The Impact of Multimodal Channels on Teaching Idiomatic Expressions to Intermediate EFL Learners with Regard to Their Attitudes

Abdolreza Pazhakh[1], Samir Alkasir[2]*

[1]Islamic Azad University, Dezful Branch, Dezful, Iran; pazhakh@gmail.com
[2]Islamic Azad University, Ahvaz Branch, Ahvaz, Iran;
samir.alekasir@gmail.com

Abstract

This study was to explore facilitative function of using multimodal channels over single channel presentation and comprehension of idiomatic expressions to Iranian EFL intermediate proficiency learners. Out of a pool of 90, sixty intermediate participants were homogenized by a QPT test, using a quasi-experimental design. They were randomly assigned to three equal groups: WhatsApp-, SMS- and Classroom-based groups. A pretest determined their idiomatic knowledge status. Only experimental groups received materials via technologically mediated instruction. A post-test tapped their competence after the treatment. A questionnaire was used to illicit the experimental group's attitudes towards using technology. The results of ANOVA and t-tests showed the superiority of multimodality channel over single channel. The superiority was, WhatsApp-based, SMS-based, and SMS-based groups, respectively. The findings also revealed a strong correlation between students' attitudes towards the use of technology and their idiomatic competence.

Keywords: Audio-visually Oriented Instruction, Idiomatic Competence, Multimedia.

1. Introduction

Language teaching has always been influenced by technological developments. This phenomenon has made teachers more active through interaction with their students (Otero et al., 2005). This encourages teachers and more particularly scholars to figure out and endorse the necessity of interaction as a vital requirement for having a successful way of teaching (Alberth, 2013). This has led to a rich propagation of research into the effect of the technological developments and media on teaching idiomatic expressions.

1.1 Statement of the Problem

Due to pedagogical and political upheavals, authentic communicative language has been victim of analytical approach to teaching in Iran. This trend has always deprived students of authentic sort of language. The type of deprivation of authentic and metaphoric language makes their language unnatural, bookish, sluggish, and too formal in such a way they fail to grasp native talks. Instead, they are more eager to use formal style of English language being devoid of decorative aspects of live language used by native speakers.

1.2 Research Questions

The researcher intends to pose the following questions:

1. Does type of language channel have a differential impact on promoting Iranian EFL learners' idiomatic performance?

2. Is there a significant correlation between EFL learners' attitude towards using technology and their development in idiomatic competence?

1.3 Research Null-Hypotheses

Based on our research questions mentioned above, the present study aims at exploring the following null research hypotheses:

$H0_1$: Type of language channel has no differential impact on promoting Iranian EFL learners' idiomatic performance.

$H0_2$: There is no significant correlation between EFL learners' attitude towards using technology and their development in idiomatic competence.

1.4 Significance of the Research

This research can add to the external validity of the effectiveness of using technology for teaching idiomatic expressions since this phenomenon has not been probed fully-fledged in an Iranian context. Besides, after reviewing the related literature, we aimed to shed more lights into subject and to testify the feasibility of technological media in terms of their language modality of input.

2. Review of Literature

2.1 Theoretical Framework

2.1.1 Theories of individual attitudes toward information technology

Different theories of individual attitudes towards application of technological media in formal education in general and in teaching idiomatic expressions have been offered (Tate, Evermann, Gable, 2015). These models which all imply the significance of technological developments in developing L2 teaching and learning are as follows: Task technology fit (TIF) (Dale, Goodhue and Thompson, 1995), Technology-to-Performance Chain (TPC) Theory of reasoned action (TRA) (Alberth, 2013), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM) (Davis, 1989), Transactional Distance Theory Park (2011).

2.2 Operational Background

2.2.1 Language Learning and Technology: E-learning

Brouse, Basch and Chow (2012) used an on-line survey circulated via e-mail. They found that technology-supported independent language learning is as effective and well operative as classroom instruction, if not more. Alberth (2013) and Bradley, Haynes, Cook, Boyle and Smith (2009) found that multimedia learning objects can provide multimodal channels that enable students to build up their own knowledge representations of the task in hand.

In line with the findings Thornton and Houser (2004, 2005), Aldalalah & Fong (2010), and Asschier (2014), , Broek, Segers, & Verhoeven (2014) using multimodal channels is more successful than the conventional approaching to

presenting new materials to students. Zhang (2011), and Motallebzadeh and Ganjali (2011) found in their experiments that the SMS-based group had "greater vocabulary gains" compared to the paper-based group (p. 519).

3. Methodology

3.1 Participants

Out of 90 participants, sixty intermediate Iranian EFL learners with an age range of 18-28 were selected in terms of their scores on a QPT, as a homogenizing test. They were randomly divided into three groups, a control (taught via teacher-fronted instruction) and two experimental groups (technological-based groups, SMS-based & WhatsApp-based groups).

3.2 Instruments

The instruments were a QPT as a homogenizing test with a 60-item multiple-choice items. A pretest of 60 multiple-choice questions related to common English idioms and expressions, adapted from *59 English Idioms and Expressions Tests* booklet (http://www.english-test.net). Using Crobach Alpha was estimated (r=0.79). A follow-up survey questionnaire was also designed to illicit the treatment groups' attitude toward technological mediated instruction of idiomatic expressions. It had 22 items. The first 15 items were designed, using a 5-point Likert scale ranging from 5 (*strongly agree*) to 1 (*strongly disagree*).

3.3 Data Collection Procedure

Out of 90 Iranian EFL learners attending the IELTS centre in Dezful, 60 participants were selected based on a convenient sampling and homogenized by a QPT test. They were informed of the procedures. To estimate the participants' knowledge of English idioms, a pretest was administered to the all three groups. The material was the same for all groups but presented through the modes of instruction: WhasApp-based, MS-based, and Classroom-based learning approached. Indeed, only the Classroom-based group attended the conventional teacher-lead classroom. The other two groups received their English idioms via their cell phones and using the technological media.

3.4 Material

The material consisted of idiomatic expressions adopted from *Visual Idioms* (Zahiri, 2009). The material included body idioms, color idioms, animal idioms, food idioms, etc. The book was adopted *The Teacher Video Program,* the BBC Learning English award-winning video series, designed to make learning idioms fun. It had 22 units, each unit was accompanied with a video, contextualizing the idioms in realistic and interesting situations. The coverage of idioms in 49 days included 100 English idioms.

3.5 Design

This study focused on the following research questions:

1. Does type of language channel have a differential impact on promoting Iranian EFL learners' idiomatic performance?
2. Is there a significant correlation between EFL learners' attitude towards using technology and their development in idiomatic competence?

The design was quasi-experimental, with a pretest and a treatment of multimodal channels instruction, a Post-test , and a questionnaire soliciting the correlations between students' attitude towards using technology in teaching idioms. Convenience sampling was used based on the research objectives.

4. Data Analysis, Results and Discussion

4.1 Data Analysis

To find the effect of instructional modes, a one way ANOVA test was used. To estimate every one of the mentioned group's idiomatic performance both before and after the treatment, an independent sample t-test was employed. Finally, a Pearson-Product moment correlation was conducted on the data from the follow-up survey questionnaire to stipulate any correlation between students' attitudes and their idiomatic performances.

The homogenized participants were randomly assigned to 3 equal groups of 20 students, based on their scores on the placement test and convenience sampling. The participants' scores in all three groups (i.e., WhatsApp-based, SMS-based & Classroom-based) ranged from 30 to 43 and their mean scores were 41.80, 41.25, and 39.00 and 41.25, respectively. The descriptive statistics for language proficiency scores are as follows (Table 4.1):

Table 4.1 *Descriptive Statistics for the Homogeneity Test Scores*

Group	N	Min.	Max.	Mean	Std.
WhatsApp-based	20	30	43	41.80	4.275
SMS-based	20	30	43	41.25	4.529
Classroom-based	20	30	43	39.00	5.813

To reassure the homogeneity of the data across the three groups, the results of Table 4.2 proved that there was no significant difference between the mean scores ($P > 0.05$).

Table 4.2 *Results of the Homogeneity of WhatsApp-,SMS-, and Classroom-based groups*

Level	*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
Between Groups	88.033	2	44.017	1.819	0.171

Within Groups	1378.950	57	24.192		
Total	1466.983	59			

To prove if the three groups have performed the same or different, the participants' performance was examined both before and after the treatment. Table 4.3 illustrates the descriptive statistics, the mean score and standard deviation of pretest and posttest in the all three groups.

Table 4.3 *Descriptive statistics of pretest and posttest in all three groups*

	Pre-test		**Post-test**	
Group	M	SD	M	SD
WhatsApp-based	13.25	1.07	17.30	0.81
SMS-based	13.55	1.05	15.15	0.74
Classroom-based	13.50	1.05	14.15	0.73

As the table above shows, the mean scores on the pretest differ from those on the posttest in each group. This reveals the potential effects of the instruction mode on improvement of the students' idiomatic performance.

4.2 Results on the 1st Research Question

To put the second question to test, an ANOVA test was run to explore if the mean scores of the three experimental groups under different language channels using various technological developments as different instructional modes (See Table 4.4).

Table 4.4 *Results of ANOVA test for the three learning approaches in the three groups*

ANOVA						
		Sum of Squares	f	Mean Square	F	Sig.
Pre-test	Between Groups	1.033		0.517	0.462	0.632
	Within Groups	63.700	7	1.118		
	Total	64.733	9			
Post-test	Between	103.633		51.817	71.515	0.000

	Groups					
	Within Groups	41.300	7	0.725		
	Total	144.933	9			

The F-value (F=71.51) for the post-test in Table 4.4 is high enough to imply significant differences among the three different types of instructional modes in posttest scores ($P<0.05$). In effect, the performances of the three experimental groups in their pre-test were relatively the same. Now, to identify which instructional mode is more effective, a Post-hoc test was used to make multiple comparisons among the three instruction modes (See Table 4.5).

Table 4.5 Results of t*he multiple comparisons between the strategies in the Post-Hoc test*

	(I) group	***(J) group***	***Mean Dif. (I-J)***	***Std. Error***	***Sig.***	***95% Confidence interval***	
						Lower bound	*Upper bound*
Pretest	SMS-based	classroom-based	0.050	0.334	0.984	-0.71	0.81
	WhatsApp-based	classroom-based	-0.250	0.334	0.675	-1.01	0.51
Posttest	SMS-based	classroom-based	1.000*	0.269	0.001	0.39	1.61*
	WhatsApp-based	classroom-based	3.150*	0.269	0.000	2.54	3.76*

*P<*0.05*

Dunnett t-tests treat one group as a classroom-based, and compare all other groups against it.

The data in Table 4.5 revealed no significant differences between the mean scores of the SMS-based and the WhatsApp-based groups (P>0.05). However, their mean scores were different in the post-test (P<0.05), being in favor of the WhatsApp-based group. In contrast, the classroom-based group acquired the lowest degree of significance compared with other two technological based groups.

To compare the mean scores in the two technologically mediated instruction groups, WhatsApp vs. SMS groups, were significantly different, the researchers carried out an independent sample t-test (4.6).

Table 4.6 *The technological-based groups' statistics*

	Groups	**N**	**Mean**	**Std.**	**Std. Error Mean**
Pretest	SMS-based	20	13.55	1.050	0.235
	WhatsApp-based	20	13.25	1.070	0.239
Posttest	SMS-based	20	15.15	0.745	0.167
	WhatsApp-based	20	17.30	1.081	0.242

As for the equality of variances, Levene's tes was used to compare the mean scores of the two technological-based groups (i.e., WhatsApp-based group, SMS-based group) (Table 4.7).

Table 4.7 *Results of independent sample t-test to compare between SMS and WhatsApp group*

		Levene's Test for Equality of Variances		***t-test for Equality of Means***				
		F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*
Pretest	Equal variances assumed	0.001	0.976	0.895	38	0.376	0.300	0.335
	Equal variances not assumed			0.895	37.987	0.376	0.300	0.335
Posttes	Equal	3.42	0.07	-	38	0.00	-2.150	0.294

t	variances assumed	7	2	7.324		0	
	Equal variances not assumed			-7.324	33.732	0.000	-2.150	0.294

The F-values (0.001) in the Levene's test showed no significant difference between the means of the two experimental groups on the pretest ($P > 0.05$). However, the independent samples t-test indicated a significant difference between the treatment groups' mean scores in the post-test ($P< 0.05$). Indeed, the WhatsApp based group outperformed the SMS-based group (F = 3.427, P<0.05).

4.3 Results on Second Research Question

To put the second question to test, *a* follow-up survey questionnaire was conducted only on the two experimental groups, 40 participants. Furthermore, a *Pearson Product Moment Correlation* was run (r=0.634) which revealed a strong positive correlation (P<0.05) between the technological-based group's attitudes towards the use of technology and their development in idiomatic performance (Table 4.8).

Table 4.8: t*he Results of the Pearson's Correlation on Technological-based*

Correlations between technological-based group's attitudes and its development in idiomatic competence				
Group			*posttest*	*Questionnaire*
Technological-based group	posttest	Pearson Correlation	1	0.634**
		Sig. (2-tailed)		0.000
		N	40	40
	questionnaire	Pearson Correlation	0.634**	1
		Sig. (2-tailed)	0.000	
		N	40	40

Group'sAttitudes

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

Secondly, the correlation between the two treatment groups' technological attitudes and their development in idiomatic performance group by group and separately by running Pearson-Product Moment Correlation.

Table 4.9: *The results of Pearson's Correlation on WhatsApp-based & SMS-based groups's attitudes and their idiomatic competence*

Group			*posttest*	*questionnaire*
WhatsApp-based	posttest	Pearson Correlation	1	0.791
		Sig. (2-tailed)		0.012
		N	20	20
	questionnaire	Pearson Correlation	0.791	1
		Sig. (2-tailed)	0.012	
		N	20	20
SMS-based	posttest	Pearson Correlation	1	0.628
		Sig. (2-tailed)		0.033
		N	20	20
	questionnaire	Pearson Correlation	0.628	1
		Sig. (2-tailed)	0.033	
		N	20	20

The data in Table 4.9 indicate a higher correlation (r=0.79) between the WhatsApp-based group's attitudes and their idiomatic competence, whereas their counterpart SMS-based group showed a correlation lower than that of the WhatsApp-based group (r=0.62).

5. Discussion

The research questions are here raised and dealt with concerning the findings of the research and they are compared to those in the literature review. Based on the results, it could be concluded that WhatsApp-based learning group's

development in idiomatic performance was far better than those of the SMS-based and classroom-based learning groups.

One explanation is that the multimedia channels capability of WhatsApp application gives it a superiority to other methods of instruction.

The current findings are in line with those of ALdalalah's & Fong's (2010), Asschier's (2014) on multimedia channels. They corroborate with the results of Bahrani (2012) and Azar's & Nasiri's (2014) who voiced their concern regarding the impact of the Iranian EFL learner's attitudes toward the effectiveness of Mobile Assisted Language Learning on their listening comprehension.

The results of the current study were also in consistence with those of Soleimani's, Ismail's & Mustaffa's (2014),who also utilized the Technology Acceptance Model (TAM) for exploring the learners' attitudes towards mobile assisted language learning (MALL).

6. Conclusion

This study aimed at comparing mobile-based technological media (i.e., SMS-based platform & WhatsApp-based platform) in terms of delivering English idioms to Iranian EFL intermediate learners. The research began with the assumption that the type of language channel has a differential impact on the development of their idiomatic performance. The results of the current study revealed that WhatsApp-based learning platform won over the SMS-based learning platform. In explaining this superiority, it could be concluded that WhatsApp based learning platform which is specified with a variety of language channels (textual, visual and audio-visual) won over the SMS-based learning platform which is capable of providing the learners with only one type of language channel (i.e., textual). Overall, the findings of this study were consistent with a series of findings (Thornton and Houser, 2005; Levy & Kennedy, 2005; Lu, 2008; Frank and Golonka, 2008; Cavus & Ibrahim, 2009; Li, 2009**;** Alavinia and Qoitassi, 2013).

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