

Peers-Group Learning for Academic Success of First Year Students: The Case of Agribusiness and Value Chain Department, Arbaminch University

Abayneh Feysa¹ Gedisha Katola² Chiamiso Demisse²

1.Lecturer at Arba Minch University, College of Agricultural Science, Agribusiness and Value Chain Management Department, Arba Minch, Ethiopia

2.Graduate Assistant Arba Minch University, College of Agricultural Science, Agribusiness and Value Chain Management Department, Arba Minch, Ethiopia

Abstract

This research has been conducted by three authors for the purpose of pursuing Higher Diploma as professional instructor of Higher Educational Institution. This study aimed to investigate impact of peer learning and influencing factors towards one-five-peer learning on academic success of first year student because Ministry of Education in Ethiopia is implementing one-to-five peer learning strategies education system from lower grade to higher institution to enhance student learning. However, some Authors study result shows that implementation is not successful compared to the desired objectives especially at higher education. Data was collected from Agribusiness and value chain management first year students and collected data were analyzed using descriptive statistics and Likert scale of attitude measurement. Study result shows that 35.6% students had negative perception while 42.2% students had negative attitude toward one to five peer group learning system. Also only 8.9% students have shows strong agreement and positive attitudes concerning to work in one-to-five peers. About 55.6% students' participation was not active and academic profile of academic dismissed student profile shows that they were not active participants of one to five peer group learning. Good information gathered from senior and attitude of group leaders and members, strong team work behaviors, time arranged by department were some psychological and physical factors which made 44.4% of student active participant in one to five peer group learning. Whereas, negative perception and associating one to five peer learning with politics and personal weak team work behaviors, bad information gathered from senior students and lack of open ended questions for discussion were, nature of course were some of factors which made 55.6% students inactive participants. To improve those psychological, physical and biological factors the authors (action research set) had taken some measures and implemented them. Some of the measures taken were: peer learning groups were re -organized and outstanding students were distribution for each group, peer groups were continuously guided, open-ended and peer learners inspiring questions were provided on two courses, students study schedule development has been assisted study and attentive observations were made. And implementations had come with promising result on academic performance of students.

Keywords: Peer- learning group, perception, attitude and factors

1. Background and Justification

Peer learning can be defined as the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions. It involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by doing (Keith, 2005). This learning involves individuals exchanging knowledge and experience with each other, and diffusing this learning back to their organisations to ensure an impact (Matt and Nick, 2016). Peer learning can be valuable approach to generate and disseminate knowledge. Peer learning tends to work best when targeted at a specific sector or area (ibid). Recently, by understanding such benefits of peer learning Ministry of Education implementing one-to-five peer learning strategies started in Ethiopian education system from lower grade level to higher institution to enhance student learning. However, the implementation is not successful compared to the desired objectives especially at higher education. Study conducted by Efrem and Oukula (2015) realised that one-to-five peer learning helped students learn better and develop self-confidence, however many students and even teachers think it as political agenda which must be implemented with no compromising since once higher institutes are commanded. Therefore this study aimed to investigate impact of peer learning and influencing factors towards one-five-peer learning on academic success of first year student.

2. Research Method

2.1.1. Data Source and Sampling Method

To select representative sample respondents' all one to five group members were stratified in to two active and inactive participants based on the level of participation in first semester. Finally due to small number of students all members (active and inactive participant) was selected and interview schedule was arranged to gather

qualitative data (attitude, influencing factors, benefits of peer learning) and their academic success issue were gathered from their academic profile by consulting department head and college registrar.

2.1.2. Method of Data Analysis

Descriptive statistics (percentage, frequency, mean) and Likert scale of attitude measurement were employed to analysis data. Likert scales are a non - comparative scaling technique and are one-dimensional (measure single trait) in nature. Respondents are asked to indicate their level of agreement with a given statement by way of an ordinal scale. Most commonly seen as a 5 - point scale ranging from “Strongly Disagree” on one end to “Strongly Agree” on another end (Mogey, 2007). Likert-type scales are most popular form of attitude measurement. Attitude scales of this sort typically are comprised of a set of statements or “items” that scale a respondent’s level of agreement, favorability, or other similar perception (N. Balasubramanian, 2012). Statistical Package for Social Science software (SPSS) was used to analyse the data.

3. Result and Discussion

3.1.1. Student Attitude and Perception of Peer Learning Group

Attitude implies that the individual is no longer neutral toward the referent psychological object. The person would be positively inclined or negatively disposed in some degree towards the referents (Burr, 2000). As indicated in (Tables 1) below from total of 45 students, 35.6% students had negative perception while 42.2% students had negative attitude toward one to five peer group learning system. This shows that significant number of students have undesirable emphasis for the learning system. This calls for improvement of students’ attitude on one to five peer groups learning because it may alter the discussion of other individuals in their group. Only 8.9% students have shows strong agreement and positive attitudes concerning to work in one-to-five peers.

Table 1: Student’s attitude and level of perception for Peer group learning system

Variables		Frequency	Percent
Perception for 1 to 5 peers learning system	Positive	27	60
	Negative	16	35.6
	Neutral	2	4.4
Students attitude for 1 to 5 peers group learning	Strongly disagree	19	42.2
	Disagree	14	31.1
	Neutral	2	4.4
	Agree	6	13.3
	Strongly agree	4	8.9
	Total	45	100

Source: own survey, 2018

As indicated in (Table 2) below 60 % of the respondents response shows that one to five peer group learning encourages way of learning. Group work is believed to be beneficial not only in a work environment, but also to have many positive results in academic settings (Davis, 1993) because it creates space for academically outstanding students to express their knowledge and weak students to inspire them to perform well and exploit their potential through peer group learning discussion.

Table 2: Importance and Student Observation of Peer Group Learning

Variables		Frequency	Percent
Encourages way of studying	Yes	27	60
	No	18	40
	Total	45	100
Observation for the study day and system	Pay attention seriously	21	26.7
	Neutral	12	26.7
	Not pay attention	12	46.7
	Total	45	100

Source: own survey, 2018

As indicated in (Table 2) above 46.7% students not pay serious attention for the program. From (Table 1 and 2) we can observe that there is still awareness problem and some students had negative attitude toward one to five peer learning.

As indicated in (Table 3) below 56.8% of interviewed students response shows that one to five peer group learning has an impact on their study style while 55.8% student response shows that one to five peer group learning has positive impact on their study style, but in the last semester 55.6% students participation was not active and academic profile of academic dismissed student profile shows that they were not active participants of one to five peer group learning.

Table 3: Peer Group Learning Impact, Types of Impacts and level of participation

Variables		Frequency	Percent
Impact on study style and result	yes	25	56.8
	no	20	43.2
	Total	44	100
Type of impact	positive	24	55.8
	negative	21	44.2
	Total	45	100
Active participation	Yes	20	44.4
	No	25	55.6
	Total	45	100

Source: own survey, 2018

3.1.2. Factors Influencing Students One-to-Peer Group Participation

To identify influencing factors authors' classified those factors as negatively and positively influencing factors. To come up with such differentiation respondents has been guided to respond separately. Based on their response analysis result has been discussed below:

3.2.1. Factors Makes Students Active Participants of Peer Learning Group

As indicated in (Table 4) below good information gathered from senior and good attitude of group leaders and members (peer motivational factors), strong team work behaviors (biological trait) time arranged by department (physical environment) are some psychological and physical factors which made 44.4% of student active participants in one to five peer group learning. Motivational states serve to energize or activate behavior and to direct the behavior toward specific goal. Motivation can done by Force (threat of punishment) is good to make inefficient persons or group to work hard, by Enticement (rewards) motivate an individual to work a lot and in improved method, by Identification (them to work by their involvement or contribute to the group). (Glynn *et al.*, 2007). Most psychologists believe that motivating by Identification is best way to motivate people. To motivate through identification it needs provision of opportunities to share ideas, participate in decision making, freely express their opinions and involve in the whole affairs thereby creating a feeling of belongingness through developing and maintaining an environment by which they work together in a group.

Table 4: Factors Which Makes Students Active Participants of peer learning

Variables	Response	Frequency	Percent
Good Information from senior and Graduating batches	Yes	15	75
	No	5	25
	Total	20	100
Strong teachers advice and monitoring	Yes	20	100
Good information about 1 to 5 from family	Yes	15	75
	No	5	25
	Total	20	100
Self-positive perception about the system	Yes	20	100
Good attitude of group leaders and members	Yes	20	100
Provision of Appropriate questions by course Instructors	Yes	20	100
Nature of course	Yes	19	95
	No	1	5
	Total	20	100
Type of course which encourages 1 to 5 discussions	Theoretical	12	58.8
	Calculation	8	41.2
	Total	17	100
Strong team work behaviors	Yes	20	100
Time arranged by department is appropriate and free class schedule	Yes	18	94.7
	No	1	5.3
	Total	19	100

Source: own survey result, 2018

3.2.2. Factors Make Students Inactive Participants of Peer Learning Group

Active or inactive participation of individuals depends upon paying attention for both objective and subjective conditions. They are found in the past history of the process of attending in the individual himself (prior mental conditions of attention) or in the environment (and characteristics of the stimuli). As indicated in (Table 5) mental conditions; negative perception and associating one to five peer learning with politics and personal weak team work behaviors and characteristics of the stimuli: bad information gathered from senior students and

discussion open ended questions were not given by course instructors, nature of course some were of factors which made 55.6% students inactive participants.

Table 5: Factors Which Makes Students inactive participants of peer learning

Variables	Response	Frequency	Percent
Bad information from senior about 1 to 5 peer learning	Yes	21	84
	No	4	16
Weak teachers advice and monitoring	Yes	11	44
	No	14	56
	Total	25	100
Bad information about 1 to 5 organizations from family	Yes	9	42.9
	No	12	57.1
	Total	21	100
Negative perception and associating it with politics	Yes	22	88
	No	3	12
	Total	25	100
Group leaders and members bad attitude	Yes	22	88
	No	3	12
	Total	25	100
Appropriate 1 to 5 discussion questions are not given	Yes	18	85.7
	No	3	14.3
Nature of course not encourages	Yes	12	57.1
	No	9	42.9
	Total	21	100
Type of course encourages 1 to 5 discussions	Theoretical	8	47.1
	Calculation based	9	52.9
	Total	17	100
Personal weak team work behaviors	Yes	20	95.2
	No	1	4.8
	Total	21	100
Time arranged by department	Yes	10	47.6
	No	11	52.4
	Total	21	100

Source: own survey, 2018

3.1.3. Academic Performance of Active and Inactive Peer Learning Participants

To examine academic performance of active and inactive one to five peer group learning participant authors have been collected data about frequency of participation (students profile and section leaders' attendance sheet), result achieved (from registrar office) and comparison has been done. The result shows that active participants have achieved promising result whereas inactive participants grade was not promising and also four students were academically dismissed from inactive participants.

Table 6: Student status in first semester

Status	Frequency	Percentage
Dean list	14	28.57
Promoted	29	59.19
Warned	2	4.08
Dismissal	4	8.16
Total	49	100

Source: Campus Registrar office, 2018

Authors has been conducted focus group discussion with first five academic ranked students and all focus group discussion participants said that "besides of academic achievement one to five peer group learning creates confidence to express the subject matter during presentation and helps to develop presentation skill."

3.2. Measures Taken and Result Gained

3.2.1. Measures Taken

One to five peers learning groups have been re-organized through distribution of first to seventh ranked outstanding student in each group and assigned as group leaders because in first semester group organization has been done based on students higher education entrance result which was not effective for coaching and assisting group members. Therefore to alleviate such problems groupings were done by a mixing male and female with

fair distribution of all level.

For the problems noted authors **continuously guided students** on the group process and students' progression through group activities. Two instructors each has been taught two different courses namely; Agricultural marketing and Developing value chain, while one of the author is section leader for the batch. Therefore, it makes continuous guidance and monitoring easy.

On aforementioned courses provided **open-ended and peer learners inspiring question** to each peer learning groups at the end and beginning of each class and assessment was done for each group. During provision of questions for discussion showing their duties to be fulfilled, but changing negatively perceived students attitude towards positive required more time and effort.

Assisted study schedule development and attentive observations of the students during one to five peer group study. During our observation group leaders and members have been encouraged to express their view and knowledge about the subject matter and encouraged them to discuss with course instructors for further improvement. These helped academically weak students to explore their own potential, outstanding students potential and course instructors too.

Provision of different roles and responsibilities for each group members: Authors assigned group members as group leader, note taker and report writer which mean among six/seven member's three members have known clear roles and the rest as active contributor for peer learning and group discussion. Providing different responsibility to all members of the group helps to reduce single leader work load and creates mutual responsibility taking habits of students'.

3.2.2. Intervention Result

To know whether our intervention come up with significant result or not we have encouraged all students to have both course (Agricultural marketing and Developing Value Chain) final exam before department exam schedule by petition. As indicated in (Table 7 and 8) below their final exam result shows that in the first semester result on the course "**Introduction to agribusiness management**" shows that 53.1% students scored C⁺ and below. However, after the intervention in second semester 84.4% students score B⁻ and above on both courses "Developing Value Chain" and "Agricultural Marketing" which shows that substantial change on students' academic performance have been observed. This indicates that there was a positive change after the proper implementation of one to five peer-learning.

Table 7: Introduction to agribusiness management (before) and developing value chain (after)

First semester before implementation				After implementation of the strategy	
No	result	Frequency	percentage	Frequency	Percentage
1	A ⁻ - A ⁺	9	18.3	19	42.2
2	B ⁻ - B ⁺	14	28.5	19	42.2
3	C ⁻ - C ⁺	22	44.9	7	15.6
4	D	4	8.2	-	-
5	Total	49	100	45	100

Source: Authors computation, 2018

Table 8: Agricultural marketing result after intervention

Grade	Frequency	Percentage
A ⁻ - A ⁺	20	44.44%
B ⁻ - B ⁺	18	40%
C ⁻ - C ⁺	7	15.56%
D	0	0
	45	100%

Source: Authors computation, 2018

The results imply that properly controlling the one to five peer-learning influencing factors towards peer learning on academic success of first year agribusiness and value chain management students can contribute to higher levels of motivation, higher levels of self-esteem, increased perceived importance of tasks, and higher levels of challenge as it relates to skill. The results shows that inactive or passive students are more readily able to achieve flow and less apathetic during discussions when the students were adequately trained in and amply experienced with the proper implementation of peer learning methods.

4. Summary and Recommendation

4.1.1. Summary

Among interviewed students 35.6% perception was negative, while 42.2% students had negative attitude toward one to five peer group learning system. Also 40% of the students' views this learning as not importance to their learning plan and study style improvement. 56.8% of interviewed students' response shows that one to five peer

group learning has an impact on their study style while 55.8% student response shows that one to five peer group learning has positive impact on their study style. Also 55.6% was not and the rest 44.4% was active participants. Good information gathered from senior students and good attitude of group leaders and members and strong team work behaviors time arranged by department are some psychological and physical factors which made 44.4% of student active participants in one to five peer group learning. In contrast negative perception and associating peer learning with politics and personal weak team work behaviors and bad information gathered from senior students and discussion questions are not given by course instructors, nature of course were some of the factors which made 55.6% students inactive participants.

4.1.2. Recommendation

Based on analysis result the following points were recommended

- ☞ Creation of clear awareness about importance of one to five peer group learning during first year
- ☞ Section leaders should monitor and motivate their students to share knowledge on each courses information for better performance and achievement of expected result.
- ☞ Academically good students should be distributed through each group and they should be aware about importance of peer learning.
- ☞ Each course instructors should provide open ended questions which encourage group learning and helps to exploit student's potential.
- ☞ Best performing and active peer learning participants should be rewarded.

5. REFERENCE

- Arul MJ. 2002. Measurement of Attitudes Available at <http://www.geocities.com/arulmj/atti-b.html>, last accessed 27/05/2018.
- Ary, D., Jacobs, L.C., & Razavieh, A. 2006. The nature of scientific inquiry. Introduction to research in education (7th ed.)
- Burr S., 2000. Attitude Questionnaires. <http://www.scre.ac.uk/tpr/observations/obs3/obs3bull.htm>
- Efrem Gulfo and Oukula Obsa. 2015. Students towards One-to-Five Peer Learning: A New Approach for Enhancing Education Quality in Wolaita Sodo University, Ethiopia. Published at Journal of Education and Practice ISSN 2222-1735 Vol.6(19)
- Glynn SM, Taasoobshirazi G, Brickman P. 2007. Nonscience majors learning science: a theoretical model of motivation. *J Res Sci Teach* 44, 1088–1107.
- Keith J . Topping. 2005. Trends in Peer Learning University of Dundee, Scotland. Published at journal of *Educational Psychology Vol. 25, No . 6*.
- Matt Andrews and Nick Manning.2016. How to make peer-to-peer support and learning effective in the public sector? Guide to Peer-to-Peer Learning. Effective Institutions Platform
- Metin, M.,2010. A study on developing general attitude scale about environmental issues for students in different grade levels, Asia pacific forum on science learning and Mogy, Nora. 2007. "So You Want to Use a Likert Scale?" Learning Technology Dissemination Initiative, Heriot - Watt University.teaching vloume11, issue 2, article 3
- Nelson, K., Quinn, C., Marrington, A.& Clarke, J. (2011); Good practice for enhancing the engagement and success of commencing students. Higher Education. <http://eprints.qut.edu.au/40257/1/41122.pdf>
- N. Balasubramanian. 2012. Likert Technique of Attitude Scale Construction in Nursing Research. Published at *Asian J. Nur. Edu. & Research 2(2)*
- Slavin, R . E . 1990. Co-operative learning: Theory, research and practice. Englewood Cliffs.
- Spencer Kagan Miguel Kagan, (2009). Kagan cooperative learning. Kagan Publishing.
- Tinto, V. (1998). Colleges as Communities: Taking Research on Student Persistence Seriously. *The Review of Higher Education*, 21(2), 167–177.
- Vester, Frederic 1998: Denken, Lernen, Vergessen. 25. Auflage, München: dtv
- Wendy Joliffe. (2007). Cooperative learning in the classroom putting in to practice: A SAGE Publications Company. London. Kagan Miguel Kagan, (2009). Kagan cooperative learning. Kagan Publishing.