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THE EFFECT OF SIMULATION PROGRAM ON THE INCREASE OF LEARNING SKILLS IN LEARNERS IN ENGLISH CLASSROOM

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ABSTRACT

This research aims to study the effect of simulation program on the increase of learning skills in learners in English classes. The study is an applied and a quasi- experimental study. The statistical community includes 60 learners at The Kish Air English Language institute in Chalous, Iran divided into two(control and experimental) groups. The tests were based on oral comprehension and speaking skills conducted on each group before and after using the simulation program with the focus on communication skills, recollection, ambition and self-confidence, as well as learning English.

Keywords: *Teaching English, Simulation Programming, Communication Skills, Self-confidence, Recollection*

INTRODUCTION

Educational technology aims to facilitate learning, and improve performance. To gain the objective, educational simulations could be used as media techniques, because among their main purposes is education, and learning (Janson and Gramham, 2006). Simulation has been used in various fields such as medicine, political science, military, and international relations, but it traces back to teaching communication skills by Gamson (1966).

He suggested simulation of role-play as the director of social communication process in which the participants analyze personal role in imaginary social groups, and that is how they, in fact, overcome situation complexities to gain certain communication purposes. In addition, simulation was used by Morno (1920) on mental treatment process. Computer-based simulations were first conducted in 1990, when the first hypotheses on simulation curriculum were developed by Hans and another philosopher called Nick Boostrom. Jacob-calmanmention some common effects that come to mind during simulation. They believe that during simulation, learners realize such things as environmental complexity, environmental correlation, and environmental control.

Since simulation plays a significant role in human's cognition, and by means of simulation, one could discover another's thoughts, it has been given more attention in educational system (John, 2010). Simulation theory first analyzed how people express their ideas and what they learned to others. Simulation curriculum can result in a productive educational environment; it could in fact, be included as an effective tool in school curricula (Banks, 2001).

The structure of simulation curriculum has a strength that makes a learner to join in deep learning, and a higher that comprehension in contrast to superficial learning. Deep learning means learning scientifically and connecting knowledge to real life, so that use of simulation curriculum for a deeper learning has urge researchers to study and use the program in teaching and learning English.

Since pedagogy is a systematic plan to gain education objectives, plans will succeed when they are put to use practically. In doing so, simulation curriculum development can be presented as a plan to English language teachers to prepare real environments to put to use what learners have learned to simulated real communication situations and tests themselves through learners' involvement in simulation situations and improve self-confidence, ambition, and learning communication skills along with other learners. That is how deep learning takes place and leads to recollection of more English words and sentences. Simulation is mostly used in natural and human systems, and it is a version of many true instruments or professional situations which tries to determine moral aspects of a physical or abstract system via the behavior of another system (Radgorz, 2007). Simulation is also the repeated representation or recreation of a real

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object or subject matter or situation. This technical simulates reality just as a mirror does. Educational simulations are divided into four categories including: Living simulations (the use of simulated equipments in a real environment); virtual simulations (the use of simulated equipments in an unreal environment); Structural simulation (the use of simulated equipments and tools in a simulated environment), and real-play simulations (real people's role-play, and real work setting).

In simulation, an imaginary problem similar to facts in the real world is presented to the students, and they have to resolve it by mean of educational rules. In cases where simulations, and with their comparisons suggest a specific solution (Shifelt, 2006); they do their best to imagine real situations so that concepts that were learned and specified solutions be transmitted into real life and facilitate the realization and performance of functions related to the concept of simulation (culture, Shovok and Bostroom, 2007). Language learners have to learn and skills related to the subject matter to improve performing simulated experiences (Wintling, 1993).

Since language learners practice their conversations in a real environment, and with pre-determined roles, lack of sufficient skill can reduce their ambition for learning, and result in the loss of self-sufficiency to use communication skills, and forgetting what they had learned (Chiri and Silvo, 1966). There have been a few studies on simulation and its effect on learners, especially on learners of English.

Vigotski suggested that learning is increased through social collaboration and interaction. Since simulation is used in transmitting theory into practical activities, in small-group simulations, one has to use a large simulation, and play many roles to develop learning skills; the learner can reach higher levels of learning through an increase in interactions and involvements.

Janson and Louis (2012) found that English proficiency needs a suitable level of knowledge, approach, and other factors. Numerous structural technologies have been used for this important matter that should defectively use in learning, practice, and assessment. Simulation program, and its techniques and structures should enable learners to develop their conversation skill which is in turn an efficient skill in a specific conversation between people during which learners are encouraged to join inter-personal dialogues, and handle dialogues without referring to books.

Look and Chan's findings (2013) in a quasi-experimental study showed that the (simulated) experimental group significantly showed more skill and self-confidence in speaking than the control group. Sisyl (2001) observed the effect of role-play on learners' interaction, and showed how learners socialize their language learning to resolve a problem.

Ductal (2007) measured effectiveness of simulation curriculum in teaching English and showed how informal collaboration in classroom develops learners' language skills, and ambition for learning more.

Toodgrand *et al.*, (2008) point to the high scores gained by students educated via simulation. On the basis of the above literature, this research studies the effect of simulation program on learners' learning skills in a quasi-empirical research the field of Teaching English. In doing so, the following questions will be studied:

1. Does simulation method in teaching English influence learning English?
2. Does simulation method influence language learners' communication skills?
3. Does simulation method influence recollection of words and expressions?
4. Does simulation method increase language learners' ambition for joining discussions?
5. Does simulation method influence language learners' self-confidence in using what they have learned?

MATERIALS AND METHODS

The study is an applied quasi-empirical study; the statistical community includes students at the Kish Air English institute among whom 60 were randomly divided into control and experimental groups. The control group received English education in a conventional method for 1 term, while English was being taught to the experimental group via the simulation method.

To measure the variables, questionnaires made about communication, and word and expression recollection skills and ambition for participation were used. Cronbach's Alpha .83 has been reported, and

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the KMO index of the questionnaire was measured .74. To analyze the data, the co-variance analysis test was used. To find answers to the research questions, first the variance homogeneities, and then, the existence of a linear relationship between auxiliary accidental variable (educational progress pre-test), and dependent variable (post-test variable) were considered. Then, the co-variance was analyzed.

RESULTS AND DISCUSSION

Results

About the research questions, (1-5), first the assumptions about the homogeneity of regression slopes, existence of a linear relationship between accidental variable and dependent variable, and equality of error variance were tested. The assumptions about all the questions were corrects, sonly the final two tables are presented about each of the questions.

The analytical results of the first question (i.e." the effect of simulation education on learning skills of the learners of English") are presented in table one.

Table 1: Tests between effects of subjects related to the effects of simulation on learning skills

Dependent Variable: learning skills

Source	Type III Sum of df Squares		Mean Square	F	Sig.	Partial Squared	Eta
Corrected Model	8911.840 ^a	2	4455.920	233.281	.000	.891	
Intercept	2469.635	1	2469.635	129.293	.000	.694	
Time1	462.773	1	462.773	24.228	.000	.298	
group	8641.366	1	8641.366	452.403	.000	.888	
Error	1088.760	57	19.101				
Total	164230.000	60					
Corrected Total	10000.600	59					

R Squared = .891 (Adjusted R Squared = .887)

The results of the first colored line shows that the auxiliary accidental variable ($F=24.228$) is meaning fully at ($p\leq 0.01$) error possibility with the depended variable.

The results in the second colored line are presented after seeing the results in table 3: Adjusted averages and their standard errors.

Table 2

Dependent Variable: learning skills

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental	62.719 ^a	.799	61.120	64.318
control	38.681 ^a	.799	37.082	40.280

a. Covariates appearing in the model are evaluated at the following values: learning skills pretest = 33.1333.

After adjusting pre-test scores, there was a meaningful effect of the agent between subjects ($p\leq 0.001$, partial $\eta^2=0.88$) of the group. The average scores suggest that the experimental group (the simulation method) has meaningfully higher scores than control group (the conventional in method) does. The results of analysis of covariance on the second research question regarding the "effectiveness of

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simulation in the field of English language learners 'communication skills' are presented in the following table:

Table 3: Tests between effects subjects related to the effects of simulation methods in communication skills

Dependent Variable: communication skills						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Squared
Corrected Model	259.807 ^a	2	129.904	50.442	.000	.639
Intercept	1397.353	1	1397.353	542.597	.000	.905
Time 1	3.541	1	3.541	1.375	.246	.024
group	232.265	1	232.265	90.189	.000	.613
Error	146.793	57	2.575			
Total	15196.000	60				
Corrected Total	406.600	59				

R Squared = .639 (Adjusted R Squared = .626)

The results of the first colored line suggest that the auxiliary accidental variable ($F=1.375$) is not meaningfully related to the dependent variable. The results of the second colored line suggest that the experimental and the control groups, pre-tests are not meaningfully different. The other results are presented in table 4:

Table 4: The justified averages and their standard error related to the effect of the simulation method on communication skills.

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental	17.714 ^a	.296	17.120	18.307
control	13.686 ^a	.296	13.093	14.280

a. Covariates appearing in the model are evaluated at the following values: communication skills pretest = 8.3167.

The results suggest that the experimental group (the simulation method) has a meaningfully higher score than the control group (the conventional method) does.

The analytical results of the covariance related to the 3rd question "the effect of the simulation method on the word and expression recollection skill of the English language learners is presented in table 5:

Table 5: Tests between the effects of subjects related to the effect of the simulation method on the word and expression recollection method:

Dependent Variable: the word and expression recollection method						
Source	Type III Sum df	of Squares	Mean Square	F	Sig.	Partial Squared
Corrected Model	442.977 ^a	2	221.488	144.521	.000	.835
Intercept	404.930	1	404.930	264.217	.000	.823
Time 1	169.910	1	169.910	110.866	.000	.660
group	239.016	1	239.016	155.958	.000	.732
Error	87.356	57	1.533			
Total	14332.000	60				
Corrected Total	47.108	156				

R Squared = .60 (Adjusted R Squared = .614)

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The results of the first colored line suggests that the auxiliary accidental variable ($F=110.866$) at($p<0.5$) fallibility has a meaningful relationship with the dependent variable, and the second colored line suggests that the conventional group and the experimental group related to the post test has a meaningful difference with the focus on recollection. The other results are presented in table in table 6:

Table 6: The adjusted averages and their standard errors related to the effect of the simulation method on recollection skill

Dependent Variable: recollection skill	Group	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Experimental		17.169 ^a	.226	16.715	17.622
control		13.165 ^a	.226	12.711	13.618

a. Covariates appearing in the model are evaluated at the following values recollection skill pretest = 10.3333.

The results show that the experimental group (the simulation method with the focus on recollection) has meaningfully higher scores than the control group (the conventional method).

The results of co-variance analysis related to the "4th question" the effect of the simulation method on the increase of language learners' ambition for joining in English language discussions" is presented in table 7:

Table 7: Tests between the effects of subjects related to the effect of the simulation method on the increase of language learners' ambition for joining English language discussion.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial	Eta Squared
						Squared	
Corrected Model	1429.203 ^a	2	714.602	61.192	.000	.682	
Intercept	340.870	1	340.870	29.189	.000	.339	
Time 1	37.186	1	37.186	3.184	.080	.053	
group	1221.270	1	1221.270	104.579	.000	.647	
Error	665.647	57	11.678				
Total	8035.000	60					
Corrected Total	2094.850	59					

R Squared = .614 (Adjusted R Squared = .61)

The results in the first colored line suggests that the auxiliary accidental variable($F=3.184$) with($p>0.05$) fallibility has a meaningful relationship with the dependent variable, and the results on the second colored line suggest that the conventional group and the experimental group have a meaningful relationship with the focus on language learners ambition for participation. The other results are in table 8:

Table 8: The adjusted averages and their standard error

Dependent Variable: the increase of language learners' ambition for joining in English language discussions

group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental	15.253 ^a	.681	13.890	16.616
control	4.647 ^a	.681	3.284	6.010

a. Covariates appearing in the model are evaluated at the following values: the increase of language learners' ambition for joining in English language discussions pretest = 8.3833.

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The results suggest that the experimental group (The simulation method with a focus on the increase of participation ambition) has meaningfully higher scores than the control group(the conventional method). The results of co-variance analysis of the 5th question" The effect of the simulation method on the increase of learners' self-confidence for joining the use of their knowledge in the field of English language is shown in table 9:

Table 9: Tests between the effects of subjects related to the effect of the simulation method on the increase of language learners' self-confidence

Dependent Variable the increase of language learners' self-confidence.						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Squared
Corrected Model	799.357 ^a	2	399.679	90.108	.000	.760
Intercept	175.311	1	175.311	39.524	.000	.409
Time 1	312.007	1	312.007	70.342	.000	.552
group	527.984	1	527.984	119.035	.000	.676
Error	252.826	57	4.436			
Total	6913.000	60				
Corrected Total	1052.183	59				

R Squared = .614 (Adjusted R Squared = .61)

The results in the first colored line suggest that the auxiliary accidental variable($F=70.342$) at the($p<0.01$) fallibility has a meaning relationship with the dependent variable, and the results in the second colored line suggest that the conventional group and the experimental group have a meaningful difference with the focus on the increase in language learners' self-confidence. The other results are presented in table 10:

Table 10: The adjusted averages and their standard error

Dependent Variable: the increase of language learners' self-confidence.				
group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental	12.854 ^a	.385	12.083	13.624
control	6.913 ^a	.385	6.142	7.683

a. Covariates appearing in the model are evaluated at the following values: the increase of language learners' self-confidence pretest = 6.7833

Discussion

The results suggest that the experimental group (the simulation method with a focus on increase in self-confidence) has meaningfully higher scores than the control group (the conventional method).

The results of co-variance analysis of the first question suggest that the experimental group (the simulation method) has meaningfully higher scores than the control group (the conventional group) in language learning skills. These findings are consistent with and supported by those of Look-Chan (2013) which study the effect of simulation program on the basis of Chines students learning English, and also consistent and supported by those of Dutil (2007) and Toodgran (2008). Since simulated curriculum is developed to involve students in an environment, and obtain a feedback so that suitable subject are adopted with student needs, the better the simulated curriculum is designed, the better the student adapt themselves to an environment, and as a result, all their learning skills will be reinforced. Language learning experts use the simulation method to put language learners in a situation almost similar to a real situation so that all language learning skills are put to use in a harmoony, and in the same senariose as real situations. The results of co-variance analysis of the second question suggested that between average post-test scores of the conventional group and the simulation group in communication skills, there was a meaningful difference. These findings are consistent with those found by such researchers as Nazari

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(2010), Barzegar (2012), Mehrmohamadi (2011), Tad (2008), Kinz (2011), and Janson (2012). Simulation method, in principle, exposes learners to almost real problems and makes them co-operate with each other to solve problems, this enhance and expands communication skills.

The result of co-variance analysis of the third question suggested that the experimental group's average recollection score has a meaningful difference with that of the control group. These findings are consistent with and supported by those of Nazari (2010), Barzegar (2012), Mehrmohamadi (2011), Tad (2008), Kinz (2011), Janson (2012). Since simulated curriculum helps syncretism through imitating roles, and scientifically obtaining experiences, recollection skill in real situation in which works and expressions are used and mixed with daily life, they get more sustainable and dynamic. The results of co-variance analysis of the fourth question suggested that the language learners' average ambition for joining discussion in the experimental group is meaningfully higher than that in the control group. These finding is consistent with and supported by results obtained by Pazargardi (2011), Barzegar (2012), Behrangi (2011), Richards (1985), Watson (1986), Albert (1999), Ductal (2007), Kinez (2011), and Janson (2012). To explicate this finding, we have to say that since simulated program has a proper structure, appropriate conversational contact between language for learners can be impressive in increasing ambition for participating in learning activities and enables learners to understand their environment better, reinforces skill, experience and knowledge related to learning process, and leads to their active participation in learning. Finally, the results of co-variance analysis of the fifth question suggested that the language learners' average self-confidence in using what they have learned in the experimental group is meaningfully higher than that in the control group. This finding consistent and supported by those found by Soleimanpour (2008), Shariatmadari (1997), Nazari (2010), Pazargadi (2011), Barzegar (2012), Richards (2007), Gordler (1992), Ductal (2007), Tad (2008), and Janson (2012). According to the findings related to the simulated curriculum in teaching English, and its effect on language learners' self-confidence, it can be said that simulation curriculum is an active learning method in which language learner's personal or group participation in an almost real environment is increased; because of the kind of practices in a competitive environment and active learning, learner's self-confidence increases. Situated in a real situation, learner's potential is used, and it will not face harms it was faced by in conventional classes. Learners, in fact, have to improve concepts and skills they need in playing different roles to make in improvement to make use of simulated experiences. This will be entailed by self-confidence.

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