

The Investigation Of The Effectiveness Of Participatory Learning Education On Students Motivation And Academic Achievement

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ABSTRACT: The purpose of this study was to investigate the effectiveness of teaching in the way of participatory learning on the motivation and academic achievement of students. The research method was quasi-experimental with pretest-posttest design with the control group. The statistical population of this study included all 9th-grade female students of Kabul private schools. The sample consisted of 60 people who were selected by random cluster sampling method. In this research, 30 participants received participatory learning and 30 were in the control group. Data were collected using a questionnaire of academic motivation and academic achievement test. For data analysis, covariance analysis was used. Findings showed that participation in learning is effective in improving academic motivation and academic achievement ($p < 0.001$). Application of the results of the research for teachers is that in order to increase the motivation and academic achievement of students, the role of motivational factors of learning in participatory learning should be considered.

Keywords: Education, Participatory Learning, Academic Motivation, Academic Achievement

1. Introduction

Throughout history, according to the prevailing conditions of educational systems, there have been different approaches and perspectives in the teaching and learning process (Eghbaladi, 2006). The complexity and problems with learning and behaviours of the students, on the other hand, force the teacher to change the behavioural style and teaching method and seek to qualify the teaching. In order to qualify, they take advantage of the findings of various human sciences and pay more attention to their teaching and role, which has led to the formation of new teaching approaches. The progress of each society depends on the educational capability of that society, and the efficiency of any educational system by measuring the achievement of the graduates of that system can be traced to educational goals. Educational goals also determine the methods and curricula. Achievement and academic achievement in any society are targeted and meet individual needs. Therefore, the educational system can be worked out and successful. Students' academic achievement has the highest and highest rates in different periods. Therefore, efforts to involve learners as much as possible in the teaching process-learning through participatory learning methods can be effective in academic achievement (eg, Faryad, Wheat, 2011). Participatory learning also has a strong theoretical background, with both accurate and empirical support. This approach is supported by behaviourists and learning experts. From the behaviorists' point of view, attempts to improve the group's performance are positive for this method, and from a cognitive theoretical point of view - Bandura Social When they see children doing what their friends do, they learn better, when they see success in the group together, their interest in learning becomes greater, and from Vygotsky's point it can be argued that when That a child is left with the help of his friends and teacher It learns better and learns fully. Participatory learning is a method in which students are divided into small groups and discussed within each group, then small groups present their summaries of the topics discussed in the classroom at The end of the teacher's lesson by designing enrichment questions and encouraging

students to think and respond are trying to deepen their learning (Kaymanesh, 2004). In a research study, Chapman and Cap (2004) studied the effect of participatory learning on reading progress and self-confidence 83 students under three conditions (group reward, individual reward, no reward), the results showed that in group rewards students in Speed and accuracy scores in reading were 50% higher than the group without individual rewards and rewards, and group reward had a significant impact on students' self-esteem. Cameron (2009) also found that collaborative learning had a greater impact on the academic achievement of mathematics than the traditional one. Hartup believes that students who are given responsibility for a collaborative learning group and are taught to other classmates learn that their motivation improves on their subject and their academic performance, in addition to their academic excellence and dignity Their breathing becomes better (Talebi, 1384). Miguel Pohled (1999) showed that students who participate in their exercises take on average higher grades in exams, and if they are exposed to different experiences in the classroom, learning it is good for them. Also, Anivibasis research (2002) suggests that students participating in learning groups learn more about academic achievement than others who learn individually. Fisher's research (2004) has found increased academic achievement for students with low and moderate academic achievement in collaborative learning. Gilles (2004) conducted research on the effects of collaborative learning on upper secondary school students in small groups. The results of the study showed that students in structured groups were more likely to have teamwork in their assigned tasks, and had a better and stronger understanding of social responsibility for each other. Robert (2004) also conducted a study on the effect of participatory learning on the performance of the academic achievement test. The results showed that the overall effect size was 42% for participatory learning versus individual learning, and students who scored low in the pre-test. They achieved remission during collaborative learning. The Teacher's Guide has a major role in participating groups, especially teacher guidance for students with low academic success. Participatory learning,

combined with effective teacher guidance, can enhance students' motivation and sense of responsibility, and give them a positive attitude toward school. Arlie also believes that the participatory learning process plays the role of guidance teacher of the groups and gives them clues. According to him, the teacher must give the students a basic responsibility for learning so that each member takes responsibility for each other and their learning (Keramati, 1390). Similarly, in one of the Persian speaking countries, the results of several studies show the positive effects of collaborative methods on cognitive-emotional educational outcomes, for example, Pakizadeh (1997), Yazidipour, Yousefi and Haqqani (2009), Mahmoudi, Fathi Azar and Esfandiari (2009) Showed that the cooperative learning group got higher scores in the academic achievement test compared to the traditional group. In addition, the method of teaching constructivist education is a student-centred approach, which emphasizes the active participation of learners in acquiring knowledge. In building-based education, which is a process-based learning process, more learning and thinking processes are considered than its products. In constructivism, the emphasis is placed on the importance of building knowledge through connecting pre-learned with new learning. In this perspective, the link between the new and the previous learning is searched. So the people themselves create schemas with their own mental maps. In the new learning, these mental maps are redefined and rebuilt. Student-based learning can lead to increased student satisfaction, increased motivation to learn, accelerated learning, problem-solving skills, learning progress, learning continuity, and critical thinking (George W., 2000). One of the most successful student-centred ways is to use a conceptual map. The conceptual map is the systematic provision of keywords, so that the broader identify important topics and concepts of a text, and then organizes these topics in a meaningful and hierarchical pattern. And it uses it successfully. The application of a conceptual map to a comprehensive subset of content gives the content that it feels to have acquired sufficient mastery of information. For example, by linking map information to previous lessons, new information can easily be integrated with the learner's knowledge framework (mesrabadi, 2006). Cole (2007) in an intervention study to increase students' understanding of acid and open lessons in chemistry, was to increase the attitude toward the chemistry course, which the experimental group trained using the conceptual map and the control group using the traditional method. Analysis of the findings showed that there was a significant difference between the experimental group and the control group from the conceptual understanding of the acid and open lessons, and also for the experimental group, the experimental work was more enjoyable. Ballat (2010) showed that a conceptual map was also used to educate teachers as well as to improve students' learning in learning, as well as helping students become aware of their learning processes. In the relativity of Joe, Sandman 4 (2010), the concept map was only useful to those who had a lower cognitive ability than others. New findings (2002) suggest that the conceptual map method is more effective than a lecture on academic achievement and that the effectiveness of this method is similar to that of male and female students. Also, Harton Gallo Woods (2001) in a meta-analysis, after studying nineteen qualitative studies, concluded that the overall conceptual map had positive effects on academic achievement of as much as 46% as well

as on people's attitudes. Urarra et al. (2007) showed that the experiment group, which was trained by conceptual mapping, was significantly more motivated to learn biology lessons, and the researchers concluded that the use of conceptual maps is an effective teaching method that teachers need to combine this method with their teaching methods. Also, Egyptian Abadi, Fathi Azar and Stavard (2005) in a research on the effectiveness of presenting and constructing individual and constructing a group of conceptual maps as a training strategy, the findings showed that the mean post-test scores increased compared to pre-tests, but the highest The effect of the conceptual map on the conceptual mapping of the individual construct and the least effect on the conceptual mapping of the group construction method was observed. Finally, since research has not analyzed the effect of education on participatory learning on student motivation and academic achievement in Afghanistan, this research seeks to answer the question of whether learning is a participatory learning approach to motivation and academic achievement Does the student have any effect?

2. Research Method

In this research, a pseudo-experimental design with a pretest-posttest design with a control group with random selection was used. The research consisted of a test group, a participatory learning group, and a control group. The statistical population included all female students in the ninth grade of Kabul's private schools in 1398. In this research, a multi-stage cluster sampling method was used. In the first instance, one of the districts was randomly selected from the districts of Kabul city, then two schools were selected randomly from among the private schools in this area. After the 9th-grade students were randomly assigned to three classes as the sample, these three classes were randomly assigned to the experimental groups (30 in the participatory learning group and 30 in the control group). The first group was trained by participatory learning method and the control group was trained in a traditional way.

2.1. RESEARCH TOOL

Data were collected using the McAurney Motivational Inventory and academic achievement test.

A- Educational Motivation Questionnaire: To measure the variables of academic motivation in this study, a short form of school motivation questionnaire was considered. The main form of the questionnaire consists of 100 questions, which were reviewed by McInnery and Singhler (1992) on a sample of 2152 male and female students (approximately identical) in Australia. The questionnaire is designed to measure two dimensions of the three-dimensional model of the skilled model, personal incentives "and" self-esteem ". The sketched questions for measuring self-reliance and external rewards include competing, power-seeking, reputational, and material rewards of a general factor that is called external motivation. Orbital tasks, including the tendency to progress, and tendency to work and homework, also formed a general factor that was called internal motivation. The stability of findings in different groups strongly confirmed the validity of the school motivation questionnaire and the validity of its structure. The reliability of different scales of school motivation questionnaires is also obtained by calculating the Cronbach's alpha. According to

McArinney and Sinclair (1992), the alpha coefficient for various scales was generally above 0.70. In this research, a short form of the McInerney and Sinkler School Motivational Questionnaire was used. The questionnaire contains 49 words based on the Likert scale and 11 of academic motivation (goal-orientation, Article competitiveness, attitude to work and duty, achievement orientation, dependence on social assistance, social, fame-seeking, material rewards, Powerfulness, self-esteem and self-esteem. The reliability of the questionnaire was measured through Cronbach's alpha test and analysis. In the open method, the total reliability of the test was 0.95. The reliability coefficients of the 11th scale were also relatively high and the range of these coefficients varied from 0.70 (relative to the progression scale) to 0.90 (related to the external stimulation scale). The average coefficients were 0.77. Also, the internal consistency of the questionnaire used for the whole questionnaire was 0.77. The scale of academic motivation in this study was calculated using Cronbach's alpha, and the reliability of the whole test was 84%.

B - Academic Achievement Questionnaire: A researcher-made questionnaire that obtained its content validity based on the drawing of the profile table. Also, in order to calculate the reliability of the test, the method of two half-diving was used and the reliability of this test was 0.72. In this study, in addition to calculating Cronbach's alpha, the questionnaire was used to examine the reliability of the questionnaire, in which the coefficient The correlation of the academic achievement questionnaire was 0.66 which indicates a high correlation between the two halves and the reliability of the test. In this research, one variable variance-covariance test was used to test the research hypotheses. The statistical method was analyzed by SPSS19 software to obtain more accurate and accurate results.

3. FINDINGS

Before analyzing covariance, a variable of its assumptions was examined. For this purpose, the homogeneity of variances was first used. For the purpose of this assumption, the data were analyzed by Lone test, data analysis was performed using the Lohn test to determine Homogeneity of variances did not show any significant difference since the significance level of F was higher than 0.05 ($P < 0.05$). So the assumption of homogeneity of variances is accepted. Then, the assumption of homogeneity of the slope of regression

was performed; this assumption means that the correlation between the pre-test and post-test scores of motivation and academic achievement is identical in the control and experimental groups. This means that there is no significant difference in their relationship with the two groups mentioned. For this purpose, one-way ANOVA was used to verify the homogeneity of regression slopes, with a significant level of F value higher than 0.05. Therefore, the pre-test and post-test regression gradients of motivation and academic achievement in the experimental and control groups did not differ significantly and the assumption of homogeneity of regression slopes was confirmed. The findings show that the grades of academic achievement in the pre-test of the two groups do not differ significantly. The mean of these scores in the learning group was 6.10 in the participatory learning and 6.80 in the control group. However, the average grades of academic achievement are different after the two groups, with the participation in the learning group being 13.75, and the control group is 7.20 (Table 1). The findings show that the grades of academic motivation in the pre-test of the three groups do not differ significantly. The mean of these scores in the learning group in the participatory learning method is 152.35, in the control group is 151.35. However, the mean scores of academic motivation in the post-test of the two groups are different, so that the mean scores in the learning group in the participatory learning method is 166.75 and in the control group is 150.45. Generally speaking, in the participatory learning group, the increase in mean scores of post-test of academic motivation was 14.4 compared to the pre-test (Table 2). Data analysis is based on a moderated average (average in which the effect of the auxiliary random variable is eliminated) shows that the learning group in the participatory learning method has the highest average scores for academic achievement and the control group with the lowest average scores. The mean of these scores in the learning group was 14.36 in the participatory learning method and 7.26 in the control group. According to the results of the data analysis, the amount of calculated F is 68.71 and the significance level of this value with a degree of freedom of 3 and 75 is less than 0.05. Therefore, the difference between the average grades of academic achievement among the groups is significant. According to Eta, the effect of the difference between the above training on students' academic achievement is 73% (Table 3).

Table 1. Results of pre-test and post-test scores of academic achievement

Testing the Groups	Pre-Test			Post-Test		
	Frequency	Average	Standard deviation	Frequency	Average	Standard deviation
Participatory method Group	30	6.10	1.33	30	13.75	2.57
Control Group	30	6.80	1.39	30	7.20	1.24

Table 2. Scores of pre-test and post-test of academic motivation

Testing the Groups	Pre-Test			Post-Test		
	Frequency	Average	Standard deviation	Frequency	Average	Standard deviation
Participatory method Group	30	152.35	9.35	30	166.75	12.99
Control Group	30	151.35	14.55	30	150.45	16.37

Table 3. The results of covariance analysis on the effect of participatory learning education on increasing academic achievement

Groups	moderated average	Standard deviation	F	Degree of Freedom	significance level	Eta-squared
Participatory method Group	14.36	0.42	68.71	3, 75	0.001	0.73
Control Group	7.26	0.41				

Table 4. The results of covariance analysis on the effect of education on participatory learning on Increasing academic motivation

Groups	moderated average	Standard deviation	F	Degree of Freedom	significance level	Eta-squared
Participatory method Group	166.09	2.56	8.42	3, 75	0.001	0.25
Control Group	150.37	2.56				

Also, analysis of academic motivation data indicates that the highest average of academic motivation scores related to the group is participation in participatory learning, and the mean score of the control group in the academic motivation is the lowest score, while the mean of these scores in the learning group is 14.36 and The control group is 7.26. Therefore, according to the results of covariance analysis, the F value obtained is 8.42 and the significance level of this value with a degree of freedom of 3 and 75 is less than 0.05. Therefore, the difference between the mean scores of academic motivation among the groups is significant and according to the Eta scale, the effect of the difference between the above training on students' academic motivation is 25% (Table 4).

4- Conclusion

The results of this study showed that there is a positive and significant effect of education on participatory learning on academic motivation and academic achievement of students. Also, Guice's (2000) research findings show that the appropriate teaching method and the use of active teaching methods lead to academic achievement. Therefore, more attention is needed to teach learners with low motivation and performance. Sharon (1990) sees part of the reason for the increase of collaborative learning from moving its motivational orientation from outside to outside. In other words, when students collaborate in learning assignments, they are more interested in learning because of self-learning. Because of external rewards, therefore, students are activated on the basis of more collaborative learning for internal satisfaction and are less dependent on the motivation of teachers or other authorities. The effect of internal motivation is stronger than external motivation, and it leads to increased learning and learning of information and skills. Participatory teaching methods have numerous benefits, one of the most important of which is the motivation and accountability of learners, which these features in the future and in workplaces are considered as the most important feature of teamwork because when students have short-term goals As mid-term tests, using a participatory learning method, they get better grades and achieve higher academic success. As a result, they are motivated to learn, and since they have had a good experience in group work, this experience can be effective in the future and in the workplace (Karami, Mohammadzadeh, Afshari, 1391). Inactive approaches to student activity in learning, student competition is reduced to score, because, in the long run, individual perceptions harm the ability of a person. Keramati (2011), in a research study, showed that participation in learning is a significant effect on the academic achievement

and motivation of female students in mathematics. Also, Vinson (2002) concluded that collaborative learning had a positive impact on students' attitudes towards mathematics and their academic achievement in this lesson. Participatory learning provides students with the opportunity to interact with each other to ask questions and support wherever they need each other. The reason for these collaborations is that solidarity, individualized participatory responsiveness and simultaneous engagement in the learning structure are included. In most cases, students receive feedback from their own groups. Teachers also have the opportunity to simultaneously engage with students involved in learning. The activity engages with groups and interacts more with them. It seems that this interaction enables students to learn more to interact more actively in activities and ultimately enhances their academic achievement (Barakli, 2005). Participatory learning leads to written and written skills, descriptive, An analysis can be developed (Bowling, 1999). So that students can solve complex problems especially at the high school level (Johnson & Johnson, 2004). Students who learn through participation learning better learn and enjoy more learning experience. According to Pine & Vitakar (2000), one of the most important strategies is to enable students to learn from the use of study groups and providing opportunity and discussion. It seems that through this collaborative learning it is possible to provide such an opportunity because, in this way, students work in the form of small groups similar to each other to achieve their common goal and try to maximize their learning and others. (Kokal 3, 2004). The results of the research show that collaborative learning increases the learning thrill, reduces anxiety, fosters critical thinking and criticism, improves emotional relationships and senses, increases confidence and mutual respect, and strengthens verbal skills and leadership in students. (Cohen, 2004; Hang 2000; Shomakar 2004, 4). Participatory learning on the motivation and self-discipline of learners has a positive effect. According to Marco & Lanning (1998), collaborative learning acts as a learning strategy and, according to Dale & schunk (2005), self-discipline learning is an active process It is therefore justifiable that the part of the academic affection of motivation and self-regulation is changed that is self-contained and inclusive because it is active in the course of learning. Succeeding is attributed to its ability and its motivation for continuing work goes higher. The complexity and problems with learning and behaviours of the students, on the other hand, force the teacher to change the behavioural style and teaching method and seek to qualify the teaching. In order to qualify, they take advantage of the

findings of various human sciences, and they pay more attention to teaching and their role, which has led to the formation of new approaches to teaching. Inactive methods, students emphasize learning. According to the education experts, students who are actively involved in learning not only learn better but also enjoy learning more. Because they are involved in the learning process rather than just listening and consider themselves responsible for their learning. The results of this study showed that participation in learning is effective on student's educational motivation. Based on the findings of the study, it can be suggested that curriculum designers and textbook authors consider the use of participatory learning teaching methods in curriculum content and content. Teachers can also use different methods in different educational stages to Construct a concept map in the classroom as an educational strategy and encourage students to participate in the classroom.

References

- [1]. Boling, G. (1999). The effect on students cognitive achievement when using the cooperative learning method in earth science classroom s school science mathematics, chunyenchang: ling mou.
- [2]. Chapman, MT. C. (2004). Group reward contingencies and cooperative learning immediate and delayed effects on academic performance, self esteem, and sociometric.
- [3]. Chen, N.S., Shuk, K., Wei, C.W., & Chen, H. J. (2006). Mining e-learning Domain Concept Map from Academic Articles. Computers & Education, Article in Press. Available free<<http://www.Sciencedirect.com>.
- [4]. Chiung, H. C. Chun, CH.. Wen, T. Ch.)2000). The evaluation and influence of interaction in wor supported collaborative concept mapping. Computer education volume, 34, page17-25.
- [5]. Chularut, P & De Backer, T, K, (2003). The influence of concept mapping on achievement, self-regulation, and self-efficacy in students of English as a second language, Contemporary Educational Psychology, 29, 248-26.
- [6]. Cikgoz, K. (2007). The effects of cooperative learning and concept mapping on learning strategy use. Educational Science, Theory & Practice, 7(1), 117- 127.
- [7]. Dale, H. & Schunk, D,H. (2005). Commentary on Self-regulation in School Context Learning and Instruction, 15, 173-177.
- [8]. David W. Johnson & Roger T. Johnson & Smith, K. (2007). The State of Cooperative Learnin in Post secondary Settings. Education Psycho Rev 19: 15-29.
- [9]. DeVelis, R.F. (2003). Scale development: Teory and applications (2ndedn). Thousand Oaks, California: Sage. confidence in teaching it,journal of education for teaching1,57-67.
- [10]. Fajonyomi M.G. (2002). Concept mapping student 'slocusofcontrolasgenderasetermination Nigerians high school student's achievement in biology,Africanjournals online,Vol.2,No.10,pp.423-431.
- [11]. Fetsco, TA. & mcclur, J. (2005). educatio mal psychology newYorkally hand bcomwolfulk, ional psychology bostom, allyn. bacomh.
- [12]. Fishar,S. (2004). Cooperative learning and the achievement of motivation and perceptions of students in 11 the grade chemistry grale chemesty classas learning and instarac.12,90 -100.
- [13]. Gillies, R. M. (2004). The effects of cooperative learning on junior Highschool students during small group learning. Learning and instruction 14: .availablefrom.www.elsevier.com/locate/learninstruc.
- [14]. Gillies, Robyn M., Ashman, Adrian, Terwel, Jan. (2008). The Teacher's Role in Implementing Cooperative Learning in the Classroom, Australia, Springer Science+Business Media, LLC.
- [15]. Gokal, A. (1995). Cooperativ elearning coll adorative learninge ducation,vol1.7.
- [16]. Guvence, H. & A-Johnson, D.W & Johnson, R.T. and Smith K. (2007). The State of Cooperative Learning in Postsecondary Settings. Education Psycho Rev 19: 15-29.
- [17]. Johnson, & Johnson, R. (1989). Cooperative and Cmpetition: Teory and Rsearch Dina, N Nteraction Book Company Kim, E.
- [18]. Johnson, D.W & Johnson, R.T. and Smith K. (2007). The State of Cooperative Learning in Postsecondary Settings. Education Psycho Rev 19: 15-29 A cooperative Journal,12pp30-45.
- [19]. Kinchin, I. p. (1999). Computer assisted behaviarl counslig for high school students journal of statistceedacatin 50,67-73.
- [20]. Novak, J. D. (1990). Concept maps: a useful tool for science education, Journal o f Research in Science teaching, 27,937-949.
- [21]. Paivio, A. (1991). Dual coding theory: retrospect and current status. Canadian Journal Psychology, 45(3), 255-28.
- [22]. Ramires.MS. (2006). Concept maps an essential tool for teaching and learn. sciene focus on learning problems in mathomatce vol28no3-4pp32-57.
- [23]. Rice, D,C, Ryan, J,M & Samson, S.M. (1998). Using concept mapping to assess student learning the science classroom: Must different methods compet?,Journal of Research in Science Teaching, 35(10), 1103-1127.

- [24]. Robert L. W. (2004). Cooperative Learning Groups at the College Level: Differential Effects on High, Average, and Low Exam Performers *Journal of Behavioral Education*, Vol. 13, No. 1, pp. 37–50.
- [25]. S Nesbitjo(2010). Cognitive ability and the instructional efficacy of collaborative concept mapping a Research Group and Graduate School Teaching and Learning of Science, Department of Biology Education, University of Duisburg-5, 45117.
- [26]. Sun, Y. (2004). Methods for automated concept mapping between medical data base, *Journal of Biomedical Informatics*, 37, 162-17.
- [27]. Tarım, k. (2009). The effects of the cooperative learning method supported by multiple intelligence theory on Turkish elementary students mathematics achievement *Asia Pacific Educ. Rev.* 10:465–474.
- [28]. Trochim, W.M. K. (1989). An introduction to concept mapping for planning and evaluation. evaluation and program planning volume 12., pp10-16.
- [29]. Unesco. (1987). Regional office for Education in Asia and Pacific” coping with Dropout ” B angkok. 1-10.
- [30]. Whittaker, L. (2004) *Developing essential study skills*. Harlow: Financial Times Prentice Hall. England.
- [31]. Yamada, M. (2005). Task Proficiency and L1 Private Speech. *International Review of Applied Linguistics in Language Teaching (IRAL)*, 43 (2), 81-108.