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A *Causal-Comparative* Study of Academic Achievement and Psychological Well-Being of Students in Virtual Education and Traditional Education Supported by State Welfare Organization of Iran

Afsanh Fattahbeigi

Master student of General Psychology, Faculty of Literature and Humanities, Azad University, Persian Gulf Branch, Khorramshahr, Iran.

ABSTRACT

Some students experience academic decline and psychological problems in the process of transition from traditional to virtual education. These problems are very important for the future of online education to identify and find the causes of academic failure and psychological problems, as well as provide solutions to improve the academic success and psychological well-being of current and future students. For this reason, this study investigates the academic achievement and psychological well-being of students in virtual education and traditional education supported by the State Welfare Organization of Iran. In this research, 30 supported students were categorized into virtual education and online education groups. Finally, it was found that the virtualization of education has a positive effect on both academic achievement and psychological well-being if the appropriate hardware facilities and qualified teachers are provided.

Keywords: Aacademic achievement, psychological well-being, students supported by State Welfare Organization.

Introduction

Online education has grown significantly both in terms of the number of *training* courses and graduate number. The delivery format is reinforced by student populations that are growing non-traditionally. Work and family commitments require that classes be held in a way that meets the needs of students. The growth of universities toward online courses and degrees has offered opportunities for students, but it has also introduced new revenue streams to higher education institutions (Zlatkovic et al., 2020).

Nowadays, many systems are oriented towards customizing User Information. This is also true for e-learning, and one of the necessities is a personalized mechanism to help the learner for effective learning. In this regard, the e-learning environment should be personalized and monitors the learner's behavior on a regular and permanent basis considering the information needs and different users' capabilities and change the teaching method and educational approach according to these studies. (Dargi and Rashidi, 2014).

The number of students participating in online courses has increased significantly in recent years. In 2005, approximately 3.2 million students completed at least one internet-based course (Foster and Carnival, 2007), and were more than 57.5 million in 2014 (The National Center for Education Statistics, 2016). Newer *estimates* show that 6.7 million students attend at least one online class (Outlaw & Rice, 2015). Today, the number of students learning from online classes has increased due to the *coronavirus* outbreak. Therefore, it has become especially important to study the impact of these training and the factors affecting students' academic success in terms of using virtual education.

In general, the purpose of e-learning is to provide equal, free and searchable access to courses , create a unified learning environment for different groups everywhere, and optimize the presentation of course materials for deeper learning. In this educational environment, people benefit from the topics according to their ability, unlike traditional educational methods. In e-learning, maximum efficiency in learning can be achieved by combining different learning methods, such as text, audio, video, etc. (Ting et al., 2018. Quoted from Jahanian and Ebtekar, 2020).

Characteristics of the e-learning system include ease and speed in updating, storing and retrieving, and sharing network-based information, conducting learning process and communicating directly with learners via computer and the Internet, focusing on a comprehensive view of learning, creating an all-inclusive system instead of teacher-centered system, flexibility in learning, new and appropriate learning methods, reproducibility and problems solving (Ingelberchet,2015).

Learning and teaching in educational technology are being developed for educational, commercial, and open access to a variety of skills training. Researchers have studied the success factors of e-learning in schools and found factors such as technology acceptance, technical support, and the availability of an efficient development model (Kong, 2019).

Today's education *system* faces *a range of challenges* related to learning and teaching efficiency, effectiveness, and expenses. Contemporary research shows that the learning environment facilitates the learning process with the capability to adapt to the needs, requirements, and students' personal competencies. It leads to improve learning outcomes and achievements. However, learning management systems, often used in e-learning, typically provide a limited level of adaptation (*Arsovic, Stefanovic*, 2020).

In fact, psychological well-being is a sense of cohesion and coherence, emotional balance, and overall life satisfaction. Bison (2008) believes that well-being includes positive factors, not just the lack of negative factors. It is a relatively broad concept that refers to good and satisfying living conditions and is a situation that is described by health, happiness, and success. Gorel (2009) believes that well-being means the ability to actively participate in work and leisure, build meaningful relationships with others, experience positive emotions, develop a sense of autonomy and purpose in life, and experience positive emotions. Diner et al. (2003) consider well-being as the meaning of cognitive and emotional evaluation of people of life; This means that ordinary people consider it happiness, peace, prosperity, and life satisfaction. Keys et al. (2002) argue that psychological well-being involves the perception of interaction with life's existential challenges.

Psychological well-being consists of several distinct variables: 1) Self-acceptance: which includes positive assessments of self and past life; 2) personal development: a sense of development continuity of a person; 3) purposeful life: it means that a person's life is purposeful and meaningful; 4) positive relationships with others: good-quality relationships with others; 5) environmental mastery**:** effective management capacity on life and the world around; 6) autonomy: a feeling of Independence (Reef and Keys, 1995). Lutans (2002) believes that psychological well-being is primarily influenced by individual factors. In the meantime, he emphasizes the role of psychological capital (Hashemi Nosratabad et al. l, 2011). Academic decline and low level of academic achievement of students areare one of the main problems of the educational life of individuals and the educational system in every country. In general, academic achievement as a dependent variable is not affected by one factor, but several factors such as cognitive and metacognitive factors affect it. (Rezaei et al., 2018). Today, the education system of any

society is the foundation of the socio-economic, political, and cultural development of that society, and academic achievement is one of the important indicators in evaluating the educational system. (Saeedzadeh et al., 2018).

Students have important capacities in which their prosperity is a necessary precondition for the success and development of modern societies today, but various risk factors in this direction have always led to short-term and long-term individual and social harms. Every year, many students, despite their good ability and talent to continue their education, suffer from academic failure and, in some cases, are forced to leave school. There are many factors involved in this problem, which are factors related to school and intolerance in class due to various reasons, including financial problems and lack of support from families. The principal question is why some students are unable to deal with failure, poor performance, stress, and academic pressures while other students improve their own performance? Why do some students lose when academic failure, but others simply respond to their poor performance? The answer to these questions lies in the concept of educational mindfulness. (Abolfazli et al., 2020). The decline in educational performance, in addition to creating problems in the educational process of students, can also affect their cognitive and emotional process, which is necessary to use appropriate psychological therapies to reduce these injuries (Shafi Naderi, 2020).

Literature review

In the thesis ‘’A Causal Comparative Study of Student success and retention in an under an undergraduate Program offered online and on-campus”, Tudor (2018) argued that educational success help offset the decline in government support in public universities in Kentucky. Continuation of this template is to deliver courses to the success of those who have enrolled in those courses and programs. The study seeks to determine whether students registering for an online undergraduate and graduate program at a comprehensive public university in the southeastern United States perform at the same level as they are assessed by the score derived from one main program in an introductory-level course and continue in a similar course. In this way, rates are measured by taking into account the first to second year. The effect of auxiliary variables on online and Intra-university results was also examined. Yousefzadeh and Dianat Rad (2020), in their research ‘online education on the psychological well-being of primary school teachers in Babol city’’, stated that the purpose of this study was to investigate the effect of virtual education on the psychological well-being of primary school teachers. This study was descriptive survey research**.** Data collection techniques were standard questionnaires that included the variables of Kim et al.’s (2005) online learning and Reef’s (2000) psychological well-being, and their reliability is assessed using Cronbach's alpha. The statistical population is the primary school teachers of Babol city in 2020 (N=360), and simple random sampling is used. The sample size is 186, according to Morgan's table. Data are analyzed in two sections descriptive statistics and inferential statistics using SPSS Statistics. Descriptive statistics included statistical distribution tables and bar graphs. A regression test was used in inferential statistics. Findings show that online education has an impact on the psychological well-being of teachers.

Methodology

This study is a quasi-experimental research with a pretest-posttest design in a control group in terms of implementation, which is performed in two groups (experimental group of 15 people and a control group). In the first group, the online teaching method was implemented, and in the other group, traditional learning methods were implemented, and the effect of these methods was examined on the academic achievement of the fifth-grade students and the psychological well-being of students supported by the State Welfare Organization in Tehran.

Table 1. Research plan diagram

Group	Pretest	Independent variable	post-test
Experimental group	T1	X	T2
Control group	T1	-	T2

Procedure:

We refer to one of the schools introduced by the State Welfare Organization and select the fifth grade in a cluster after obtaining the necessary permits from the Department of Education of Tehran. We select two fifth classes as a cluster, and in the intervention stage, we consider 15 people from class A as the experimental group and 15 people from class B as the control group as peers. Teaching in two classes is done by the researcher herself, no matter how many people are learners (the purpose of teaching by one person is to control teacher performance), but the data of these two groups of 15 people enter the research. The e-learning program will be implemented to the experimental group in 8 sessions of 60 minutes. The statistical population of this study is elementary school students (male) under the support of the State Welfare Organization in Tehran who are studying in this metropolitan in 2020-2021. The number of samples will be 30, depending on the type of research.

Demographic characteristics

In this section, the characteristics of gender, age, education of 30 statistical samples described in the third chapter are examined in two groups: control and experimental.

It should be noted that these 30 people are all studying in the fifth grade of elementary school, so they all have specific education and are male. The age range is from eleven to twelve.

The statistical fact of academic achievement is presented below (table 1).

a) academic achievement

Table 1: Pre-test and post-test of academic achievement in control and experimental groups

Experimental group	Control group	Academic achievement
14.3	12.2	Pretest
17.53	13.27	Posttest

These are presented in the following (figure 1):

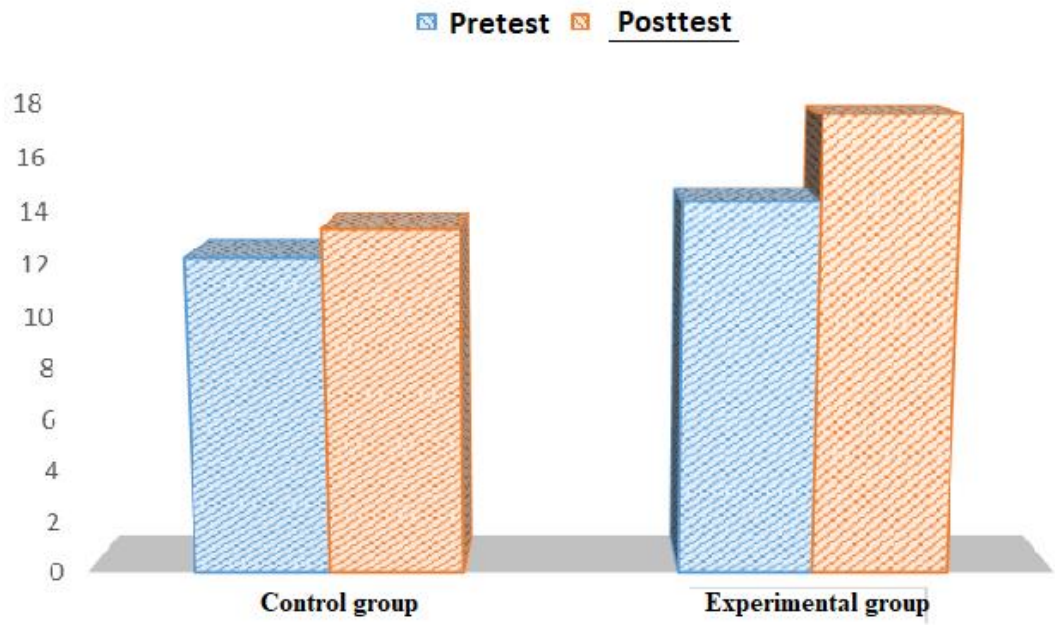

Figure 1: Pre-test and post-test of academic achievement in control and experimental groups

b) psychological well-being

Table 2: Pre-test and post-test of psychological well-being in the control and experimental groups

Experimental group	Control group	Psychological well-being
95.3	73.8	Pre-test
162.3	105.13	Post-test

Where are presented in the following (figure 2):

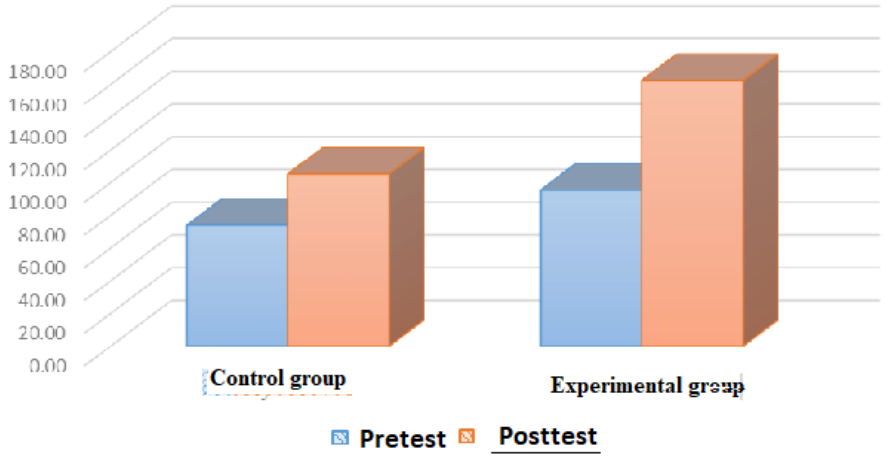

Figure 2: Pre-test and post-test of psychological well-being in the control and experimental groups

c) the homogeneity of regression slopes

Table 3 summarize the regression model estimates:

Table 3. Results goodness of fit for a regression model

Response variable = Academic achievement (experimental group)			
Significance level	Test statistic t test	Regression coefficients	Independent variables
--	0.67	2.79	Equation(a) constant
**	2.57	1.04	Online education
F statistics test =6.63 Coefficient of determination=0.33		Significance level=0.02	

**: Significant at a confidence level of more than 95%

Table 4 Results of the goodness of fit for a regression model

Response variable = Psychological well-being (experimental group)			
Significance level	Test statistic t test	Regression coefficients	Independent variables
---	-0.65	-2/39	Equation(a) constant
***	3.67	1.36	Online education
F statistics test =13.51 Coefficient of determination=0.51		Significance level=0.003	

**: Significant at a confidence level of more than 99%

The regression model is significantly based on the results and the table above with respect to the F-statistic and significance level. Therefore, the hypothesis of heterogeneity of regression slopes is rejected. Therefore, the regression slope of the two variables is homogeneous, and a significant correlation is confirmed.

Hypothesis analysis

The analysis of the results is presented below

The primary hypothesis

Virtuality of education affects the academic achievement and psychological well-being of primary school students (male).

Table 5: ANOVA test T-coefficient results

Significance level	T-coefficient	Mean absolute difference	Variable
0.006	-3.20	4.26	Academic achievement
0.001	-4.18	4.86	Academic achievement

The difference between the two groups is statistically significant (Table 5).

The hypothesis 1

Virtuality of education affects the academic achievement of elementary school students (male):

Table 6: Results of even T-factor

Significance level	T-factor	Mean absolute difference
0.006	-3.20	4.26

Significant at a confidence level of more than 95%

The difference between the two groups is statistically significant (Table 6).

Table 7 presents the ANOVA analysis for the first model:

Table 7: ANOVA analysis for the first model

	Significance level					F statistic	Mean squared error	Degrees of freedom	Sum of squares	Model
						6.63	76.64	1	76.64	Regression
							11.25	13	146.28	Error
								14	220.93	Sum
Significant level	Resources	Sum of squares	Degrees of freedom	Mean squared error	F statistic					
00.0 00.0 00.0	Corrected model y-intercept Separation group variables Pre-test of academic achievement Academic achievement pre-test group Total error Total corrected error	354.115 19.973 2.586 219.053 30.60 8.585 8931.000 362.700	3 1 1 1 1	118/038 19.973 2.586 219.053 3.060 0.33	357.479 60.488 7.831 663.402 9.267					

A covariance test is also provided for this model:

Table 8: Analysis of covariance of academic achievement

Coefficient of determination=0.97

The coefficients are completely significant. Analysis of covariance also shows the effect of virtualization of education on academic achievement.

Hypothesis 2

Virtuality of education affects the psychological well-being of primary school students:

Table 9: Paired Sample T-Test results

Significance level	T-factor	Means difference
0.001	-.418	4.86

Significant at a confidence level of more than 95%

The difference between the two groups is statistically significant (Table 9).

Table 10 presents the ANOVA analysis for the second model:

Table 10: ANOVA analysis for the second model

Significance level	F statistic	Mean squared error	Degrees of freedom	Sum of squares	Model
0.003	13.51	12.63	1	127.63	Regression
		9.44	13	122.76	Error
			14	250.40	Sum

Therefore, the effect of virtual education on the psychological well-being of fifth-grade elementary students is confirmed according to the results of table 10.

Coefficient of determination:0.98

Table 11: Analysis of covariance for psychological well-being

Resources	Sum of squares type	Degrees of freedom	Mean squared error	F statistic	Significance level
Corrected model	582.046a	3	194.015	705.153	.000
y-intercept	20.406	1	20.406	74.166	.000
Separation group variables	2.471	1	2.471	8.982	.006
Pre-test of academic achievement	402.719	1	402.719	1463.690	.000
Academic achievement pre-test group	3.997	1	3.997	14.528	.001
Total corrected error	7.154	26	.275		
	7890.000	30			
	589.200	29			

Conclusion

In this study, the correlations considered are significant, and it can be said that the virtuality of education affects both academic achievement and psychological well-being. Of course, it should be noted that this significant impact and prove that it requires appropriate hardware facilities, proper training of teachers for proper online teaching, and proper school planning. Every system has pros and cons. Pros and cons of the e-learning system are also among the topics that have received a lot of attention today. The use of virtual learning systems is increasing day by day. All organizations, universities, schools, and companies were closed due to the outbreak of the Coronavirus. These centers need to restart their activities with the continuation of these conditions and long holidays. Long holidays were impossible for companies and organizations in some cases and caused great economic losses in others. This is true for schools and universities. In addition to the backwardness of students, faculty and staff need income to survive. But these shortcomings need to be addressed in order to increase the quality of education and the quality of learning. Online classes require high motivation to progress in virtual courses. These training are ideal and unique for working people because they are recorded. So it can be downloaded and view them whenever you want. But perhaps these cases and the possibility of recording and reviewing these training in the future will lead to the student's lack of concentration in the classroom and will disrupt comparative learning.

References

Tudor Daniel David (2018), A Causal Comparative Study of Student Success and Retention in An Under An Undergraduate Program Offered Online And On Campus, Online Theses and Dissertations, Eastern Kentucky University.

Siu Cheung Kong (2019). The partnership among Schools in E-Learning Implementation: Implications on Elements for Sustainable Development. Journal of Educational Technology & Society. Vol. 22, No. 1 (January 2019), pp. 28-43. International Forum of Educational Technology & Society. https://www.jstor.org/stable/26558826. Page Count: 16.

Raymond Ting, Angela C. Smith and Emily Gomez (2018) E-Learning in China: Progress, Challenges, and Research Issues. Digital Transformation and Innovation in Chinese Education. DOI: 10.4018/978-1-5225-2924-8.ch001.

Dragan Zlatkovic, Nebojsa Denic, Milena Petrovic, Milos Ilic, Majid Khorami (2020), Analysis of adaptive e- learning systems with adjustment of Felder- Silverman model in a Moodle DLS, Volume28, Issue4 July 2020

Yousefzadeh, Massoud and Dianat Rad, Mohammad Javad, the effect of virtual education on the psychological well-being of primary school teachers in Babol, the first national conference on applied studies in educational processes, Bandar Abbas, 2020

Abolfazli, Parvin, Tahmasebipour, Najaf, Nasri, Sadegh. (2020). The effectiveness of mindfulness-based stress reduction program on academic resilience and self-esteem of female high school students. Quarterly Journal of Research in Educational Systems, 14 (Special Issue), 383-397. doi: 10.22034 / jiera.2020.208129.2141

Rezaei, Abdolmutallab, Raisi, Khodadad, Jalilian, Sara. (2018). Investigating the effect of metacognitive skills and academic self-efficacy on academic achievement of agricultural students in Saravan Higher Education Complex. Iranian Journal of Agricultural Economics and Development, 49 (4), 749-764. doi: 10.22059 / ijaedr.2018.237405.668455

Saeedzadeh Mohammad, Mohammadi Yahya, Asadi Fariba, (2018), The role of metacognitive beliefs and self-efficacy in students' academic achievement, Yazd Center for the Study and Development of Medical Education. Summer, Number 2; 140 -149.

Shafi Naderi, Mahdieh, Sharifi, Tayebeh, Ghazanfari, Ahmad, Ahmadi, Reza. (2020). The effectiveness of mindfulness-based stress reduction education on self-efficacy and academic burnout of female students with secondary education. The Medical Journal of Mashhad University of Medical Sciences, 63 (6), -. doi: 10.22038 / mjms.2021.18119

Dargi, Ayub, Rashidi, Hassan. (2014). Modeling user knowledge for adaptive learning in an e-learning environment. **The technology of Instruction and Learning**, 1 (1), 111-136. doi: 10.22054 / jti.2014.227