ISSN NO. 2320-5407

Journal homepage: http://www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH

RESEARCH ARTICLE

Collaborative Learning and Motivation

Mahbube Keihaniyan
Young Researchers and Elite Club, Najafabad Branch, Islamic Azad University, Najafabad, Isfahan, Iran.

Manuscript Info

Manuscript History:

Received: 10 November 2013
Final Accepted: 25 November 2013
Published Online: December 2013

Key words:
test anxiety, collaborative learning, motivation

Abstract

This study investigated 100 undergraduate college students to see the relationship between the collaborative learning and motivation. Some prior researches showed that collaborative learning improves motivation. Also, the findings of this study show a significant difference in motivation between students who have collaborative learning and students who work alone. The findings of this study are useful for teachers to apply collaborative learning to improve learners' motivation and in this way decrease their test anxiety.

Introduction

The field of second or foreign language teaching has undergone many fluctuations and shifts over the years. Language teaching is a field in which fads and heroes have come and gone in a manner fairly consistent with the kinds of changes that occur in youth culture. Celce-Murcia (2005) believes that one reason for the frequent swings of the pendulum that have been taking place until fairly recently is the fact that every few language teachers have a sense of history about their profession and are thus unaware of the historical bases of many methodological options they have at their disposal.

Collaborative Learning

Collaborative learning is a situation in which two or more people learn or attempt to learn something together. Unlike individual learning, people engaged in collaborative learning capitalize on one another's resources and skills (asking one another for information, evaluating one another's ideas, monitoring one another's work, etc).More specifically, collaborative learning is based on the model that knowledge can be created within a population where members actively interact by sharing experiences and take on asymmetry roles. Put differently, collaborative learning refers to methodologies and environments in which learners engage in a common task where each individual depends on and is accountable to each other. These include both face-to-face conversations and computer discussions (online forums, chat rooms, etc.). Methods for examining collaborative learning processes include conversation analysis and statistical discourse analysis. Collaborative learning is heavily rooted in Vygotsky's views that there exists an inherent social nature of learning which is shown through his theory of zone of proximal development. Often, collaborative learning is used as an umbrella term for a variety of approaches in education that involve joint intellectual effort by students or students and teachers. Thus, collaborative learning is commonly illustrated when groups of students work together to search for understanding, meaning, or solutions or to create an artifact or product of their learning. Further, collaborative learning redefines traditional student-teacher relationship in the classroom which results in controversy over whether this paradigm is more beneficial than harmful. Collaborative learning activities can include collaborative writing, group projects, joint problem solving, debates, study teams, and other activities. The approach is closely related to learning. Alternatively, collaborative learning occurs when individuals are actively engaged in a community in which learning takes place through explicit or implicit collaborative efforts.

Collaborative learning has often been portrayed as solely a cognitive process by which adults participate as facilitators of knowledge and children as receivers. However, indigenous communities of the Americas illustrate

that collaborative learning occurs because individual participation in learning occurs on a horizontal plane where children and adults are equal. Thus collaborative learning also occurs when children and adults engage in play, work, and other activities together.

Examples of Collaborative Learning

Collaborative Network Learning: According to Findley (2002) "Collaborative Networked Learning (CNL) is that learning which occurs via electronic dialogue between self-directed co-learners and learners and experts. Learners share a common purpose, depend upon each other and are accountable to each other for their success. CNL occurs in interactive groups in which participants actively communicate and negotiation meaning with one another within a contextual framework which may be facilitated by an online coach, mentor or group leader."

Computer-supported collaborative learning (CSCL) is a relatively new educational paradigm within collaborative learning which uses technology in a learning environment to help mediate and support group interactions in a collaborative learning context. CSCL systems use technology to control and monitor interactions, to regulate tasks, rules, and roles, and to mediate the acquisition of new knowledge.

Learning Management System. In this context, collaborative learning refers to a collection of tools which learners can use to assist, or be assisted by others. Such tools include Virtual Classrooms (i.e. geographically distributed classrooms linked by audio-visual network connections), chat, discussion threads, application sharing (e.g. a colleague projects spreadsheet on another colleague's screen across a network link for the purpose of collaboration), among many others.

Collaborative Learning Development enables developers of learning systems to work as a network. Specifically relevant to e-learning where developers can share and build knowledge into courses in a collaborative environment. Knowledge of a single subject can be pulled together from remote locations using software systems.

Collaborative Learning in Virtual Worlds. Virtual Worlds by their nature provide an excellent opportunity for collaborative learning. At first learning in virtual worlds was restricted to classroom meetings and lectures, similar to their counterparts in real life. Now collaborative learning is evolving as companies starting to take advantage of unique features offered by virtual world spaces - such as ability to record and map the flow of ideas, use 3D models and virtual worlds mind mapping tools.

Collaborative learning in thesis circles in higher education is another example of people learning together. In a thesis circle, a number of students work together with at least one professor or lecturer, to collaboratively coach and supervise individual work on final (e.g. undergraduate or MSc) projects. Students switch frequently between their role as co-supervisor of other students and their own thesis work (receiving feedback from other students).

Collaborative Learning can lead to student success by deepening the understanding of a given topic.

An example highlighted in Edutopia's Schools. That Work series is The College Preparatory School in Oakland, CA. In this setting students utilized daily class worksheets and periodic group tests designed to be more challenging than individual homework or exams, and students quickly learn how they are able to solve problems as a group that they might not have struggled with on their own. Essentially, Collaborative Learning at The College Preparatory School aims to actively engage students with material and each other to maximize knowledge retention. Additionally, collaborative learning fosters cooperation and connections with others (Muir and Tracy 2006; Rau and Heyl 2003), develops skills critical workplace success such as team building and teamwork skills (Nowak et al 2005; Russo and Warren 2004), humanizes the learning experiences (Grzelkowski 1987), eliminates cheating (Grzelkowski 2006; Ley et al2003), is associated with higher levels of student satisfaction (Chickering and Gamson2002; Fuchs et al 2001; Giraud and Enders 2000; Sernau 2004; Slavin 2002), and lowers test anxiety (Grzelkowski 2006; Hanshaw 2007; Helmericks 2005; Ley et al 2003; Muir and Tracy 2006; Russo and Warren 2004).

Motivation

Recent research on motivation has demonstrated that students' goals and expectancies, referred to as motivational variables, can have considerable influence on their academic performance and achievement (Barker *et al*., 2002). McInerney (2006) proposed that learners' internal motivations (such as their goals and expectancies) may promote positive academic behavior and achievement; external forces in students' social environments may facilitate or inhibit the translation of these internal motivations into actual behavior.

There is a large body of research concerned with the impact of attitudes and motivation on second language acquisition and much of it has demonstrated a positive relationship between motivational variables and proficiency in a second language (Tremblay & Gardner, 2002).

Among various L2 motivations, the pragmatic reasons for learning an L2 referred to as instrumental motivation (for example, getting a job or passing an examination) is often contrasted with another L2 motivation that emphasizes interaction with members of the L2 community (i.e., integrative motivation), and it is suggested that the integrative motivation is a better predictor of L2 outcomes (e.g., achievement or motivated behavior) than the instrumental motivation. The relationship between instrumental and integrative motivation seems to be unclear, because of the inconsistent findings reported on the relationship among these two factors and L2 achievement (Izard, 2007).

It is suggested that L2 learning motivation is affected by L2 learning contexts to which L2 learners are exposed (Schmidt, *et al*., 2003). For instance, in an ESL (English as a Second Language) situation, where direct contact with native speakers of English is possible, English is mastered through direct exposure to it. In an EFL (English as a Foreign Language) context, English learning takes place in formal classroom settings without interacting with the English language community; thereby there is little motivation for learning that language.

At the turn of the twentieth century there has been an uprising interest in the investigation of the role of learner's characteristics in a foreign and second language learning (hereafter referred to as FLL/SLL) process (Brown, 2000). A major trend in language syllabus design has been the use of information from learners on curriculum decision-making (Nunan 2006). Students should be active agents of their learning, not merely passive receivers of information. Learning is a product of learners' own actions and is based not only on the learners' prior skills and knowledge but also on their experience and interest. If learners have role in defining and choosing the goals, the course content, and methodology, learning will be more relevant to them (Decorte, 2007). In order to create a learning environment in which students' needs are addressed, teachers need to understand their students' interests and concerns, in short, their motivation. If considering preferences felt by learners is crucial for effective language learning, negotiation is needed between teachers and students. Information has to be exchanged about the role of teacher and learners, so that compromises are reached between what learners want and what the teacher can provide (Brindly, 2001).

Although many teachers admit that learners differ in terms of needs and preferences, they may not consult learners in conducting language activities. The basis for such reluctance to cooperate may be that learners are not capable to express what they need to learn and how they want to learn it.

Many research projects suggest a meaningful relationship between motivation and student's performance. Schmidt (2000) argues that motivated learners are more likely to pay close attention to the language input than those who are not so motivated. Niezgoda and Rover (2001) suggested that motivation might influence English learners' sensitivity to grammatical errors. Cook (2001) also points out that highly motivated learners can notice pragmatic functions of language. A similar observation was made by Tateyama (2001) who found that highly motivated learners showed a better performance in a role-play (Csizer&Dornyei, 2005).

One of the influential studies of student motivation was conducted by Robert Gardner and Wallace Lambert (1972). During 12 years they studied Foreign Language Learning in Canada, the United States, and the Philippines in order to investigate how attitude and motivation affect success in language learning. They identified two types of motivation: instrumental and integrative. Instrumental motivation refers to motivation to learn a language in order to reach instrumental goals: promoting a job, reading technical material, translation and so on.

In integrative motivation learners wish to integrate himself/herself into the culture of the second language group, to identify with them, and become a part of the target language society. Many of Lambert studies (1963) found that higher scores on proficiency test in a Foreign Language followed integrative motivation. In a number of previous studies, positive attitudes toward learning English was found to be one of the most important factors in a motivated behavior (Crooks & Schmidt, 2000). If learners have a positive attitude toward learning a second or foreign language, they are more motivated to learn that language.

In summary, literature suggests that most learners begin their academic career with integrative and instrumental motivation toward achievement (Entwisle*et al*., 2007; Stipek& Ryan, 2008).

II. Methodology

Participant

Our subjects were 100 undergraduate college students ranged from 21 to 25 year-old students selected randomly from male students studying English as a foreign language (EFL). Learners enrolled in the second grade. The participants were divided into two groups: experimental and control groups.

Instruments

1) A Nelson test (1999, as cited in Dadkhah's thesis, 2002). It consisted of 40 multiple-choice items on grammar and vocabulary to estimate the proficiency level of the learners. The validity of the test was established by consulting with my supervisor and advisor.

2) A motivation test. It was developed by Celce Murcia (2001) and consisted of 41 questions in six parts. Part one consisted of eight questions dealing with the view of participants regarding the reasons for learning English. Part two consisted of five questions to measure students' attitude toward learning English. Part three consisted of seven items to measure students' attitude about the English textbooks. Part four consisted of one question to rate the extent of students' satisfaction with achievement in English. Part five consisted of 17 items to measure the students' attitude toward the preferred ways and activities for learning English. Part six consisted of three items to rate the extent to which students agree with the way of error correction. This questionnaire was translated into Farsi to avoid participants' confusion. According to Seliger and Shohamy (1989), one of the main problems with questionnaires in a foreign language (FL) is that participants often have problems in providing answers in FL and there is no assurance that the questions are properly understood and answered correctly. Also, the participants of this study were in the second grade and not proficient enough in English; therefore, this questionnaire was used in Farsi, the native language of the participants. The validity of the test was measured by consulting with my supervisor and advisor and the researcher measured its reliability via Cronbach's alpha ($r=0.85$). The participants were asked to rate their attitudes on a 5-point Likert scale.

3) Two contexts from the general English book for university students.

Procedure

At first 200 students were selected randomly. Then, via the administration of the Nelson test, 100 male students were selected as the participants of the study. The researcher covered the same amount of material for each group. Two contexts were administered at the end of the instruction. Participants worked individually on the first context. Participants from the experimental group worked in pairs while students in the control group worked alone to work on the second one. On the day of the test, the researcher administered the motivation test.

III. Data Analysis

The results of the Nelson Test show no significant differences between our experimental and control groups. As Table 1 shows, there is a significant difference in motivation between our groups at either test 1 or test 2. There is also a significant difference in motivation level between test 1 and test 2. Our results support the argument that collaborative learning increases motivation.

Table 1: Motivation Levels and Change

Experimental Group			Control Group	t-statistic[a]
Test 1: Motivation Average -	100	10.44	10.08	0.770
Test 2: Motivation Average			18.13	10.20

The evidence presented in Table 2 shows that while most students in both groups experienced an increase in motivation between test 1 and test 2, students in the experimental group were more likely than those in the control group to experience an increase in motivation. Whereas motivation increased 45 percent of experimental students, it increased for 30 percent of control group students. Collaboration may be responsible for these changes. Students with poor information may feel more motivation because they will have the knowledge of other students.

Table2: Distribution of Motivation Score by Groups

Experimental Group		Control Group	
Cumulative		Cumulative	
Percent	Percent	Percent	Percent
2.5%		2.5%	
3.3%	3.3%	2.5	5.0
4.4	7.7	2.5	7.5
2.2	9.9	10.0	17.5
11.0	20.9	10.0	27.5
15.4	45.3	15.0	30.0
17.6	53.8	20.0	62.5
17.6	71.4	7.5	70.0
15.4	86.8	12.5	82.5
6.6	93.4	12.5	95.0
5.5	98.9	2.5	97.5
1.1	100.0%	2.5	100.0%

In order to find out whether or not this difference is statistically significant, a *t*-test was run. Table 3 shows the results of this *t*-test.

Table 3. ***The Results of the t-test for the Motivation Test***

Group	No.	Mean	SD	SEM	df	t	p
Control Group	50	183.08	19.845	3.169	48	-2.229	.031
Experimental Group	50	195.24	17.622	2.724			

Table 3 reveals that the amount of *t*-observed (*t*= -2.229) is significant at the probability level of p= .031, which is smaller than .05. In other words, motivation is significantly higher for the experimental group than for the control group.

IV. Conclusion

Collaborative learning is a teaching style that has evolved over the last thirty years and is still evolving. Collaborative learning is an umbrella term for a variety of educational approaches involving joint intellectual effort by students, or students and teachers together. Usually, students are working in groups of two or more, mutually searching for understanding, solutions, or meanings, or creating a product. Collaborative learning activities vary widely, but most center on students' exploration or application of the course material, not simply the teacher's presentation or explication of it. Collaborative learning represents a significant shift away from the typical teacher-centered or lecture-centered milieu in college classrooms. In collaborative classrooms, the lecturing/ listening/note-taking process may not disappear entirely, but it lives alongside other processes that are based in students' discussion and active work with the course material. Teachers who use collaborative learning approaches tend to think of themselves less as expert transmitters of knowledge to students, and more as expert designers of intellectual experiences for students as coaches or mid-wives of a more emergent learning process.

A previous study by Giles and Coupland (2004) found that collaborative learning is a very useful factor to engage learners in learning process. The results of this study were similar to the results of the present study.

V. Suggestions for Further Research

No study is complete by itself and cannot take every detail into consideration. Therefore, there are always aspects which are not accounted for. This research is no exception. There are some issues which were not controlled in this study and can be topics for further research by other researchers.

This study was done only in one city with a limited number of students. It is suggested that another study be performed with large numbers of students from more cities. These findings are based on comparisons between the results of two contexts. Additional researches are needed to compare changes in motivation across multiple exams, not just between two.

References

Appelhans, B. and R. Schmeck. (2002). "Learning Styles and Approach versus Avoidant Coping During Academic Exam Performance." College Student Journal. 36:157-161.

Barker, K., Dowson, M., & McInerney, D. M. (2002). Performance approach, performance avoidance and depth of information processing: A fresh look at relations between students' academic motivation and cognition. *Educational Psychology*, *22*, 571-589.

Birenbaum, M. and P. Pinku. (1997). "Effects of Test Anxiety, Information Organization, and Testing Situation on Performance on Two Test Formats." Contemporary Educational Psychology. 22:23-38.

Brindly, G. (2001). The role of needs analysis in adult ESL program design. In E. Bada & Z. Okan (Eds.), *Students language learning preferences* TESL – EJ, 4/3: A-1.

Brown, H. D. (2000). *Teaching by principles: An interactive approach to language pedagogy*. New York: Pearson Education.

Celce-Murcia, M. (2001). Teaching English as a second or foreign language. Massachusetts: Heinle & Heinle Publishers.

Celce-Murcia. (2005). "Cognitive Test Anxiety and Academic Performance." Contemporary Educational Psychology. 27:270-295.

Chickering, A. and Z. Gamson.(2002). "Applying the Seven Principles for Good Practice in Undergraduate Education."

in A. Chickering and Z. Gamson, Eds. New Directions in Teaching and Learning. San Francisco: Jossey Bass.

Clark, D. (1994). "High-risk Teaching." The Teaching Professor. 8:1-2.

Cook, V. (2001). *Second language learning and language teaching*. London: Edward Arnold.

Crooks, G., & Schmidt, R. W. (2000). Motivation: Reopening the research agenda. *Language Learning, 41*, 469-512

Csizér, K., & Dörnyei, Z. (2005). The internal structure of language learning motivation and its relationship with language choice and effort. *The Modern Language Journal, 89*, 19-36.

Dadkhah, (2002). *The relationship between test anxiety and sex*. Unpublished master's thesis, University of Khoramabad, Khoramabad, Iran.

De Corte, E. (2007). Learning theory and instructional science. In P. Pollari, (Ed.), *Portfolios in EFL teaching in Finish upper secondary school*. Engl. Teaching Forum 34. 1-2.

Entwisle, D., Alexander, K., Cadigan, D., & Pallas, A. (2007). The schooling process in first grade: Two samples a decade apart. *American Educational Research Journal, 23*, 587-613.

Findley. (2002). (1994). "Effects of Collaborative Test Taking on Retention in Eight ThirdGrade Mathematics Classes." The Elementary School Journal. 95:23-32.

Fuchs, L., D. Fuchs, K. Karns, C. Hamlett, M. Katzaroff, and S. Dutka. (2001). "Comparisons among Individual and Cooperative Performance Assessments and Other Measures of Mathematics Competence." The Elementary School Journal. 1998:23-52.

Gamson, Z. (2002). "Collaborative Learning Comes of Age." Change. 26:44-50.

Giles, H., & Coupland, N. (2004). *Language: context and consequences*. New York: Oxford University Press.

Giraud, G. and C. Enders. (2000). "The Effects of Repeated Cooperative Testing in an Introductory Statistics Course." Paper presented at the Annual Meeting of the American Educational Research Association.

Gokhale, A. (1995). "Collaborative Learning Enhances Critical Thinking". Journal of Technology Education. 7:1.

Grzelkowski, K. (2006). "A Journey Toward Humanistic Testing." Teaching Sociology. 15:27-32.

Guest, K. and D. Murphy. (2000). "In Support of Memory Retention: A Cooperative Oral Final Exam." Education. 121:350-354.

Hanshaw, L. (2007). "Test Anxiety, Self-concept, and the Test Performance of Students Paired for the Same Students Working Alone." Science Education. 66:15-24.

Helmericks, S. (2005). "Collaborative Testing in Social Statistics: Toward Gemeinstat." Teaching Sociology. 21:287-297.

Hembree, R. (1988). "Correlates, Causes, and Treatment of Test Anxiety." Review of Educational

Research. 58:47-77.
Izard, C. E. (2007). *The psychology of emotions*. New York: Plenum.

Harris, T. (1993). "Team Testing Produces Dramatic Results." Teaching for Success. 5:5-6.

Johnson, D., R. Johnson and M. Stanne. (2000). "Cooperative Learning Methods: A MetaAnalysis." http://www.clcrc.com/pages/cl-methods.html.

Ley, K., R. Hodges and D. Young. (2003). "Partner Testing." Research and Teaching in Developmental Education. 12:23-30.

McInerney, D. M. (2006). Cross-cultural insights into school motivation and decision making. *Journal of Intercultural Studies*, *13*, 53-74.

Muir, S. and D. Tracy. (2006). "Collaborative Essay Testing." College Teaching. 47:33-36.

Naveh-Benjamin, M., W. McKeachie and Y. Lin. (1987). "Two Types of Test-anxious Students: Support for an Information Processing Model. Journal of Educational Psychology. 79:131-136.

Niezgoda, K., & Rover, C. (2001). Pragmatic and grammatical awareness: A function of the learning environment? In K. R. Rose & G. Kasper (Eds.), *Pragmatics in language teaching* (pp. 63-79). Cambridge: Cambridge University Press.

Nowak, L., S. Miller and J. Washburn. (2005). "Team Testing Increases Performance." Journal of Education for Business. 71:253-256.

Nunan, D. (2006). *Syllabus design*. Oxford: Oxford University Press.

Orpen, C. (2008). "The Interactive Effects of Social Support and Test Anxiety on Student Academic Performance." Education. 116:464-466.

Pekrun, R., T. Goetz and W. Titz. (2002). "Academic Emotions in Students' SelfRegulated Learning and Achievement: A Program of Qualitative and Quantitative Research." Educational Psychologist. 37:91-105.

Rau, W. and B. Heyl. (2003). "Humanizing the College Classroom: Collaborative Learning and Social Organization Among Students." Teaching Sociology. 18:141-155.

Rinehart, J. (1999). "Turning Theory into Theorizing: Collaborative Learning in a Sociology Theory Course." Teaching Sociology. 27:216-232.

Russo, A., and S. Warren.(2004). "Collaborative Test Taking". College Teaching. 47:18-20.

Sarason, I. (1986). "Stress, Anxiety, and Cognitive Interference: Reactions to Tests." Journal of Personality and Social Psychology. 46:929-938.

Schmidt, R. (2000). Consciousness, learning and interlanguage pragmatics. In G. Kasper & S. Blum-Kulka (Eds.), *Interlanguage pragmatics* (pp. 21-42). New York: Oxford University Press.

Schmidt, R., Boraie, D., & Kassabgy, O. (2003). Foreign language motivation: Internal structure and external connections. In R. L. Oxford (Ed.), *Language learning motivation: Pathways to a new century* (Technical Report No. 11, pp. 9-70). Honolulu: University of Hawaii, Second Language Teaching and Curriculum Center.

Seipp, B. (1991). "Anxiety and Academic Performance: a Meta-analysis of Findings. Anxiety Research. 4:27-41.

Selinger, H. W., & Shohamy, E. (1989). *Second language research.* Oxford: Oxford University Press.

Sernau, S. (2004). "Using a Collaborative Problem-Solving Approach in Teaching Social Stratification." Teaching Sociology. 23:364-373.

Slavin, R. (2002). "Cooperative Learning." Review of Educational Research. 50:315-342.

Tateyama, Y. (2001). Explicit and implicit teaching of pragmatic routines: Japanese sumimasen. In K. R. Rose & G. Kasper (Eds.), *Pragmatics in language teaching* (pp. 200-22). Cambridge: Cambridge University Press.

Stipek, D., & Ryan, R. (2008). Economically disadvantaged preschoolers: Ready to learn but further to go. *Developmental Psychology*, *33*(4), 711-723.

Tobias, S. (1985). "Test Anxiety: Interference, Defective Skills, and Cognitive Capacity. Educational Psychologist. 20:135-142.

Trembly, P. F., & Gardner, R. C. (2002). On motivation, research agendas, and theoretical frameworks. In S. Hussin, et al. (Eds.), *Sustaining an interest in learning English and increasing the motivation to learn English* [Online]. Available at http://iteslj.org.

Williams, J. (1991). "Modeling Test Anxiety, Self Concept, and High School Student's Academic Achievement." Journal of Research and Development in Education. 25:51-57.

Wine, J. (1980). "Cognitive-attentional Theory of Test Anxiety." In I. Sarason, Ed. Test Anxiety: Theory, Research, and Applications. pp. 349-385. Hillsdale, NJ: Erlbaum.