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An Investigation into the Impact of Hypermedia on Iranian Elementary EFL Learners' Motivation

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Abstract – This research aims at investigating the effect of hypermedia on motivation of Iranian EFL Learners. This article presents part of a study on variables that impact foreign language learning; it discusses the effect of motivation on the performance of young EFL learners in spelling. There has been a great deal of research on the role of attitudes and motivation in second/foreign language learning but little research has been conducted on the effect of technology on learners' motivation. A total of thirty four students from two classes sharing a similar social and educational background were selected by a background questionnaire and a language proficiency test participated in the study. Then, seventeen students in each class at the elementary level of proficiency were randomly assigned into either experimental or control group. Next, the two classes were administered a motivation questionnaire. For a period of four weeks in eight sessions the educational software, *Tell Me More* was offered to the experimental group. After eight sessions both groups were retested through a motivation questionnaire to examine the effect of the software on learners' motivation. The results provided evidence that hypermedia helps to significantly enhance the elementary EFL learners' motivation.

Keywords: hypermedia, motivation, Tell Me More, EFL learners

I. INTRODUCTION

The term hypermedia refers to "a software program that provides seamless access to text, graphics, audio, and video through multiple connected pathways" (Ivers & Barron 2002, p.219). Technology can be the bridge between the behaviorist instruction of the past and the new instructional methods lately developed. Technology in second language classroom has become the new tool of communication and requires to be seen as a process on what to teach, how to teach, and how learners can learn most efficiently (Stone et al, 2005). Second language teachers who have been instructed in the profits of using technology as a valid and efficient teaching tool will find that it increases learner's understanding.

According to Dörnyei and Otto (1998, p.65), "motivation is a dynamically changing arousal in a person that initiates, directs, coordinates, amplifies, terminates, and evaluates the cognitive and motor processes whereby initial wishes and desires are selected, prioritized,

operationalized, and (successfully or unsuccessfully) acted out." Brown (1994, p. 114) defines motivation as "inner drive, impulse, emotion or desire that moves one to a particular action."

Motivation is such a complex phenomenon that it cannot be characterized by a single broadly accepted theory. Apparently, it can mean different things and it may be influenced by: (a) cause, identified with personal aims of the learner or outside impetuses, for example, rewards or punishment; (b) behavior, which identifies with persistence, effort of the learner or pleasure; (c) outcomes, alluding to evaluation of performance and reaction to achievement or disappointment.

In Foreign Language Learning theories, it is recommended that motivation can be characterized in connection to two factors: the 'needs' of the learners and their 'attitudes' towards the second language and the second language community. Learners are motivated if they want to learn the language in order to achieve an aim or if they need to communicate with speakers of the target language and learn about the country where the language is spoken (Nakanishi T, 2002). Furthermore, it is grouped together with different parts of identity and feeling, hence the reference to attitudes and motivation.

Cohen and Dörnyei (2002, p.172) argue that "motivation is often seen as the key learner variable because without it nothing much happens. Indeed, most other learner variables presuppose the existence of at least some degree of motivation." Further, Brown (1981) recognizes three different types of motivation: (1) global; a general orientation for learning; (2) situational identifies with the circumstance in which learning happens, and (3) task motivation which identifies with particular tasks. Djigunović (2008) also mentions that motivation is often connected with levels of aspiration, which is defined as the standard that individuals set themselves in target-directed activities.

There is a lack of conclusive evidence as to how technology can influence the motivation of students learning a foreign language. There is a lack of concentration on the implementation of new strategies and methods for learners in the learning process, which could transform and revolutionize instruction and learning at the elementary level. Wang (2005) expressed that technology has done a great job in aiding language learning, but this is just the beginning of the age of technology-improved education. Some foreign language instructors are eager to include the utilization of technology because they see their learners' excitement and motivation expand if these strategies are implemented more (Pitler, Hubbell, Kuhn, & Malenoski, 2007).

Studying motivation in connection with foreign language learning makes the researchers concentrate on the point in a more limited way by taking the unique principles of language learning into account. As in other learning processes, motivation is additionally respected a fundamental affective factor in language learning. Foreign language learning motivation has been seen as a key factor by researchers which "gives the essential stimulus to start learning the L2 and later the main impetus to manage the long and frequently tedious learning process" (Dörnyei, 1998, p.117). Gardner (1985) assures that motivation alludes to the mix of exertion in addition to desire to achieve the objective of learning the language in addition to favorable attitudes towards learning the language. Subsequently, foreign language

learning motivation is a complex set of variables covering the endeavors and energy to learn a new language.

In spite of claims regarding the potential benefits of using hypermedia in education, and the controversial issues about the relationship between media and learning, research results comparing the effects of hypermedia and non-hypermedia instruction are conflicting. For example, Abdolmanafi-Rokni and Hamidi (2015), Abdolmanafi-Rokni et al. (2014), Bain, Houghton, Sah, and Carroll (1992), Gretes, and Green (1994), Liu, and Reed (1995), Smith, Jones, and Waugh (1986), and Toro (1995) all report significant gains for hypermedia over non-hypermedia instruction. On the other side, Azevedo, Shaw, and Bret (1995), D'Alessandro, Galvin, Erkonen, Albanese, McBurney, and Easley (1993), Kinzie (1993), Leonard (1992), McCoy (1994), Sheldon (1995), and Tabar (1991) have found no significant differences between hypermedia and non-hypermedia instruction.

One study (Havice, 1995) even reports significant gains favor non-hypermedia instruction. Recently, a descriptive review of research on hypermedia-based learning (Ayersman, 1996) provides deep discussion about various types of hypermedia studies on students' learning. Yet, owing to the contradictory evidence provided by existing research in the area, it is important to conduct a meta-analysis to clarify the research conclusions. The results of this meta-analysis may also shed light on the debatable issue regarding the relationship between media and learning.

Lambert (1955) started to explore this element by estimating that an interest in learning a foreign language develops because of emotional involvement with the target language's community or because the learner has a direct interest in the language. Research findings demonstrate that motivation are indeed related to successful L2 learning but it has not been indicated how they do so (Lightbown & Spada, 1993).

When alluding to motivation, instructors are concerned with the behavior of the student. Learners are considered motivated if they are effectively included in a task and the main goal of language teachers is to encourage as many students as possible to be included in classroom activities hoping that this will aid learning. The usual meaning of motivation for the teacher is presumably the interest that something creates in the learners and it identifies with the attitudes of children towards the target language, as these are established in their minds and their background (Cook, 1996).

It is, however, argued that in the case of young children motivation may be influenced by the significance of tasks (task motivation) (Brown, 1981) to the interests and the needs of the students, to their requirement for achievement and social affiliation, and by the teaching methodology and material (Crookes & Schmidt, 1991). Little research has concentrated on the material and methodology in connection to motivation but there is evidence that authentic materials produce interest in the lesson (Peacock, 1997). Burden (2000) recommends various criteria that identify with task motivation: the difficulty of the work must match the capacity levels of the students, the materials should give helpful structure and they should captivate the enthusiasm of the children.

A. Research Question

Does hypermedia have any effect on the promotion of Iranian elementary learners' motivation?

II. METHODOLOGY

A. Participants

For the purpose of conducting this study, thirty four students from two classes were randomly divided into two groups, namely as the experimental group and control group (each 17). All of the participants were studying English at Cheraghali high school in Gorgan, Iran. They were at elementary level determined by a proficiency test. The participants involved female students only. Their age range varied from 15 to 17. The native language of all the participants was Persian. After the selection of the participants, the English language proficiency, Oxford Test was administered to the participants of the study. The aim of the administration of this test was to ensure, as a triangulation procedure, the homogeneity of the learners in terms of general language proficiency prior to the treatments.

B. Instrumentation

Demography questionnaire. In order to elicit subjective information of participants, a demography questionnaire was developed by the researcher. It covered issues such as the participants' age, gender, and first language status**.**

Proficiency test. In order to be assured of the homogeneity of the control and experimental groups in terms of English language proficiency, Oxford Test, was given to the students. It included grammar and structure as well as reading comprehension section so that students can be scaled in a continuum, arranged by their proficiency level. It proved to have a reliability of 0.73. It consisted of 40 multiple-choice items. The time allotted was 60 minutes.

Motivation questionnaire. In this study, in order to understand about the learners' motivation toward learning English before and after the treatment, Motivational Questionnaire containing 67 items outlined by Clement, Dornyei and Noels (1994) was used. The questionnaire was a Likert-type scale coded on a 5-point scale. To validate, the questionnaire was piloted to check the reliability and validity. As a triangulation procedure, the content validity of the selected items was approved by three colleagues involved in teaching English as a foreign language at the same high school. To ensure the reliability of the instrument, it was given to 15 EFL students who had taken it before. The reliability of the instrument was estimated through Cronbach's alpha was 0.76, which is highly reliable. The questionnaire intended to investigate the participant's motivation while using *Tell Me More* software. After randomly assigning the students into two subgroups, both groups filled out a questionnaire before and after treatment.

***Tell Me More* software.** The hypermedia software used in this research was *Tell Me More*, which is one of the most popular computer-based instructional software. It has the characteristic of having an interactive interface which benefits the students by allowing them

to get extra information about the subject or the unknown word simply by clicking it. Another feature of this software is the capability of being easily adapted to the needs of the user. Therefore, it can be used particularly to support the spelling skill. It also uses the immersion technique that does not allow using any sort of translation in any level of the teaching. Moreover, the lessons that are presented in the *Tell Me More* are divided into five parts. This feature helped the learners find the exact level of the lesson based on their capabilities.

C. Procedure

At the beginning of the study, two classes were selected. Then, they were assigned into two groups. One of the classes randomly was selected as control group and the other served as the experimental group. The study was carried out in the academic year 2014. In the first step, students were administered the background questionnaire as well as the proficiency test in order to determine their overall level of English proficiency. Both groups in the present study were at elementary level determined by the proficiency test that corresponded to the level two of the software. Their practice sessions were about 45 minutes in the classroom and half an hour each day at home. The treatment lasted four weeks in eight sessions. They were asked not to use the dictionary but the interface of the hypermedia that gives the extra needed information. In the last step, in order to find out if hypermedia had a significant effect on increasing motivation, the motivation questionnaire was administered again on the participants in both groups, once before and the other after treatment.

D. Data Analysis

The researcher used the descriptive analytical method of research to carry out the study. To analyze the data, SPSS.16 Software was used for descriptive and inferential statistics. The research used methods of statistical analysis, including charts and graphs, measures of central tendency and dispersion, abundance etc. Among the graphical methods, frequency, percentage, mean and Cronbach's Alpha because they are better suited than numerical methods for identifying patterns in the data.

III. RESULTS OF MOTIVATION QUESTIONNAIRE

In this study, the questionnaire was administered to both groups before and after treatment. The purpose of the questionnaire was to gather data related to differences in motivation of elementary level students when exposed to a multimedia curriculum versus traditional curriculum. The questionnaire consisted of 67 questions to investigate the participant’s motivation. The questionnaire was classified according to agreement or disagreement of the students, and it was scored based on a Likert scale ranging from ‘Strongly Agree’ to ‘Strongly Disagree’. Having collected the data through the tests, the researcher applied the t-test formula to measure the differences, if any, between the experimental group and the control group. It is important to note that the researcher employed all the formulas with

the level of significance set at 0.05 in all their applications. The following tables illustrate descriptive of means of data. The results were shown in tables 1, 2, 3 and 4.

Table 1: Results of Independent Samples T Test of Experimental and Control Groups for Motivation Questionnaire in Pretest

Scope	Groups	N	Mean	SD	Std. Error Mean	Sig(P-value)
Pretest	Experimental	17	1.338235	4.54471	1.10225	0.129
	Control	17	1.305294	7.45082	1.80709	

As represented in table 1, the computed significance is equal to 0.129 which is bigger than the significance level set for the study (0.05). This indicates that there was no statistically significant difference between the two groups in the pretest.

Table 2: Results of Independent Samples T Test of Experimental and Control Groups for Motivation Questionnaire in Posttest

Scope	Groups	N	Mean	SD	Std. Error Mean	Sig(P-value)
Posttest	Experimental	17	2.337647	6.7707665	1.856061	0.000
	Control	17	1.4570595	5.122554	1.353714	

As revealed in Table2, the computed significance equals 0.000 which is smaller than the significance level set for the study (0.05). This substantiates the fact that there was a statistically significant difference between the experimental group and the control group in the posttest confirming the effect of hypermedia on improving the learners' motivation.

Table 3: Results of Paired Samples T Test of Control Group for Motivation Questionnaire in Pretest and Posttest

Scope	Groups	N	Mean	SD	Std. Error Mean	Sig (P-value)
Pretest	Control 1	17	1.224324	3.565323	1.251071	0.628
Posttest	Control 2	17	1.364623	5.34823	1.523675	

As represented in table 3, the computed significance is equal to 0.628 which is bigger than the significance level set for the study (0.05). This indicates that there was no statistically significant difference in the control group in the pretest and posttest.

Table 4: Results of Paired Samples T Test of Experimental Group for Motivation Questionnaire in Pretest and Posttest

Scope	Groups	N	Mean	SD	Std. Error Mean	Sig(P-value)
Pretest	Experimental 1	17	2.463135	4.773244	1.472243	0.000
Posttest	Experimental 2	17	3.7217542	7.232623	1.786341	

As revealed in table 4, the computed significance equals 0.000 which is smaller than the significance level set for the study (0.05). This substantiates the fact that there was a statistically significant difference in the experimental groups in the pretest and posttest confirming the effect of hypermedia on improving the learners' motivation.

IV. DISCUSSION

Research findings propose that attitudes and motivation are vital aspects in successful language learning (Lightbown & Spada 1993, Gardner & MacIntyre 1993). Gardner (1985) depicts motivation as the equation of exertion, desire and attitudes. These children appeared to be affected by their positive attitudes (I like the language, it is easy to learn, and it is not hard) and their desire to be good students and utilizing it in the future. The latter statement shows instrumental motives (Gardner, 1985). Finding the books easy and fun and the lesson at school; interesting, fun and not hard were the statements that demonstrated this, highlighting the crucial role of both the instructor and the teaching material in the result of the language classroom. Having language materials that are significant to the age and the interests of the children, and teaching in a motivating and fascinating way can advance effective learning.

The data from the questionnaire specified that motivation of EFL students was significantly different from the motivation of EFL students towards traditional curriculum, and it was concluded that there was a difference in the average learning motivation score between the control and experimental groups.

V. CONCLUSION & PEDAGOGICAL IMPLICATIONS

This research was driven by the prompt that technology is an important part of education. High schools are perhaps the neediest destination for multimedia. Multimedia will induce radical changes in the teaching process during the coming decades (Vaughan, 2004). The aim was to utilize these findings as a foundation for addressing the utilization of multimedia technology in improving students' motivation at the high school. This research question was designed to obtain students' motivation.

Instructors in foreign language play a significant role in the implementation of new technology learning strategies in their curriculum with a wide variety of tools for learning. Multimedia supplies the opportunity to differentiate instruction and to change the classroom to

a dynamic, student centered environment, motivating students to collaborative learning and supporting critical thinking and problem solving skills.

Some practical implications are presented which are on the basis of the results and findings of this study and suggest that foreign language teachers should be aware of the benefits that multimedia technology can bring to their curriculum and the advantage that multimedia can bring to the students' learning process by using strategies that can reach all students learning styles. The students who participated in this research showed that they had never been exposed to multimedia presentations during elementary level, but now they find multimedia a new appropriate tool for improving motivation.

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