Fostering Sport Sciences Students’ Academic Achievement through Peer Oriented Instruction

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Abstract

The purpose of this study was to examine the perception of students, peer assistants and the department head towards peer assisted instruction. It also aimed to investigate the extent of its implementation in sport sciences department and challenges which hamper its effectiveness. The subjects were peer assistants, tutees and the department head. They were selected through purposive sampling technique. Questionnaire, interview and focus group discussions were employed as data gathering instruments. The findings indicated that tutees, peer assistants and the department head have positive perceptions toward peer assisted learning instruction. They perceived that peer assisted instructional approach helps learners to develop their academic achievement, to enhance their social interaction skills and to manage their psychological difficulties. However, the practices were limited to activities such as doing assignments and project works, sharing their learning and studying experience. The data also revealed that factors such as lack of tutees motivation, lack of facilities, lack of support from the department, lack of peer assister tutoring experience were the observed challenges which affect students’ engagement in peer assisted instructional model.
INTRODUCTION

Peer assisted learning has been a widely accepted instructional technique in educational institutions (Arendale, 2017). It is implemented to maximize students learning, to enhance communication and social skills; students who understand the lesson assist lower achievers and less experienced students to foster their academic success and to reach out them in an individualized and positive ways (Mynard & Almarzouqi, 2006; Nguyen, 2013). In addition, Mynard and Almarzouqi, (2006) and Thurston, et al. (2007) explained that peer assisted instruction emphasis on the role of learner’s interaction and allows them to scaffold each other’s learning.

Ginty and Harding (2014) asserted that peer assisted instruction benefits learners to facilitate learning, information processing, knowledge sharing, academic socialization, critical thinking and reflection among peers. Betegiorgis and Abiy (2016) also viewed peer assisted learning as a part of student-center instruction where students engage in cooperative learning. Furthermore, the instruction provides to students the opportunity to participate actively in their learning to improve their self-confidence and to be familiar with the learning environment (Topping, 2005). The strategy makes lawyers, doctors, educators and students’ effective in their professional skills and practices (Han, 2005) through proper peer assisting and mentoring.

Furthermore it is effective at improving success rates in high-risk courses (Cheng and Johnston, 2014). From the social interaction theory point of view, learning relies on interaction among individuals; learners could improve their learning with the support of adult guidance or mentored by capable peers. Moreover, Vygotsky’s 1962 idea cited in (Arendale, 2014) stated the presence of an advance peer within a student group serves as a catalyst for all students to perform at higher levels than they would alone. Hence, through peer assisted instruction, learners acculturated in to knowledge through engagement with more capable peers to enhance their partners’ confidence and academic performance (Topping, 2005 cited in Betegiorgis, Abiy and Mesafint, 2015).

Research studies show that the instruction is effective to improve students’ learning. Among these, Betegiorgis and Abiy (2015) and Beyissa (2014) proved peer assisted instruction is effective to teach courses like English and physics. Arendale (2014) also proved peer assisted learning contributes to improve students’ academic performance. Likewise, (Topping, 2009; Duah, Croft & Inglis, 2013; Ginty & Harding (2014) mentioned that it is an effective approach for students to adapt the new environment, to understand a course content, to develop learning and study skills and to prepare for better achievement in tests.

Therefore, this research aimed at investigating the perceptions of tutees, peer assisters and the department head toward peer assisted instruction. Besides, it aimed to explore the practice of peer assisted instruction in sport science department, Bahir Dar University. It also aimed to investigate the major challenges which hamper the implementation of the instruction to foster sport science students academic achievement.

In Ethiopia, recently, there is a great expansion of primary, secondary, territory and vocational institutions by guided through the Ethiopia Educational policy (ETP, 1994). As it is mentioned in the policy, the objective of education is to develop the physical and mental potential of the learners, to make them problem solver, to become critical thinker.

In the country, peer assisted learning has been implemented in orthodox church education (Abenet tme’hetbet) for a long time. The students who learn and understand the lesson have a responsibility to guide their colleagues before and after they learn from their teachers. This helps them to master the content which they learn. Likewise, the Ethiopian education policy (1994) embarks every educational institution should implement different active learning strategy such as cooperative learning, peer assisted learning, and mentoring to make university students effective in their education. For instance, according to Betegiorgis and Abiy, (2016), higher institution students work together in peer learning group and assist one another’s learning. Similarly, Weldemariam and Girmay (2015) state that Ethiopia introduces network learning such as cooperative learning strategy starting from upper primary to university education.

According to Medhanit, Meseret & Akilu (2015), education, to be successful has to consider the type of the lesson, teachers’ qualification, students’ motivation, level of knowledge and the overall situation of the institution. Thus, Bahir Dar University, one of the largest public university in the country, designed various active
teaching methodology like cooperative learning, peer assisted learning and mentoring as supplementary instructions.

The university designed this learning approach and is implementing in every discipline. Particularly, first year students are assisted by senior students to support their transition to higher education and to develop their learning and study skills (Ginty & Harding, 2014), and it also practiced to motivate and maximize their learning and to appreciate their educational engagement. Furthermore, the university arranged various study areas in the campus to be used by peer assisters while they assist each other. Moreover, students are also grouped into one to five arrangements to assist each other’s learning by using cooperative learning approach. Sport Sciences is one of the department in which students support each other by using peer assisting instruction and cooperative learning strategies. Particularly, senior students are selected to assist courses which are difficult for first year students such as human physiology and biochemistry.

However, Peer assisters are selected either based on higher education entrance result or based on their previous semester academic achievements (grades). Accordingly, the instructional approach did not implement as it was aimed. For instance, Efrem & Oukulu (2015) also asserted that although it has been implemented widely in Ethiopian Higher Education (EHEI), the program has not been effective to the expected extent. These might be the reason that students who are selected to assist lower achievers did not get any formal or informal training, the department head or the coordinate did not have any mechanism to follow up the instruction and students’ lack of awareness regarding peer assisted learning instruction, difficulty with lack of teaching aids and materials.

Hence, the researchers observed only some students participate in the program. It seemed lack of attention is given by tutees, teachers and peer assisters; they might think that they don’t get benefit from the instructional approach.

According to the literature, teachers’ conception and attitudes towards peer assisted learning, personality clashes during study, lack of commitment and attendance on the parts of tutees are the mentioned challenges which affect peer assisted instruction (Mynard & Almarzouqi, 2006; Betegiorgis & Abiy, 2016). Besides, inconsistent tutoring practice also undermines its effective implementation (Nguyen, 2013). Thus, it is recommended that academic members should carefully coordinate the program in order to troubleshoot problems that arises (Ginty & Harding, 2014).

Recently, there are researchers who investigated the peer assisted instruction. For instance, Betegiorgis and Abiy (2016) investigated EFL teachers’ conceptions and attitudes of peer-assisted learning in English classes. They find out that majority of EFL instructors neither they have positive attitude nor they have positive conceptions toward peer assisted learning as result of lack of practice and adequate training in its implementation. Similarly, Betegiorgis, Abiy and Mesafint (2015) also investigated EFL teachers’ beliefs and practices in relation to peer-assisted learning in university English classes, and they concluded that Debre Birhan University EFL instructors have strong belief in the importance of using peer assisted learning in English classes. However, according to these researchers teacher’s beliefs and practices did not significantly corresponded.

Furthermore, Betegiorgis and Abiy, (2015) examined the fidelity of peer mediation and its role in improving students’ oral English communication skills. They reported that low and medium achievers showed moderate improvement in their oral English communication skills as a result of peer mediation instruction. Thurston, et al. (2007) also studied the theoretical perspectives and implications of peer learning for primary school science classroom practice. Hence, they find out that peer learning has an important role to play in primary school, and they recommended that continues professional development program is essential to enhance the pedagogy of teachers in using peer learning strategies. Likewise, Eskay, et al. (2012) investigated the use of peer tutoring, cooperative learning and collaborative learning on reducing anti-social behavior of schooling adolescence. They reported that peer tutoring, cooperative learning and collaborative learning reduces anti-social behavior of schooling adolescents.

In the same way, some researchers conducted a meta-analysis and systematic review toward peer assisted instruction. For instance, Balta, et al. (2017) studied a meta-analysis of the effect of peer instruction on learning gain: Identification informational and cultural moderators. These researchers found that peer instruction has a positive impact on learning compared
to traditional teaching methods, and they added that it is the most effective in collectivist countries and individualist countries that place a high value on social interaction, compared to those encouraging individual learning. In addition, Dawson, Vander Meer, Skalicky and Cowley (2014) reviewed literatures from 2001-2010. The review focused on the effectiveness of supplemental instruction and peer assisted study. Accordingly, the researchers stated that through supplemental instruction seemed to have been effective, it does not provide some indications that worked on some level for some groups of students.

Generally, the above researchers explained that peer assisted instruction is an active learning instruction which helps learners to improve their academic achievement and help them to reduce psychological difficulties. Therefore, this research aimed to examine perceptions of peer assistants, tutees and the department head perceptions and the way peer assisted instruction model was practiced in the selected department.

Though, researchers such as the above discussed peer assisted instruction, none of them explored the perception of peer assistants, tutors and the department head, and how it is practiced in the selected department and university is not addressed. Moreover, there is no enough data which mentioned the challenges which hamper the implementation of peer assisted learning in sport science setting.

Accordingly, this research aimed to explore perceptions of tutors, tutees and the department head. In addition, it endeavored to determine the extent of its practice in sport academy, sport science department. It also aimed to investigate the major challenges which hamper the implementation of peer assisted learning in the sport science department in particular and in Bahir Dar University in general. Thus, the study attempted to answer the following research

1. What are the students, peer assistants and department head perceptions towards peer assisted learning?
2. To what extent peer assisted learning is practiced in Sport Academy, Bahir Dar University?
3. What are the main challenges of peer assisted learning in sport academy, Bahir Dar University?

Students’ active involvement in the educational processes is the focus of every educational institution, teacher, policy maker, students and parent, and various educational institutions have been enacting various polices and strategies to make students’ learning effective. Thus, this research benefits institutions by indicating what challenges may face their students to practice and implement peer assisted learning instruction, and it also shows a direction what is expected from the department head and from each individual. Likewise, teachers also benefit in this research. Teachers who need to improve students’ critical thinking, social skills and academic achievement through peer assisted instruction can use this research. Moreover, learners are also benefited by this research. The research inform them how peer assisted instruction is important for learners to improve their academic achievement, to enhance social skills and to manage psychological difficulties.

**METHOD**

The main purpose of this research was to explore the practices and perceptions of peer assisted learning instruction in sport sciences department Bahir Dar University. It was also aimed to investigate factors which hamper the implementation of peer assisted instruction in the department. The research followed mixed methods research paradigm. Accordingly, the researchers gathered qualitative data by direct observation on the actual phenomena through focus group discussion, and quantitative data were gathered through questionnaire. These data were gathered simultaneously. Therefore, this research is designed through convergent parallel mixed method design.

In Bahir Dar University, according to the University official website (http://bdu.edu.et), there are 4 institutes, 5 colleges, 2 faculties, 2 academies and 5 schools, and the university aspires to implement active learning and participatory teaching methodologies like peer assisted learning, cooperative learning and other in all institutes, schools, faculties and colleges. Though there are various educational issues which need to investigate, the researchers decided to focus on students who enrolled in sport academic in 2016/2017 academic year and peer assisted learning.

The university and the department were selected purposively since the researchers are working at Bahir Dar University and the co-researcher was delivering courses for sport science first year students. Hence, the researchers believed that to manage and to coordinate the data
gathering process, the researchers selected 1st year sport science students, three 3rd year students who were participated in peer assisting program and the department head through purposive sampling technique. It was assumed that tutees, peer assisters and the department head knew the actual practices and challenges of peer assisting instruction in the selected department. Hence, 34 first year students who joined the university in 2016/2017 academic year, 3 peer assisters (third year students) and the department head participated in the research.

The researchers employed questionnaire, interview and focus group discussion as data gathering instruments. Questionnaire was the main instrument which the researchers used, and it was prepared for both tutees and peer assisters. It was designed using a Likert scale with numerical values (5, strongly agree, 4 agree, 3 neutral, 2 disagree and 1 strongly disagree).

The items were both adopted and adapted from previous studies such as (Capstick, 2004; Smith, May & Burke, 2007; Cheng & Walters, 2009 Arendale, 2014) ideas. For instance, items regarding peer assisters and tutees perception towards peer assisted instruction were adopted in Capstick, (2004), and the other items which mentioned practices and challenges of peer assisted instruction were prepared by consulting literatures from Smith, May & Burke, (2007), Cheng & Walters, (2009) and Arendale, (2014). Therefore, the questionnaire discussed tutees and peer assisters perceptions, approaches and challenges of peer assisted instructional approaches in sport science department. Likewise, the department head was also interviewed on the practices, supports and challenges of peer assisted learning instruction in sport science department, sport academy.

The other instrument was focus group discussion (FGD); in this instrument 30 students participated; all discussions were facilitated by the researchers, and they discussed issues about their perceptions about peer assisted learning, practice of peer assisted learning instruction and challenges of peer assisted learning instruction. The participants were selected randomly from the sample population and assigned them in to three groups randomly. The FGD questionnaires were grouped with three (perceptions, practices and challenges) themes. Each discussion lasted approximately 60 minutes.

The researchers checked the reliability and validity of the instruments. To assure their validity the researchers adopted and adapted questionnaire items by refereeing previous researchers (Capstick, 2004; Smith, May & Burke, 2007; Cheng & Walters, 2009 Arendale, 2014) which their validity were proved. Besides, it was viewed and revised by students who pursue their PhD in English language and literature department. Then, the reviewed questionnaire was administered to the sample population. Moreover, the questionnaire reliability was cheked through Cronbach alpha test and the value was 0.824 which indicates high level of consistency.

The data were analysed using SPSS version 23 (SPSS Inc., Chicago, IL, USA). Thus, descriptive statistics and the inferential statistics were employed. The description of participants is presented as frequency and percentage. Specifically, peer assisters perceptions, practice and challenges toward peer oriented instruction were computed through descriptive statistics with structured five-point rating scale (1-5 value: strongly disagree (SDA), disagree (DA), no response (NR), agree (A) and strongly agree (SA) and presented by using mean and standard deviation. A cut off point of 3.0 was used as decision point (expected mean) to reject or accept the items in the questionnaire. Likewise, one-sample t test was used to investigate whether perception level of tutees differed significantly from the assumed mean level. Only a few missing was registered in the questionnaires, and these were treated as missing in the analysis using exclude cases list wise. In addition, the qualitative data which were collected through focus group discussion and through semi structured interview was passed through sorting the data in to broader themes and issues by using Nvivo 10.0 analysis software.

RESULT AND DISCUSSION

As mentioned above, the participants of this study were first year sport sciences students. Among the participants 15 (44.1%) students were male, and 19 (55.9%) students were female. The data which were gathered through the instruments were analyzed thematically below.

A. Practice of Peer Assisted Learning

Peer oriented instruction practices needs both peer assisters and tutees engagement. As it is shown in table 1 above, tutors practiced some activities such as asking assistance in doing difficult assignments and tasks in a moderately way (Mean=3.26). It also explained that the supple-
A mentoring schedule was conducted through fixed and negotiated (voluntary timetabled) schedule (mean=3.21). In this case, the schedule is prepared centrally by the facilitators, or they could arrange by the agreement between tutees and peer assisters. Similarly, peer assisters also encouraged tutees to deal different tasks and activities collaboratively (Mean=3.21).

Furthermore, the researchers found that sharing tutors learning experiences and ways of coping up challenges, relatedness of activities and tasks with the course's contents were considerably better which has mean, 3.18 and 3.15 respectively. However, some discrepancies were observed from tutees responses. Even if tutees asked assisters how to deal with difficult tasks (mean=3.26), peer assisters were unable to deal with difficult tasks (mean=2.88) and they even did not consider their (tutees) feelings (M=2.82). Lastly, tutees mentioned that peer assisters did not master the subject and able to transfer the contents effectively (mean=2.76).

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B. Perception of Students and Peer Assistors Toward Peer Assisting

One sample t-test was also run to investigate the students’ levels of perceptions towards peer assisted instruction. Table 2 above shows that t (33) =10.63, P< 0.05 which indicated there is a statistical significance difference. This indicated that learners perceived peer assisted learning instruction could benefit to their academic improvement, social interaction and developing psychological aspects (self-esteem and self-confidence).

Similarly, the department head replied regarding the practice of peer assisted learning instruction. “this instruction was tried many times and many students did not participate; it is not effectively practiced.” He also responded regarding to their supervision and support. Thus he said “I rarely supervised the effectiveness of this instruction, but I think they participate in peer assisted instruction to do their assignments and group works through peer assisting.

Generally, the above data showed that peer assisted instruction was not a common active teaching strategy in the department. Though, there seem contradiction between the questionnaire data and the tutees and the department head response, it is clearly shown that the instruction did not practice in a wider context. Thus, the instruction did not use other than in educational practices such as to do assignments, project works and term papers.

| Perception | T | df | sig. (2-tailed) | Mean |
|------------|---|----|----------------|------|
| Difference | 10.633 | 33 | .000 | .86708 |

Furthermore, participants were asked their views on peer assisted instruction. They stated that “we think if it is practiced properly, it will help us to increase our grades, there will not
be students who dismiss from the department, and senior students know how to study, how to do their assignments and they are familiar with teachers’ exam preparation styles. Therefore, they can instruct how work and study with other students, how to develop our confidence during presentation and how to score better grade.”

Generally, the researchers observed that all most all students believed the instructional approach is important for improving their learning, for enhancing social interaction, for developing self-confidence, for sharing study skills and experiences and for motivating them to participate in different active learning strategies. Jahan, et al., (2013) found similar result.

Moreover, peer assisters’ perceptions were computed through descriptive statistics with (1-5 value: strongly disagree, disagree, no response, agree and strongly agree). As it is observed in the table 2 below, peer assisters highly believed by the benefits of peer assisted instructional approach.

Particularly, they believed that peer assisting instruction is very significant to understand the subject matter of the courses, for assisting each other in their learning and to have positive relationship among peers with the highest (4.66) mean.

In addition, they perceived that the instruction is very important to create the opportunity to clarify basic courses concepts and to develop different study skills with 4.33 mean. They also agreed that the instruction is very important to assist their tutees how to prepare their assignments for better marking and to develop their confidence. However, peer assisters did not think that it could benefit to create the opportunity clarify complex concepts of the courses. In general, like that of tutees (students) peer assisters have positive perceptions toward peer assisted instruction for academic, social and psychological aspects.

Generally, the researchers learned that students and peer assisters’ perceptions did not affect students’ engagement. It is believed that if the learners have positive perception, they are more likely engage with the instruction technique. Hence, sport science department students have positive perceptions toward peer oriented instruction which help them to engage with the instructional practices if they get suitable environment.

Furthermore, the department head was asked his views regarding peer assisted instruction. He replied that “I think the instructional technique is very important to strengthen their social relationship, to improve their results during assignments, to develop study skills and understand the subject matter.” Therefore, it is clearly known that peer assisted instruction contributes to the development of students’ self-confidence and minimizing stress and anxiety besides to educational aspects. According to this, Demir, et al. (2014) explained that students could minimize their stress and anxiety while they are mentored through capable peers.

### C. Challenges of Peer assisted Learning Instruction

Table 4 revels that peer assisted instruction is challenged by shortage of supportive material (3.76), tutees motivation to attend in peer assisted learning (3.74) lack of awareness about peer assisted instruction (3.35) are the major challenges which mentioned by peer assisters. Similarly, tutees mentioned in their focus group discussions that “The department does not give resources such as projectors, books, work sheets and others... the area is not also quite well for peer learning; there is sound pollution during discussion, and some students are not interested to participate in peer learning.” They believed
that it is best to study by them. Furthermore, peer assistants did not give detail explanations."

Generally, according to the data, peer assisted instruction is not effectively practiced in the department because of the lack of peer assistants assisting experience, lack of support from the department, lack of motivation and other reasons.

**CONCLUSION**

This research showed that peer-oriented instruction was rarely practiced in the selected department. Particularly, students were using it to share their learning experiences, to discuss assignments and project works cooperatively and they were using it for getting assistance for concepts which were difficult for them.

Furthermore, it is observed that students have positive perception about peer-oriented instruction. Hence, the researchers found that it greatly motivates tutees to participate especially if the skill of peer assistants improved through formal and informal training. Topping (2005) argues that participants should take specific training to take their roles.

Researchers such as (Arendale, 2000; Keenan, 2014; Chan, et al., 2016) stated that giving training for both tutees and peer assistants are mandatory for successful peer learning program. Nguyen (2013) also explained that it helps students take responsibility for their learning, and their ability to recognize and accept responsibility for academic failures. Likewise Topping (2005) also mentioned that training is compulsory to ensure equal participation and simultaneous interaction, and synergy. Therefore, it is important it is important to train peer assistants and tutees about peer assistance techniques, group management and facilitation skills (Makala, 2017). In addition, the training should include tutees and peer assistants role, procedures, active learning strategies, group skills such as team working, cooperative and collaborative learning.

Finally, challenges like lack of supportive materials, tutees motivation, awareness and peer assistants assisting experiences hampered the implementation of peer-oriented instruction at sport sciences department.

The researchers recommended that close supervision is needed by the department and quality assurance office to assist and facilitate the implementation of the program. In addition, peer assister should not be chosen simply by their ranks or academic achievement. Since peer assisting needs personal skill, passion and commitment, the department should consider other criteria while recruiting peer assisters, and training and orientation are necessary for both peer tutors and tutees to use their responsibilities successfully.

The researchers’ main aim in this study was to investigate perceptions of tutees, peer assistants and the department head and to explore the practice of the instruction in the selected department. Moreover, it aimed to explore the main challenges which impacted the implementation peer assisted learning instruction in sport science department, Bahir Dar University. Accordingly, the study showed students were interested to engage in peer assisted instruction though they were not effectively engaged as they perceived because of social, economic and administrative factors. Specifically, students’ motivation, lack of facilities, lack of support from the department, lack tutoring trainings were the observed challenges which affected students’ engagement in peer assisted instruction.

The research has implication for the practice, the learners and the teachers. For practice, the research implied that it is an effective active learning strategy to enhance students’ academic achievement, cognitive development and to improve social interaction among students’ (Thursto, et al., 2007; Eskay, Onu, Obiyo & Obidoo, 2012; Betegiorgis & Abiy, 2016). Moreover, the researcher has also implied that it has contribution to students’ academic, social and psychological improvement, and it helps them to share their learning and study experience and assist each other’s learning (Glynn, MacFarlance, Kel-

| Table 4 Challenges of Peer Assisted Learning Instruction | Mean | StD |
|----------------------------------------------------------|------|-----|
| Shortage of supportive materials (work sheet, chalk, books) | 3.76 | 1.103 |
| Students motivation to attend in peer assisted learning | 3.74 | 0.931 |
| Lack of awareness about peer assisted learning | 3.35 | 1.228 |
| Lack of experiences in peer assisted learning | 3.18 | 1.424 |
| Poor coordination of group members contribution | 3.24 | 1.182 |

Note: Each item is rated on a 5-point Likert scale (1 = SDA; 2 = DA; 3=NR; 4=A; 5=SA
In addition, the research implied to the teachers that if they coordinate peer learning program and train tutors and tutees they take their responsibility and facilitate students’ learning and the program can also minimize teachers’ burden by having desirable effort to improve their learning and understanding the learning concept easily (Watkins, 2005; Betegiorgis, Abiy & Mesafint, 2015; Hodgson, Benson & Brack, 2015). So, it is important that, tutors, tutees, teachers and the department head should be committed, encouraged and facilitated the instruction implementation.

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