COOPERATIVE LEARNING, ACADEMIC, AND SOCIAL GAIN: A STUDY OF MEDIATING ROLE OF TEACHER'S FEEDBACK

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Abstract

Purpose: The study aimed to investigate the scope of cooperative learning (CL) as an alternate of traditional teaching methods in Pakistani classrooms and to examine the direct and indirect relationship between CL and social & academic gains through teacher feedback. The study also intended to survey students' opinions regarding the usefulness of the CL approach and to identify challenges that hindered its implementation at the tertiary level.

Methodology: This study was a cross-sectional and mixed-method (Concurrent Dominant Status (Quan+qual) research design). Qualitative data was collected through Focus Group Discussion (FGD) technique, while quantitative data was collected through a questionnaire. Data were analyzed with the help of mediation analysis using bootstrapping approach.

Results: Findings of Quantitative data analysis proved the significance of Cooperative Learning in terms of academic and social gains. Teachers` feedback had a significant mediating effect on the quality of students` group work. Qualitative data analysis revealed that students had a positive attitude towards the CL approach; however, students had few concerns regarding the group size, time, cohesion, etc. The study proposed using the CL method and teachers` feedback regularly during group assignments to improve students` academic and social gains.

Application of this Study: The findings of the study promote the implementation and use of cooperative learning at the tertiary level in different subjects to increase students` academic gain and social adjustment. As Pakistan is situated in East Asia so in Pakistani teachers should adopt this teaching methodology which supports collectivism rather than individualism.

The novelty of this study: The current study was unique by methodology as well as variables. The researcher adopted a mixed-method concurrent with Dominant Status (Quan+qual) research design. Researchers used teacher feedback as a mediating variable to assess CL's effect on learners' academic gains. Data was collected in three interims during the semester, and group assignments were given to students to intervene feedback with the CL.

Keywords: Cooperation, Interdependence, Accountability, Academic Gain, Social Gain, Feedback.

INTRODUCTION

The CL is one of the learners-centred teaching methods in which teacher encourages students of diverse abilities to work in small groups to improve their understanding of subject matter and encourage them to interact and cooperate to achieve a common goal (Chan, 2020;). The effectiveness of CL is proved by many pieces of research concerning academic gain and social gain (Alzahrani, 2016; Mashhadi & Gazorkhani, 2015; Nguyen et al., 2009; Reza, 2013; Tan et al., 2007; Tran & Lewis, 2012; Siddique at al., 2020).

For this study, the CL is considered a teaching technique in which the teacher divides the class into small groups and assigns collective and structured home-based tasks with his/her interim feedback. During group interaction, diversity is appreciated and respected, helping students develop a positive relationship among group members (Sturz, Kleiner & Fernandez, 2005; Nichols & Sullivan, 2009; Green, Reid, & Larson, 2012; Sharan, 2015). They learn communication skills and conflict resolution techniques (Goodwin, 1999).

Teaching and learning are in the process of evolution for centuries, however, the dominant status of the Lecture method still exists in Pakistani educational institutions specifically (Ali 1998; Jan 2013; Sajjad; Sarwar, 2001; Sultana & Zaki, 2015; Siddiqui et al., 2020), and internationally in general (Loh,& Ang, 2020). According to Najmonnisa (2013), the classroom-learning environment does not allow students to interact with each other; students sit in rows, facing the teacher and blackboard instead of facing each other to share and communicate knowledge to each other.

It is generally observed by the researchers of this study that there is a common misunderstanding among the teachers at the tertiary level who consider all types of group assignments or projects as part of the CL method. Since the main feature of CL is missing such as Positive interdependence, Social Skills, Individual Accountability, Group Reflection, Face-to-Face

Interaction, therefore such understandings need to be addressed. In CL task, teachers` role is significant. He or she is supposed to perform the role of a facilitator (Sharan, 2015).

Teacher's feedback and facilitation during group tasks/work is a prerequisite condition for CL. Group work is a prominent feature of CL tasks. Moreover, literature reports that group assignment is part of the formative assessment in which teacher's feedback on the performance of group members help them to reflect on their own and group` learning, so students can control, monitor, and improve their learning pace and become independent learners (Nicol, & Macfarlane-Dick, 2006). However, in the Pakistani context, teachers` understanding and CL practices are very limited (Najmonnisa, 2013). Even in developed countries like Britain, Australia, America, CL is not effectively used (Jolliffe, 2015). Most of the time, teachers give students group assignments as a project and frequently use CL for these tasks without understanding the CL method (Najmonnisa, 2013). Teachers' facilitation in giving feedback is missing in such types of assignments as the assignments cannot be reviewed or revised. This observation is supported by Synnott (2016). Various research reports that in such group assignments, teachers only assign tasks without instructions, and no interim feedback is given (Hu & Choo, 2015). Students are supposed to complete these projects until the end of the session outside of the classroom without teachers` facilitation. Students submit their report at/by the end of the session, following/followed by a group presentation, and then receive teachers` feedback.

Teachers should implement suitable methods of instruction and direct their students through the writing process to ensure producing a readable end product. The feedback provided by a teacher to students serves as one of the only forms of guiding them. Feedback is a central facet of the writing process, enabling students to acquire this skill (Azzioui, 2015). It motivates students to compose several writing drafts to ensure producing improved writing (Hamp-Lyons and Heasley cited in Azzioui, 2015).

Cooperative learning and teachers' feedback motivate students and enable them to reflect upon their work. Moreover, it helps students develop an acute perception of their writing and that of their peers. Therefore, it is suggested that Cooperative Learning's integration with teacher's feedback would improve the students` academic achievement and social gain. (Jolliffe, 2015)

Despite the usefulness of CL, very limited research has been conducted in Pakistan (Batool&Perveen, 2012; Najmonnisa, 2013; 2014; 2016; Siddiqui et al., 2020) and internationally (Premo, Cavagnetto & Davis, 2018; Makini, Barasa, & Chemwei, 2020 to measure the level of capability of Cooperative Learning on academic accomplishment. However, according to the researcher's limited literature review, only one study conducted by Azzioui (2015) is found to investigate the relationship between CL, Teachers' feedback, and academic achievement.

The current study was unique by methodology as well as variables. The researcher adopted a mixed-method concurrent with Dominant Status (Quantitative + qualitative) research design. Researchers used teacher feedback as a mediating variable to assess Cooperative learning's effect on learners' academic gains. Despite the reported effectiveness of CL at the tertiary level (Vega & Hederich, 2015), very few researches have been conducted to gauge feedback effectiveness (Evans, 2013). It was assumed from the study that CL is not adopted by the teachers of the tertiary level. The current study was intended to gauge the effectiveness of the CL method on learners` academic and social gains in the subjects of Sociology, Psychology, and writing research and mediating effects of teachers` feedback in the completion of group work.

Research Questions

1. How does CL affect students` academic achievement and social gain?

2. Does teachers' feedback mediate students` academic and social gain?

3. What are the student's and teachers' perceptions towards the use of CL and teachers' feedback at the tertiary level?

LITERATURE REVIEW

Due to the technological revolution, the whole world has become a global village (Thanh, Gillies & Renshaw, 2008). People are interconnected and interdependent to achieve common and mutually beneficial goals. Globally, cooperation and teamwork are supported at all educational levels (Jolliffe, 2015; Slavin, 2015). For facilitating cooperation and interaction among students, teachers use various teaching methods in classrooms. CL is one of the teaching methods that characterize a situation in which teachers organize group activity in a structured manner to maximize learners' interpersonal and cognitive skills (Phiwpong & Dennis, 2016). According to Johnson, Johnson & Holubec (1998), CL includes the whole/complete range of learning exercises. Students are divided into small groups to work together on a mutual task in or out of class. The effectiveness of CL is validated through various researches as it has strong theoretical foundations (Johnson & Johnson and Slavin cited in Buchs & Butera, 2015). Literature also supports that CL is effective in learning gain in all academic aspects; it declines students' absenteeism, increases social unity, and accepts gender equity and diversity (Buchs & Butera, 2015; Gillies, 2008; Premo, 2018; Slavin, 2015).

Theoretical Foundation

Cooperative Learning (CL) has a strong foundation in several contemporary theoretical perspectives such as social constructivist, social cohesion, and motivational perspectives (Alzahrani, 2016; Makini, 2020). Social constructivists perceive the aim of education as the transformation of knowledge rather than the transmission of knowledge. The focus of activities is an interaction among the members of society (Sullivan, 1998). According to them, knowledge is socially constructed, and cognitive conflict promotes new learning through a constructivist interaction (Slavin, 2015). The teacher's role is very important; she promotes interaction in the classroom, and learning becomes meaningful in this way (Chebii, Wachanga, & Anditi, 2018; Sharan, 2015).

According to motivational and social cohesion perspectives, students achieve their shared targets through collective efforts, as they are motivated to achieve the goal. Group members put their maximum effort into achieving set goals by helping each other. As group members are concerned about each other's success, they cooperate (Slavin, 1996; Karali & Aydemir, 2018).

Academic & Social Gain for CL

Findings of various researches support the benefits of CL in the areas of academic success and SS (Slavin, 1995, 1996, 2015; Azzioui, 2015; Mashhadi & Gazorkhani, 2015; Phiwpong & Dennis, 2016; Premo, 2018; Hendrawati & Muhlisin, 2018).

Teacher's Feedback

Feedback is a vital element of formative assessment. It can be defined as the response of teacher towards "student's performance, attitude or behavior, at least where attitude or behavior impinges upon performance" (Dinham, 2005, p. 82)."Feedback is conceptualized as information provided by an agent regarding aspects of one's performance or understanding." (Hattie & Timperley, 2007, p.81). Ferguson (2011) identified feedback as an acritical way to aid pupils in becoming autonomous learners who can "monitor, evaluate, and regulate their learning, allowing them to feed up and beyond graduation into professional practice."

The quality of teaching influences students' academic gain, and in this regard, teachers` feedback is a vital element (Hu & Choo, 2016; Chaqmaqchee, 2015; Dinham, 2008; Shute, 2008; Paulus, 1999). Teacher's feedback is as essential as teacher's lectures and students` previous cognitive skills (Hyland, 2013). The difference of opinion was found while reviewing the literature. Some researchers consider feedback as a deciding item because of accomplishment. It is a kind of information about the quality of tasks provided by a more knowledgeable/skillful person (Pekrun et al., 2014) who can be a teacher, peer, parent, or guardian. The book or "self, experience concerning parts of one's accomplishment" can receive sometimes feedback (Hattie and Timperley, cited by Evans, 2013, p.71). For others, feedback is an essential component of learning (Orrell, 2006; Värlander, 2008; Cramp, 2011; Tucker & Stronge (2005) stated that effective teachers provide timely feedback to their students and monitor their learning. Archer (2010) and Rosa & Beijaardb (2013) support the same, according to the feedback given during the active learning process.

Based on the work of Ramaprasad (1983) and Sadler (2013), feedback is supposed to bridge the gap between the existing levels of performance and desired academic gain cited by Evans, 2013). Ovando (1994) suggests that teachers should give relevant, prompt, and systematic feedback. According to him, feedback should be delivered confidentially and respectably.

Types of Feedback

Lipnevich (2007) reported two types of feedback, intentional and unintentional. Teachers give both the kind of feedback however if he/she assigns task so she will provide purposeful feedback, which is an essential element of learning. Samuel (2013) reports that teachers give verbal and generic types of feedback on assignments and write comments on the assignment sheet. However, teachers give one on one feedback also on assignments, which is very time-consuming. Teachers have written feedback that is more effective than verbal feedback (White, 2008). Yoke et al. (2013) and Zhu, (2020) report various written feedback types such as "correcting errors, writing comments directly and indirectly." Few studies reported online feedback by teachers and peers, which is an effective feedback technique (Chaqmaqchee, 2015; Pinterest al., 2018).

Theoretical Background

Feedback is a process, which is being studied under/from the perspectives of behaviorist, cognitivist, and a socio-constructivist perspective. According to the behaviorist perspective, positive feedback plays a role in positive reinforcement. However, negative feedback is considered as punishment. Both reinforcement and punishment influence learning (Brookhart, 2008; Aslam & Khan, 2020; Torrese et al., 2020).

According to the cognitivist point of view/perspective, feedback is directive in nature, which is supposed to tell students what to correct, and the teacher performs the role of an active expert who provides feedback on the performance of students (Bangert, Kulik, Kulik & Morgan, 1991; Shute, 2008; Molin et al., 2020). On the contrary, according to the socio-constructivist perspective, feedback is considered as facilitation provided by a teacher or an expert who leads the learner

through the Zone of proximal development and creates opportunities for them to reflect on their work from the perspective of others (Vygotsky cited in Hyland & Hyland, 2006). The elaborative cognitive perspective states that students, who receive elaborated explanations from others, gain most from these activities (Webb cited in Slavin, 2015). Teachers` feedback, either verbal or written, empowers students to make their amendments, and with the help of teacher's feedback, they enhance their understanding without being told (Archer, 2010; Chaqmaqchee, 2015; Aslam & Khan, 2020).

Related Researches

Black & Wiliam (1998) conducted a meta-analysis of 250 studies. They found the positive influence of feedback on acquiring knowledge, skill development, and achievement in all content areas. They reported Elawar & Corno's (1985) study in which the researchers measured the effect of feedback through experimental research. Researchers recruited more than 500 Venezuelan students from three schools, and 18 mathematics teachers were involved in the study. The study revealed that students who were given written feedback on their homework, such as pointing out particular mistakes with recommendations about rectifying those mistakes, performed well than students whose assignments were only marked without receiving any feedback.

Ismail, Maulan & Hasan (2008) conducted an experimental study to determine the effect of teacher's feedback on students' writing skills. During the experiment, students were given three topics to write essays/on one. Students were asked to write an essay during the class period and then submit it to their teachers, and after one week, teachers returned their assignments with feedback. Students resubmitted their essays after incorporating the given feedback. "Each essay was given one of these feedback types; content feedback or endnote feedback respectively/alternatively. A score/number for the content, organization, and language was given/awarded for each of the essays based on the analytic scale" (pp 45). The study's findings revealed that feedback provided on students` assignments was found to be effective that helped students improve their assignments with the help of self-revision. A significant difference was observed in the first and second drafts of students` written essays when content feedback was given to them, and improvement in the correct use of grammar was also observed.

Reugg (2015) conducted an exploratory study to investigate the effect of the feedback given during and at the end of written assignments. Teachers provided feedback to two groups of students throughout the year. The experimental group was assigned interim feedback during the task, and they revised their drafts accordingly, whereas the control group was given feedback at the end of the task. The performance/result/score of both the groups was compared based on Mann–Whitney *U*-test. ANOVA was used to compare the performance of students. It was found that the experimental group performed significantly better than the control group.

Therefore, we hypothesize that if students receive effective teacher's feedback while doing group assignment; their quality of work would be enhanced

Hypotheses

H₁: There is a significant direct relationship between cooperative learning and social gain.

H₂: Teacher feedback mediates the relation between cooperative learning and social gain.

H₃: There is a direct relationship between cooperative learning and academic gain.

H₄: Teacher feedback mediates the relation between cooperative learning and academic gain.
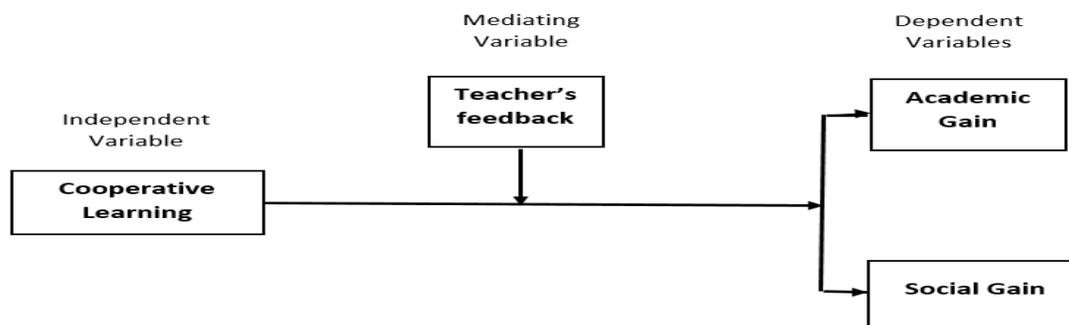
Research Model

Figure 1: Conceptual Model of the Study

Source: Authors conceptualization

METHODOLOGY

This study is based on the perception that teachers do not give interim feedback while giving home-based CL assignments at the tertiary level (Evans, 2013). However, the effectiveness of CL and the importance of interim feedback in CL task has been proved by numerous researches (Herrmann, 2013). The current study aimed to examine the direct and indirect relationship between cooperative learning and social & academic gains through teacher feedback at the tertiary level. In the present study cooperative learning method is the independent variable, the teacher's feedback is the mediator, and social and academic gains are two dependent variables. Moreover, to gauge the CL method's effectiveness on learners` academic and social gains in the subject of Sociology, Psychology and Writing Research Report and mediating effects of teachers` feedback in the successful completion of group work. Researchers adopted a mixed-method approach, contemporary design with dominant status (Quan + qual), to collect quantitative and qualitative data (Greene, 2007; Creswell & Plano Clark, 2011). Qualitative and quantitative data were collected concurrently. A Survey technique was adopted to collect the data.

Students of tertiary level constitute the research population. They are of between age group of 18-22 years old (Kaufman, Sutow & Dunn, 1997). The researcher selected eight sections of BBA 1st semester and four sections of BBA 2nd Semester from a private sector university by using the convenience sampling technique. Students of Sociology, Psychology, and Writing Research Report courses were selected as research subjects. The sample size was 32 students for qualitative data collection (derived from the 538 students) and 538 students for quantitative data. The researcher collected qualitative and quantitative data concurrently. For qualitative data, five focus group discussions (FGDs) were conducted with 32 selected students. The aim of FGDs s was to validate, contradict, or enhance findings from the experiment. For quantitative data, 600 questionnaires were distributed to students to gauge the effectiveness of CL and the mediating effect of teachers` feedback, whereas 538 filled questionnaires were returned. The response rate was 89.8%. (89.66%)The sample comprised of48% male and 52 % female students, and their age group is between 18 and 22 years.

After reviewing the literature, the researcher adopted the scale of CL from Brown (2008), the scale of social gain adapted from Waksman Social Skills Rating Scale (Waksman, 1985) for teacher feedback and students` concerns regarding CL, the scale was adapted from Nunez et al., (2015). All the questionnaire items were designed for a Likert scale response using a five-interval scale from strongly agree to disagree strongly. The reliability score of the questionnaire was 0.896 (Sekaran, 2006). This was above 0.7. In this way, the instrument was viewed as reliable for use in the study.

Data Analysis Technique

To measure the CL method's effectiveness on the academic and social gain of students, the researcher adopted quantitative and qualitative data analysis techniques, for qualitative data researcher used the thematic analysis technique (Braun & Clarke, 2006). In thematic analysis, the researcher utilized both the first words discussed by respondents in citations to precisely display the participants` view and the researchers` portrayal of the occasions. To test the model, mediation analysis was performed using bootstrapping approach recommended by Preacher & Heyes (2004) using process macro in SPSS developed by Heyes (2013).

Data Collection Procedure

Initially, the researcher selected a private sector university and took informed consents of dean faculty of business administration and teachers of Psychology, Sociology and Writing Research Report of Bachelor of Business Administration (BBA). Before introducing the CL technique in the classroom, the researcher conducted CL workshops to understand the method. During the semester, teachers planned three home-based group assignments with researchers' help and with clear instructions for each assignment. Two feedback sessions were kept for each assignment. The group size was kept as small as 4-5 students. Groups were diverse for abilities and based on their previous semester's performance. Students were assigned different roles during group tasks, such as group leader, mediator, writer, etc. Feedback was given using the procedure suggested by Hattie & Timperley, cited in Brookhart, (2008). According to the proposed model, teachers gave feedback at four level

(1) feedback about the task (such as feedback about whether answers were right or wrong or directions to get more information), (2) feedback about the processing of the task (such as feedback about strategies used or strategies that could be used), (3) feedback about self-regulation (such as feedback about student self-evaluation or self-confidence), and (4) feedback about the student as a person (such as pronouncements that a student is "good" or "smart")" (p.4).

At the end of the semester, the researcher distributed questionnaires and conducted FGDs to collect the data simultaneously. The researchers collected data.

DATA ANALYSIS

Research question 1: What are the concerns of students regarding CL?

Table 1: Concerns of students relating to CL

Statement	1	2	3	4	5
1. Maximum group size should be between 4-5	220	194	80	30	14
2. Team learning/ Group work should be encouraged/continued	232	184	60	36	26
3. Difficult getting members to actively participate in tasks	16	36	98	226	162
4. Waste of time explaining things to other	22	34	70	200	212

Note 1= Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5= Strongly disagree

Group size matters a lot for the effective completion of the task. According to the data set, 77% of students believe that the maximum group size should be between 4 to 5 students. 8.1% of students showed disagreement on this group size, and 14.9% of students have a neutral opinion. Students have a positive perception about CL, and 77.3% of students showed agreement to continue CL activities; however, 11.5% of students showed disagreement, whereas11.2% of students are of the neutral opinion. The majority of students, i.e., 72.1% of them, do not perceive any difficulty getting group members actively participating in the task. In comparison, 9.7% consider it difficult, whereas 18.2% are neutral as positive interdependence is a significant characteristic of CL, so students are responsible for each other's learning. Data set reveals that 76.6% of students showed disagreement with this statement that explaining concepts to others is a waste of time. However, 10.4 % of students consider it a waste of time, and 13% have a neutral opinion. It shows that students are motivated to cooperate and do not consider it a waste of time.

Findings from FGDs

Perceptions of Students Regarding CL

The findings of the FGDs reveal that students have positive perceptions about the effectiveness of CL as a teaching method, which might give long-lasting learning experiences in terms of academic and social gains (Brown, 2008). Few sample statements are listed below:

Note: (Extract from focus group discussions (FGDs) translated in English).

- I appreciated a lot working in a group.

- Learning in a group is more valuable than learning alone

- We had a lot of fun during group work.

- It made me surer, on the off chance that I don't know anything so that I can ask my companion.

- There were a couple of arguments among group members; however, we resolved the issues quickly without being passionate.

Most of the students were having a favorable opinion regarding CL; according to them, CL increases their academic and social skills (Cecchini et al., 2020). Working together enables them to utilize social skills in incompatible circumstances (Korkmaz & Oztürk, 2020).

Hypotheses Testing

The purpose of the current study was to examine the direct and indirect relationship between cooperative learning and social & academic gain through teacher's feedback. In the current analysis, a cooperative learning strategy is an independent variable, teacher's feedback is the mediator, and social and academic gains are two dependent variables. To test the model, mediation analysis was performed using bootstrapping approach recommended by Preacher & Heyes (2004) using process macro in SPSS developed by Heyes; (2013). The following hypothesis was tested in this research:

H₁: There is a significant direct relationship between cooperative learning and social gain.

H₂: Teacher feedback mediates the relation between cooperative learning and social gain.

H₃: There is a direct relationship between cooperative learning and academic gain.

H₄: Teacher feedback mediates the relation between cooperative learning and academic gain.

In Table 2, two mediation models were developed and tested using the Process Macro approach in SPSS as suggested by Heyes (2013). The reason for developing two separate models was because of the limitation of the macro – i.e., it can accommodate only one dependent variable in the analysis at a particular time. In the first model, where the dependent variable was social gain, the F test value was 60.596, p-value < 0.01 that was significant. Therefore, the relationship between

the variables was not due to a chance. Moreover, R2 represents around 10% impact of all the independent variables on the dependent variable.

As far as model 1 is concerned, the direct relationship between cooperative learning and social gain was found to be insignificant – i.e., beta value- .0369, p <0.01. Therefore, the hypothesis that "There is a significant direct relationship between cooperative learning and social gain" was rejected. On the other hand, the indirect relationship between cooperative learning and social gain through teacher's feedback was significant with effect size .3960, p <0.10. This means that the hypothesis, "Teacher's feedback mediates the relation between cooperative learning and social gain," was accepted. Furthermore, the total effect was also significant, with an effect size of 0.3590. p <0.01, which concludes that teacher feedback fully mediates the relationship between cooperative learning and social gain.

Table 2: Mediation Analysis Results

Model	Social Gain (Mediator = Teacher's Feedback)		Academic Gain (Mediator = Teacher's Feedback)	
	B	**SE**	**B**	**SE**
Direct Effects				
Co-operative Learning	-0.0369	0.077	.6047***	0.0537
Indirect Effects				
Co-operative Learning	.3960*	0.063	0.5348	0.0699
Total Effects				
Co-operative Learning	.3590***	0.046	.0699***	0.0311
R^2	0.1016		0.4136	
F test	60.596***		378.016***	

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

*. Correlation is significant at the 0.10 level (2-tailed).

In model 2, the dependent variable was academic gain, where the F statistic was significant as the F value is 738.016. p< 0.01. In addition to that, R2 is approx. 41% implies a sufficient overall influence of all the variables on the dependent variable. In this particular model, a direct relationship between cooperative learning is significantly associated with academic gain with an effect size of 0.6047. Therefore, the hypothesis, "there is a direct relationship between cooperative learning and academic gain was accepted. Furthermore, the indirect relation between cooperative learning and academic gain through teacher's feedback was insignificant as the indirect effect size .5348 was not significant, i.e., a p-value less than 0.5. It implied that the hypothesis, "teacher's feedback mediates the relation between cooperative learning and academic gain," was rejected.

The overall crux is that teacher feedback is the main reason for the relationship between cooperative learning and social gain – i.e., if there is no feedback from the teacher, cooperative learning is not the right strategy for students' social learning. On the other hand, in the second variable, cooperative learning is a helpful strategy for academic gain regardless of its feedback.

DISCUSSION AND RECOMMENDATIONS

Findings of the research is inconsistency with the findings of the studies which reported the effectiveness of CL in relation to academic gain (Goodwin, 1999; Tan, Sharan & Lee, (2007); Thanh-Pham (2008); Nguyen (2009); Tran & Lewis, (2012); Tran & Lewis (2012); Ebrahim (2012); Reza, (2013); Lau, Chong &Wong (2014); Paul & Ray, (2014); Inuwa, (2015); Garcha & Kumar (2015); Mashhadi & Gazorkhani (2015); Phiwpong & Dennis, (2016). The findings support the theoretical perspectives of social constructivism. According to social constructivism, knowledge is built socially, so CL facilitates learning in an asocial environment (Johnson & Johnson, 2006; Slavin, 2015; Makini, 2020), considering that CL could be an approach that gives the best result in scholarly accomplishment students as compared to traditional group assignments. Findings of focus group discussions also support quantitative data findings as students showed positive perceptions towards CL. They perceived it helpful in their academic gain and motivation towards learning. They said that they enjoyed working in groups. Students` performances and responses show that cooperative learning improved their level of academic gain.

In contrast, the mediating role of teacher`s feedback in terms of increasing academic gain is proved insignificant, which is contradicting the findings of previous researches (Wiliam, 1998; Paulus,1999; Dinham, 2008; Shute, 2008; Ismail et al., 2008; Chaqmaqchee, 2015; Black & Reugg, 2015; Hu & Choo, 2016). Findings related to CL's effects in enhancing social gain are not consistent with the previous research and not supporting the social cohesion perspective. Results show that there is no direct relationship between CL and social gain. However, the role of teachers` feedback as a mediator proved to be effective for gaining social skills, which are not discussed in mostly reviewed researches but only in Ross (1995). This finding can be considered a significant contribution in the field of educational research.

CONCLUSION

It can be concluded that CL can be adopted as an alternative to the traditional teaching method at the tertiary level. Teachers` feedback plays an essential role in increasing group cohesion. Researchers have advocated the implementation and use of cooperative learning at the tertiary level in different subjects to increase students` academic gain and social adjustment. As Pakistan is situated in East Asia so in Pakistani schools' teacher should adopt a teaching methodology which supports collectivism rather individualism. Researchers recommend conducting future researches to explore the direct and indirect relationship between teachers` feedback and social and academic gain. Future researchers may study the significance of CL in different subjects and across gender.

LIMITATION OF THE STUDY

In this study, data was collected from the students of Private Sector University with the help of convenience sampling technique. Moreover, researchers selected participants from Sociology, Psychology, and Writing Research Report courses by using the convenience sampling technique. Therefore, it is recommended that in future research, respondents of public sector universities should also be included to collect the data. It is suggested that students may be selected with the help of a stratified random sampling technique and respondents from courses other than social sciences may be selected to collect the data.

CONTRIBUTION OF AUTHORS

Prof. Dr. Najmonnisa Khan contributed majorly to designing methodology and developing research tools moreover, she also contributed to conceptualizing the introduction and literature review of this study.

Farhan Uddin Raja: He also contributed to conceptualizing the introduction of this study.

Mirza Amin Ul Haq: He helped in the analysis and interpretation of data.

Lubna Oad contributed to developing discussions and conclusion, recommendation, limitations of the study.

Rabia Aslam contributed to the data analysis section, generate themes, interpret findings, and future research directions.

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