features of e-books and their ability to be combined with image, sound and the fact that its result is expansion of involved senses help some participants to understand better:

> "When an e-book comes in a multimedia format, it helps me to understand better. Text, videos, photos and music can engage sense of sight along with sense of hearing".

In addition to this experience, some participants emphasized on reduction of the psychological burden of reading a long text, especially in the reading curriculum:

> "Sometimes I borrow a book from library, and I see it is thick, but when I read its PDF, a number of pages seem fewer to me, and I have a good feeling, and I tell myself that I should finish it sooner. That is why I sometimes prefer reading e-books".

Behavior

A part of participants' experience of reading printed books can be reflected in their behavior. Analysis of such experiences shows that most of them got used to made reading printed books. This has led them to prefer printed books to electronic format; the most prominent of these behaviors are reflected in physical interaction with books, promoting reading and changing ways of reading. Another point is that some behaviors of these people are formed during interaction with traditional form of books. Holding and touching the printed book, easy carriage, the capacity of annotating and marking and easy reading are some of features emphasized by participants:

"I am comfortable with a printed book. I like to carry it wherever I go". …"with a printed book, I may read 200 pages in a day, and move forward very easily".

Analysis of experiences of these people showed many of them did not notice passage of time when reading a printed book. Interestingly, according to the statements of the persons, printed format is free of any physical damage like those caused by improper or excessive use of new technologies for the readers of e-texts and by creating a pleasant sense of reading eliminates boredom from reading, and even drown the person in the world of book:

"Time passes very quickly. I feel time passed very soon".

Interestingly enough, some people believed that the habit of reading can be promoted by reading the printed book in public places.:

"It is important to promote a culture of reading in our country. I do not say that I always do so, but I try to think that in such places, a child is sitting next me is to learn something from me".

Most of the students are more likely to continue to read because of reading printed books and they do it with fewer interruptions:

"As I start to read, it depends on what kind of book it is, but I start very enthusiastically. Perhaps, somewhere in the middle of the book, I get tired, but I tell myself it is better to go on, it may get better".

These behaviors take on a different shape in the face of e-books. Reading these books often increase people's willingness to establish interaction with other readers and share their views. Apparently, this feature has been achieved due to the nature of this type of format:

"In e-book, we can easily leave comments, write reviews, get answer right away, and we may read very different opinions about the same book".

The point here is that it seems that reading e-books changes the way of reading. In the experiences of some people, the most important effect is the increase developed in the speed of reading:

> "I remember, last year I would read a 200-pages book in one week or ten days, not caring about the volume and thickness of the book. If it was printed, I would have read it more slowly".

It seems that a portion of this increase in reading speed is due to reduction of the psychological burden might be caused by the high volume of paper books. Judgment on the perceived quality of the text and how it relates to reading speed is not feasible with the current data collected for the present survey. It requires other research must be conducted. Other behavioral changes are caused by physical characteristics and the nature of e-books. For example, some participants described their own experiences reading their fondness for books, mentioning it as the result of availability, convenience, ease of use and simplicity of transportation of e-books:

> "When I saw that I was not forced to carry a one hundred- page book with myself, and I could take it in my cell phone, reading e-books became a habit for me little by little".

Preference

Investigating and analyzing the experiences of the participants showed that most of them preferred the electronic version of the books for reading when they want a book once, or it was a short texts. However, for reading long texts, they expressed reluctance to read the electronic form, and welcomed the printed format:

> "I like to have some of the books. It means that reading them for once does not suffice. In these cases, I try to provide the printed version. However, sometimes, when it is a play, I want to read it once, and maybe I do not use it again, I choose the electronic format".

Except for one person, other participants, the general e-collection if ideas was that they generally , prefer reading printed books. The most important   reason   for   this   was   expressed   as   the   unpleasant

experiencethey had about physical damages caused by reading such books:

> "When reading e-books, my eyes get tired, especially when I read for a long time" … "I suffer from a type of a headache, and if I want to read all its pages, I must zoom on computer and I get a headache".
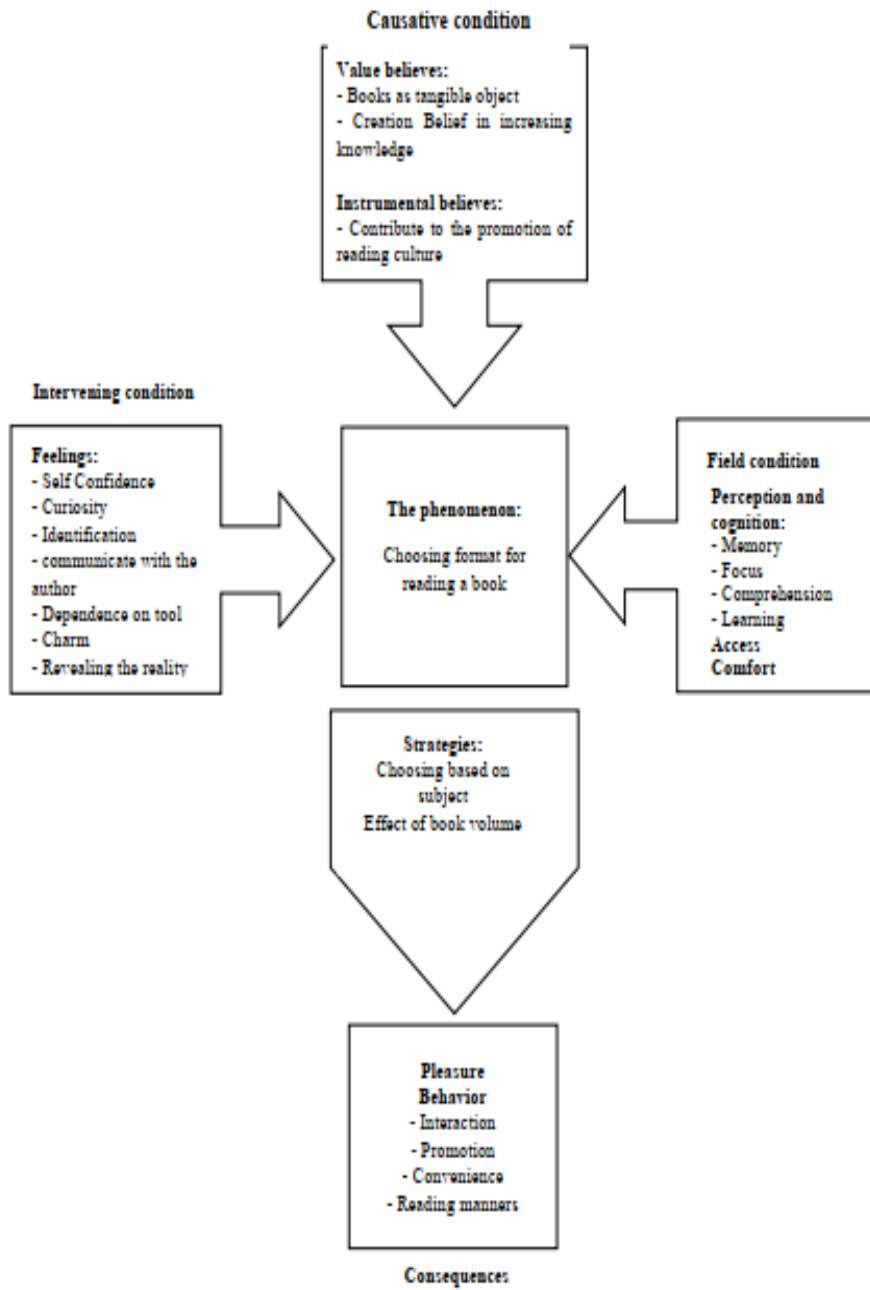
Conclusion

The central core issues of participants' experience in printed and electronic reading have been illustrated in a graphical model (Figure 1). According to this model, the core concept is called "choosing the format for reading a book" which includes key issues. Causative conditions for choosing a format of reading along with grounded and interferential conditions form the decision of these people to choose a format. Causative conditions include instrumental and value believes. Based on this model, individuals 1) select format for reading based on the value of the format, and inducing this idea that the format can indicate their willingness to learn and gain knowledge. These causes have "inner" load and "person" will receive their benefits. 2) Selecttion is based on the belief in the influence of format in promoting reading culture. The usefulness of the idea is "collective" and "outer" rather than individual. In addition to these causes, aspects of perception and cognition and access will allow students to choose a format for reading.

They need a deep understanding of the text, and remembering and attention when reading a printed or electronic material play an important role in selecting the format. In addition, ease of use and ways to access the text, especially in different situations is also important for them. The experience of participants in the present study showed that decision to choose a format for reading a text- disregarding its subject- is considered as a feeling- based process, because intervention of feeling in this selection is noticeable. Even, it is possible that more than considering beliefs and fields of selection, the people are affected by feelings such as confidence in dealing with format, curiosity, ownership of the book, charm of format, helping to evoke the imagery of the content and so on.Participants in the study decide to choose a format in under the described circumstances. They choose two strategies for this

issue. They segregate format based on the subject of text: for simple and easily- read texts that do not need high focus, they used electronic format. Moreover, for difficult and more complicated texts needing high attention, they used printed format. For the selection, people prefer to read long texts in printed format in order to avoid the damages resulted from electronic environments. The strategies have two main consequences including the pleasure of touching reality in printed format, and virtual comprehension in e-format and formation of pleasant behavioral habits such as communicating and sharing experience resulted from reading text with other people, promotion of reading culture, and effect on reading methods such as increased speed of reading, fewer interruption while reading and so on.

Responds analysis showed that causative, Intervention and field conditions affect the choosing format for reading. Some of the responses coded in causative condition in two groups of believes: Value (e.g. books as tangible object and creation belief in increasing knowledge) and Instrumental (e.g. Contribute to the promotion of reading culture). Some of the comments grouped in to intervening condition: feelings (e.g. self-confidence, curiosity, identification, communicate with the author, dependence on tool, charm and revealing the reality). A number of responder's viewpoints placed in field condition in perception and cognition (e. g. memorizing, focus, comprehension etc.) and ease of access.

Based on the monitored conditions the readers select book format (paper or electronic) but important dimension for reading strategy are the book subject and the volume of it!

Causative condition

Value believes:
- Books as tangible object
- Creation Belief in increasing knowledge

Instrumental believes:
- Contribute to the promotion of reading culture

Intervening condition

Feelings:
- Self Confidence
- Curiosity
- Identification
- communicate with the author
- Dependence on tool
- Charm
- Revealing the reality

The phenomenon:

Choosing format for reading a book

Field condition

Perception and cognition:
- Memory
- Focus
- Comprehension
- Learning
Access
Comfort

Strategies:
Choosing based on subject
Effect of book volume

Pleasure
Behavior
- Interaction
- Promotion
- Convenience
- Reading manners

Consequences

Fig. 1: The grounded model of students' experience from selecting the format for reading a book

It should be noted that the results should be considered along with this issue that, "Means and tools, are secondary to reading" (Azarang, 2014) and no one could say with the current trend of publishing, where reading will go and what changes will occur in reading (Azarang, 2014). It should be kept in mind that the present study population was a certain group of young people with their own specifie age, social and cultural characteristics, which might have influenced the results. Conducting studies of this kind with respect to society can be effective in the development of the model presented in this paper. Focus on thematic and specialized texts such as textbooks and review of people's experience for choosing the format will be useful for other researchers, especially in the fields of studies and curriculum. The exact breakdown of electronic formats and reexamining the experiences of readers and cognitive processes of reading are some of other researches that are recommended to be under taken by other researcers in the future .

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