



JOURNAL OF ACCOUNTING AND BUSINESS EDUCATION

P-ISSN 2528-7281 E-ISSN 2528-729X

E-mail: jabe.journal@um.ac.id

<http://journal2.um.ac.id/index.php/jabe/>

Peer Tutoring as One Best practice for Accounting Learning in Vocational Education

Mika Marsely

Accounting Department, Politeknik Negeri Malang, Indonesia

email: mika.marsely@polinema.ac.id

DOI: <http://dx.doi.org/10.26675/jabe.v5i1.12634>

Abstract: This study attempts to investigate the use of peer tutoring and assess the effectiveness of peer tutoring of accounting learning at Politeknik Negeri Malang. A descriptive research approach with a case study was employed in this research. The information was gathered through documentation, observation and in-depth interview. The accounting learning was conducted by the author by applying the same-age peer tutoring (co-peer). The findings reveal that peer tutoring is a very effective learning strategy both to tutors and tutees. Tutors feel happy, proud, and satisfied when the lecturers trust them to give the materials in front of their friends. In fact, the tutees also feel more comfortable because the learning activities have become more relaxing and not stressing that the students are brave enough to ask more questions. Peer tutoring has improved the students' academic achievements, communication skills, responsibilities, patience, empathy, sympathy, and strengthened their social skills both for tutors and tutees. As we know, these skills are greatly needed in our life in the world. The students have to be equipped with the twenty first century skills as stated by UNESCO and ILO. The author suggests that the ability should be utilized within the premises of the educational institutions. It is a must for polytechnic students to be equipped with such ability due to its great impacts on the development of their future careers. The graduates are believed to be able to productively perform their ability in the society.

Keywords: Peer tutoring, accounting learning, vocational education, tutor, tutee

INTRODUCTION

Various learning problems often occur in vocational education, such as lecturers' teaching ways, students' conditions, and lack of facilities provided by the higher education institutions to well support the teaching and learning processes. However, in this study, we will not discuss the learning problems caused by lack of facilities, but focus more on how to overcome the learning problems caused by the lecturers' teaching ways and students' conditions.

Based on the interviews conducted by the author to the accounting students at Politeknik Negeri Malang, it was found that the lecturers had some deficiencies in their teaching ways: (1) too fast explanation, (2) poor mastery on the materials, (3) less detailed explanations, (4) having no ability or skill to clearly explain the materials, (5) not willingly listening to the students' opinions or critics that the students became less motivated to study, and (6) poor understanding to the students' conditions when studying.

The second is related to the problems coming from the students themselves, including: (1) less motivated to learn because of feeling sleepy, bored, sick, and not interested in the lecturers or materials, (2)

scary learning process conducted by the killer lecturers that the knowledge transfer failed, (3) students' anxiety to ask since their questions were considered unqualified that the lecturer asked them back with successive questions, and more. Thus, it is important for the lecturers to find more appropriate learning methods to overcome the above-mentioned problems.

One appropriate learning model to apply in vocational education is peer tutoring learning model due to its promising approach in both fostering the students' academic skills and positive behaviors (Spilles *et al.*, 2019). Peer tutoring refers to learners' processes for to help each other. Rudland & Rennie (2014) have defined peer learning as a process of a student facilitates the other students' learning activities. In the other research, Amamou & Cheniti-Belcadhi (2018) state that peer tutoring is a learning device in which the tutors' task is to educate and organize themselves in teaching and then help the tutees who have got difficulties in learning. Hence, professional tutors generally play a very important role in these pedagogical learning approaches.

There are two peer tutoring types. First, "near-peer," is a peer tutoring type in which one learner is more knowledgeable than the other. Second, "co-peer" is a peer tutoring type in which they are at the same level. Near peer tutoring type more academically enable learners to work with those with difficulties. Meanwhile, co-peer tutoring type describes the paired learners who work together with the same ability and gain a better understanding on the materials by learning from each other. Peer tutoring leads the students to work in pairs to help each another in learning the materials or practices given as the academic tasks. Peer tutoring works best when students with different levels of ability work together (Rahmasari, 2017).

Most students learn by elaborating their views on others when implementing peer tutoring. Peer tutoring enables the students to develop their skills in organizing and planning the learning activities, collaboratively working with others, giving and receiving feedbacks related to their work, and finally evaluate their own learning. Ali *et al.* (2015) said that the students usually learn effectively through peer learning, especially when the university resources are inadequate and the demand of staff is higher. Peer learning creates the opportunity for students to learn from each other by employing their own skills enabling students to have more practices than learning in traditional teaching. Along with a peer tutoring assignment, the teacher can switch or make a role play, such as the tutor becomes the tutee. Whenever a tutor is explaining the concept of certain materials to the tutees, it may automatically extend the tutor's own learning. This practice gives both parties opportunities to better understanding in learning the materials being studied. In addition, the lecturers have to give trainings and supervisions to the tutors before teaching to ensure that everything works properly. So far, these practices are not only effective for face to face but also through online learning with a hybrid model (the combination of face to face and online learning through peer tutoring) as the learning media (Herrera Bohórquez *et al.*, 2019).

UNESCO and the European Agency for the Development of Special Needs Education state that peer tutoring is one of the key strategies in achieving quality education and attaining the goal of inclusive education (K. Topping, 2000). Further, the higher education institutions have to equip the students with the twenty-first century skills, such as creativity, problem-solving, collaborative skills, critical thinking, and higher order thinking skills, in order to increase the students' flexibility and job mobility (The United Nations Educational, Scientific, and Cultural Organization known as UNESCO and International Labor Organization known as ILO). Consequently, the vocational education institutions have to adopt the student-centered instructional methods (Bakare & Orji, 2019). Nevertheless, the vocational education teaching methods have not met the demands. The face to face teaching methods (direct methods) such as lecture, demonstration, and discussion adopted in vocational education tend to be the teacher-centered instructional methods. These teaching methods are ineffective to reach the learners' twenty-first century and academic needs (Orji & Ogbuanya, 2018). Hence, the need for lecturers to shift from face to face teaching methods to student-centered teaching methods is ineluctable. It is believed that peer tutoring can effectively enhance the achievement of twenty-first century skills and academic needs. Peer tutoring has been practiced and researched at all educational levels and in numerous areas, such as reading, writing, mathematics, science, and in different types of school settings (special needs, general, adult). Sharif *et al.* (2012) study the peer tutoring in language program finding that the peer tutoring program is a contributory platform for students to practice the language. They suggest that the students learn best in the student-center learning. They also

argue that the environment surrounding the teaching and learning process plays an important role in the acquisition of process and increases a meaningful language use. They appoint that peer tutoring can be a powerful support program in promoting language use among higher education institutions' students.

Prince *et al.* (2010); Britton & Anderson (2010); and Buzbee Little (2005) give the devastating research evidence that peer tutoring is greatly beneficial for academic trainings and professional developments. K. Topping (1998); Schaffer *et al.* (1990); Steele *et al.* (2000); and Parkinson (2009) describe the benefits of peer tutoring which include the increasing cognitive development and communication (Nestel & Kidd, 2003). Peer tutoring has also improved the tutors' knowledge related to the handled content areas and how to teach (Benware & Deci, 1984). Peer tutoring plays a key role in the construction of knowledge by many hands. According to Western thoughts, it is found that the children's learning will be more effective if one child teaches the other one.

Peer tutoring gives the students opportunities to enhance their self-management skills, and enhance their controls on learning and cooperation with others. Furthermore, students are accountable to monitor and evaluate the peer performance. In addition, students can be more active during lectures and have a higher motivation during the teaching-learning processes. Thus, it is believed that peer tutoring can improve the students' ability and solve the learning problems. The National Education Association has particularly emphasized on the importance of critical thinking, problem solving, creativity, and innovation competencies (World Economic Forum, 2015). Therefore, the author intends to explore the effect of peer tutoring not only on academic achievements, but also skills related to communication and collaboration.

The purpose of this paper is to describe the use of peer tutor programs to enhance the students' learning competencies and to present assessments on the programs' effectiveness. Furthermore, the author would explore the tutors' perceptions on peer tutoring processes within the accounting management practicum courses. The first section overviews the literatures related to peer tutoring, its underlying theories, implementation principles, and benefits as well as the research questions. The context, method, and result are then explained followed by conclusion to complete the paper. To achieve the aims of this study, the following question was proposed and guided the data collection process:

How are the use and the effectiveness of peer tutoring to enhance the students' learning competencies?

LITERATURE REVIEW

Peer Tutoring Concept

Boud (2001) defines that peer learning is not a single, undifferentiated educational strategy, yet includes a broad sweep of activities. For example, Griffiths, Houston & Lazenbatt in Boud (2001) find that there are ten different models of peer learning ranging from a traditional proctor model in which senior students tutor junior students, is students in the same year form partnerships assisting each other with both course contents and personal concerns, until a model involving discussion seminars, private study groups, parrainage (a buddy system) or counseling, peer assessment schemes, collaborative projects or laboratory works, projects in different sized (cascading) groups, workplace mentoring and community activities.

Sharif *et al.* (2012) argue that basically, peer-tutoring is a process of having peer tutors to help their tutees in any specific field where the tutees are considerably weak. Peer tutoring is also perceived that peer tutors are the backups or indirect knowledge transfers from teachers to students through tutors (Yaman, 2019). Peer tutoring is a collaborative learning strategy in which students exchange their roles one another to be the tutors and tutees in pairs. The tutoring processes involve the students with similar learning levels to work together or students with various learning levels working together. Peer tutoring is an organized collaborative learning strategy in which one student serves as the teacher or tutor, while the other one becomes the learner or tutee. Tutors strengthen their own learning by reviewing and reformulating their knowledge, while tutees gain one-on-one attentions. The tutors do not need to be experts in the field that they are going to tutor but they at least must possess better proficiency than their tutees. However, peer tutoring is an instructional technique which has been successfully used among children and adults to

achieve their academic and social developmental goals. Each and every teacher's goal must be the future of their students, including high, average, and low-level learners to attain high achievement levels.

Beside two types of peer tutoring called near-peers and co-peers, the other types of peer tutoring are called reciprocal tutoring and class wide peer tutoring (Ayvazo & Aljadeff-Abergel, 2019). Similarly, reciprocal peer tutoring was a type of intervention which allows students to become the instructional partners for each other. The teacher serves as a moderator during the reciprocal peer tutoring. Bakare & Orji (2019) stated that reciprocal peer tutoring was more effective than the direct learning in improving the students' achievements in both electronic and computer subjects. In addition, gender had a significant effect on students' achievement, interest, and learning retention in both electronic and computer subjects. Students will learn faster and better in mastering any skill when they are allowed to participate actively in the class by interacting freely with their lecturers and peers, working in groups and performing their practical projects together. One goal of reciprocal peer tutoring is to create self - managed learners with high self-esteem. In some cases, reciprocal peer tutoring is more effective to reach the learning goals because it may generate larger effect sizes than same-age (co-peers) peer tutoring (Leung, 2019). Meanwhile, class wide peer tutoring had positive impacts on students' social performance for three of four participants testifying the mixed effects on motor performance. Social validity reports suggest the intervention carried an added value for the students, who were empowered with the responsibility given to them and the enjoyment in cooperating with a peer during the lesson tasks are assigned.

In general, the students feel more comfortable and better understand the learning materials with their own friends than with their lecturers. Imagine when a student shares something with the other students on how much fun a particular concert or university party was. Now try to think how a professor shares the same common bond and enthusiasm was. The professor is usually unable to connect with the students due to their role and authority differences. Imagine a student sharing with the other students on their excitement in making business decisions or how marketing and management are tied into accounting for sales. Peer tutors offer compliments to the students' instructions received in the traditional classroom settings. The tutors attend class, participate in the class activities, and meet the students outside of the class to build the relationships leading to more enhanced learning processes and results. The maturity of personal, social, and intellectual model is highly emphasized by the instructors for their students to achieve.

Kunsch *et al.* (2007) state that peer tutoring works best when students of different ability levels work together. The teacher changes the role of some students to become the tutors while some others become the tutored ones (tutees). This method gives the students chances to better understand the materials studied by explaining a concept to the other students helping them to remember their previous learning materials. Peer tutoring is a beneficial way for students to learn from each other in the classroom. One student may well master one topic, while the other student may excel in the other topic. These two students can work together to help each other understand the difficult concepts and deepen their own knowledge on a particular subject.

A tutoring program for higher education students is intended to integrate the students and enhance their personal and interpersonal development through psychological experiences in the classrooms. Moreover, tutoring is also intended to support the students' knowledge related to their institution and its operation as well as to facilitate the welcoming network creation. On the other side, peer tutoring is intended to avoid the students' social isolation, and to support them in defining their academic goals (Ragins & Kram, 2007). Using peer tutoring as an instructional format may improve the students' academic achievement and social outcomes including those with disabilities (Walkup-Amos, 2020). Researchers find that the interactions between students with disabilities and their typically developing peers are positive. Through this student-centered learning design, students are more likely to develop and use their conversational skills, learn from peers with different strengths and interests as well as build the relationships with peers whom they do not typically interact with. The students with disabilities gain more opportunities to participate in social skill development goals from their individualized education programs across content areas and practices using the previously learned skills related to the services with peers. In the other perspective, students without disabilities develop meaningful friendships, increase appreciation

and acceptance to individual differences, show an increased understanding and respect for all people, and have opportunities to master new skills and contents by practicing and teaching others.

Regardless, peer tutoring represents one example of a structured academic design that intentionally combined responsiveness, positive feedback and structured, and well-organized classroom environments to improve student achievement. It is a simple and replicable way to address behavior and academics simultaneously. The implementation of peer tutoring changed the environment of the classroom for all students, but the exceptions were that peer tutoring was incompatible with disruptive behavior (Sinclair *et al.*, 2019; Gottfried *et al.*, 2019). Teachers have to consider the elements of their own instruction that could change the classroom environment. However, peer tutoring is an effective and efficient method for providing structured, supplemental reading instruction through a class-wide delivery model in an inclusive setting (Sinclair *et al.*, 2019).

Peer Tutoring Benefits

Many conducted studies have criticized the effect of peer tutoring in various settings and most have found the positive results. A great study have found that peer tutoring may improve the academic achievements and cognitive functions in various areas (Zeneli *et al.*, 2015; De Backer *et al.*, 2016). Peer tutoring encompasses the utilization of academically successful tutors in terms of their advance understanding on the subject matters or academic skills, and then provides learning assistance to less advanced tutees. It has been reported that peer tutoring affects the development of leadership, teaching skills, confidence, satisfaction, and learning experience (Burgess *et al.*, 2014).

Damon & Phelps (1989) infer that peer collaboration provides opportunities for students to work and share ideas together in order to address the challenging tasks. Day *et al.* (2007) argue that helping teachers to learn well is a meaningful way of helping students to learn. Similarly, Buzbee Little (2005) explains that peer coaching enhances the teachers' professional development and students' learning since providing chances for teachers to share ideas and expertise.

Rudland & Rennie (2014) state that the advantages of peer tutoring for tutees are mostly related to effective learning environments which shorten the distance between tutees and tutors. Meanwhile, the disadvantages of peer tutoring for tutees are sometimes the information given is less accurate and exposed to the poor teaching methods. For tutors, the benefits of peer tutoring deal with the development of their self-learning and teaching skills. The disadvantages of peer tutoring for tutors are that they feel nervous when asked to teach. Thus, it can be concluded that peer tutoring is a powerful 3-in-1 learning platform which encourages the development of transferable, social, and communication skills (Alpay *et al.*, 2010). Some researchers find that peer tutoring is one effective way to enhance the academic achievements (Zeneli *et al.*, 2015); regulation skills (De Backer *et al.*, 2016); psychological adjustment (Fantuzzo *et al.*, 1989); and affective learning aspects, such as self-concept, self-esteem, autonomy, and aspects of conduct (Miller *et al.*, 2010).

Beside the above mentioned benefits, peer tutoring in language classes also makes more efficient in time and more effective in cost (Sytsma *et al.*, 2019). These programs may efficiently free the educators' time to use for the other essential tasks and add the tutors' self-esteem level and sense of competence. These programs may be used to help the students with difficulties in several areas (e.g. language, math, social skills) and may become the benchmarking procedures designed to work in conjunction with the goals set in these programs.

In most research, peer tutoring is considered very effective, yet with exceptions. In general, tutors should be high-achievers, considered as the role models, and have the ability to lead the less-motivated tutors. Hence, each peer's personality and interaction are important for a more representative learning environment. This program usually needs cognitive challenges, such as involving simplification, clarification, and exemplification which eventually discourage the tutors and become not ready to teach. One important thing to remind is that tutors also learned the subject matter they have to teach and at the same time, they have to show their best performance during the peer tutoring process. So, tutors should make a limitation in providing the explanations for the tutees who are greatly dependent on their

understanding, background knowledge, and motivation because sometimes long explanations confuse the tutees (Yaman, 2019).

METHODS

This research is a case study employing a descriptive research approach. Yin & K.Yin (2011) explain that qualitative research enables the researchers to conduct in-depth studies in broader topic ranges, including the everyday terms. It means that qualitative research is study about the topic arrangement which describes the naturally occurring social phenomena, involving the study the meaning of people's lives. Qualitative research takes place in natural settings. According to Flick (2009), a case study may immediately capture the processes under study in great details not restricted to the intended comparability and to completely use the potential certain methods. It means that a case study is a process in understanding something unique available in a certain case.

A descriptive approach was employed to explore and describe the tutors' existing knowledge and understanding on peer tutoring. This research was conducted in three Accounting Management Practice classes. The peer tutoring was implemented after the middle semester test. Documentations, observations, and in-depth interviews were the major data collection instruments in this study. The interviews were conducted on both tutees and tutors. The tutors were the observed in this research, while the tutees' responses during the interviews were gathered and interpreted. Both tutors and tutees were the forth-year students of Accounting Management Practice classes.

RESULTS

To present the research results, the researcher will first show the score differences before and after the peer tutoring implemented after the middle semester test. The results showed that peer tutoring has various benefits in learning process. From Figure 1 we can see that most tutees' academic achievements significantly improved starting from DIV AKM – 4A those whose score was above 70 significantly improved from 18 to 28 persons after implementing the peer tutoring. Meanwhile, those whose score was below 70 significantly decreased from 13 to 3 persons. Thus, we might say that the peer tutoring program in this class was greatly successful.



Figure 1. Gain Scores of Accounting Management Practices of DIV AKM – 4A

Next, from the Figure 2 we can see that the achievement of DIV AKM – 4B showed that those with the score of above 70 increased from 20 to 22 persons. Meanwhile, those with the score below 70 decreased from 12 to 10 persons. When compared to the previous class, this class' achievement slightly increased.



Figure 2. Gain Scores of Accounting Management Practices of DIV AKM – 4B

Last, from Figure 3 we can see that the students of DIV AKM – 4E who get score above 70 increased from 22 to 26 students. Meanwhile, the students who get the score of below 70 decreased from 11 to 7 students.

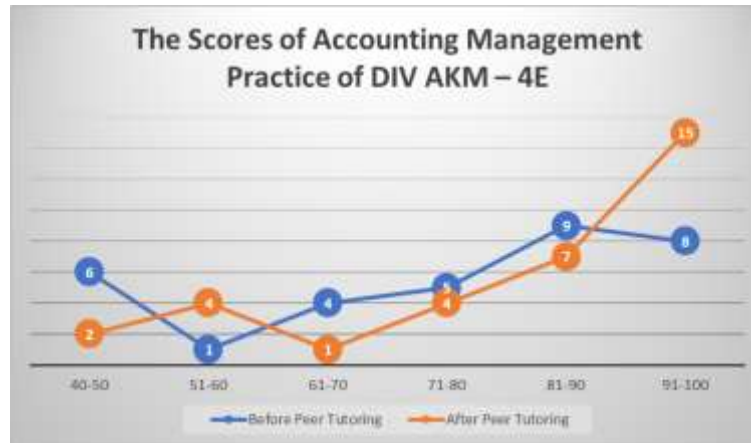


Figure 3. Gain Scores of Accounting Management Practices of DIV AKM – 4E

Hence, this program worked best to improve the students' academic achievement and self-esteem (Leach-López, 2010). In accordance with the finding of research conducted by K. J. Topping & Foggie (2008) that tutees (students) significantly improved their academic achievement and support, while Leach-López (2010) stated that peer tutoring increased the students' self-esteem from this program. This academic improvement was not only experienced by the tutees but also the tutors proven by the tutors' academic achievements which always seem increasing. Conversely, Alegre *et al.* (2019) found that 13% of students decreased their academic achievement in algebra. This might be due to the fact that some students did not like to help their peers or be helped by them that the cooperative methodologies, such as peer tutoring which might improve the academic achievement decreased (Sanchez *et al.*, 2015). Besides, Moeyaert *et al.* (2019) underlined that the peer tutoring meta-analysis conducted for English or Mathematics, sometimes decreased the tutees' academic self-concept if they are not accompanied by the tutors, it may cause some of those feel insecure during the exams when they are left alone.

From the observation and interview results, the researcher first pointed out the best condition for having a peer tutoring from the tutors' points of view. The tutors said that they were very happy when requested to become the tutors starting from 7 a.m. to 12 p.m., but when the time showed 1 p.m. or more it

was too hard for them to teach because most tutees were tired, sleepy, and had no spirit to study that they were too lazy listening to the tutors.

Second is related to the tutors' feeling when appointed to become tutors. They sometimes were afraid and nervous when explaining the materials in front of the class. This happened when feeling that they did not really master the materials. They were afraid of having no capacity to explain the materials well to the tutees and no responsibility to the lecturers who trusted them to teach. In the other hand, the tutors felt very proud when they well mastered and explained the materials to the tutees. In other words, the tutors felt satisfied and happy when they were able to help the tutees better understand the materials since the learners might better understand the materials when explained by their own friends than by the lecturers. One tutor said "I think this chance is the best moment I have been waiting for. This moment will prove the quality of my knowledge I can show to other persons. I am also very glad that I can help my friends understand the materials. He also believed that "The best scientists are those willing to share their knowledge with others". The tutors think that in these opportunities, the lecturers might assess how deep and how far the tutors' understanding and ability to teach.

Third, the benefits of peer tutoring include: (1) Motivating the tutors to learn more because they have a responsibility to explain the materials to their friends; (2) Improving their public speaking skills as one required soft skill when competing in various working fields; (3) Increasing empathy and sympathy among peers, because the tutors felt having more responsibility to make their friends well understand the materials to help the other students in difficulties with the previously explained materials; (4) more relax and less serious learning activities. The tutors conducted the teaching and learning activities with more familiar, easier, and better to understand language and terms for the tutees. Thus, the students were braver to ask more questions; (5) The tutees felt more comfortable since taught by their own friends; (6) The tutors mastered the materials better due to the responsibilities given by the lecturers; (7) Tutors were highly satisfied and proud of themselves for being brave and helpful for their friends in the knowledge sharing. In addition, they felt more precious since trusted by their lecturers; (8) Improving their learning spirit; (9) Strengthening the relationship with the other friends since tutors should interact more with the tutees in the classrooms to improve their social skills, especially for some shy tutors; (10) Practicing to naturally become more patient with some less competence students .

Fourth, responsibility attitudes. Due to this peer tutoring, the tutors might practice and improve their responsibility skills to the others, such as to the God, themselves, trusting lecturers, other learning friends (students), and responsibility for the truth of the presented materials.

DISCUSSION

From the observations and interviews conducted on the tutors, they said that they were happy, proud, and satisfied when the lecturers trusted them to give the materials in front of their friends. Moreover, peer tutoring might enhance their communication skills, responsibilities, patience, empathy, sympathy, and strengthening their social skills. Next, this peer tutoring also motivated their willingness to study. This finding was similar with that conducted by Gottfried *et al.* (2019) saying that peer tutoring had a positive influence on classroom learning behaviours (e.g. learning approaches , learning eagerness, and interpersonal skill level). In the other fact, the tutees complained that the vocational education curriculum made them become experts in the field of practical science, but they did not have the presentation skills (communication skills). Mostly, the students from the vocational education are lack of confidence to speak although they have well mastered the knowledge. Unfortunately, this happened when the vocational education graduates have to compete with the other higher education institution graduates. They will surely lose those opportunities due to their inability to clearly express their opinions. Hence, the students of vocational education have to be equipped with soft skills, i.e. communication and leadership skills through various activities, such as peer tutoring.

These findings were in line with those conducted by Seo & Kim (2019) saying that peer tutoring had a positive influence on the students' academic achievements, communicative, and collaborative competences. Based on the second result of research conducted by K. J. Topping & Foggie (2008) saying

that peer tutoring might improve both personal and social development as well as motivation and opportunities to individualize instructions. Ali *et al.* (2015) also found that peer tutoring not only benefited the students academically but also helps the students develop their communication and interpersonal skills. Through peer tutoring, the students may enhance their confidence and self-motivation level. Peer tutoring has two processes which are equally beneficial for both tutors and tutees. The effects of peer tutoring on both tutors and tutees were positive in the areas of learning, attitude toward the subject matter, and self confidence (Rahmasari, 2017). Peer tutoring enhanced self confidence and communication skills as follows: “when you teach and share with your peers, you will automatically develop yourself confidence and communications skills”. These are highly beneficial activities to be implemented when working. When the students were trained to become tutors, their learning motivation increased, personal helplessness feelings reduced, and the stigma of accepting help from others faded.

Seo & Kim (2019) stated that peer tutoring positively and significantly influenced communication competence of both tutors and tutees. Meanwhile, the effects of peer tutoring on tutors’ academic achievement and collaborative competency might be different. Although the differences were not statistically significant, the impact of peer tutoring on academic achievement and responsibility for teamwork was valid only for tutees. On the other hand, the tutees’ academic achievement improved but not for the tutors. It might be defined that tutors intended to obtain benefits from their tutees’ progress, not their own. Therefore, peer tutoring might not contribute to the tutors’ academic improvement. In terms of collaboration, the tutors’ expectations and responsibility did not significantly improve implying that the students with high cooperative levels preferred the tutoring program and tended to directly implement it. It can be concluded that tutees might gain more benefits from peer tutoring than the tutors do.

In the contrary, Field (2019) found something different when compared to this research. There was no statistical differences in academic satisfaction, motivation and learning strategies between those receiving and not receiving peer tutoring. Field (2019) found that policy changes and institutional replacements might lead to the need for peer tutoring less important and the presence of a robust veteran program might exclude the need for peer tutoring.

Since all students have the chances to participate in and opportunities to help, peer tutoring empowers them to feel valuable and worthwhile. Thus, more cooperative classroom learning spirit continuously grows. Day *et al.* (2007) argues that helping teachers to learn may positively impact on the students’ learning. Similarly, Buzbee Little (2005) argues that peer tutoring reinforce teachers professional development and students learning through a continuous process of sharing ideas. Thus, it can be said that peer tutoring may support the strategies in a higher education institution system. Peer tutoring helps the student-centered classroom. Peer tutoring help the students move away from dependence on teacher to believe in their own ability to create knowledge. Thus, the teacher may become the co-learner and facilitator, acting as a guide and a coach. The teacher is no longer the one with all answers in his head; except the teacher talks with the students and offers opinions, explores strategies, and helps. In peer tutoring, students should participate in active instead of passive learning. For example, when using peer tutoring, the students worked cooperatively and followed the procedures, actively asked each other questions, gave responses, corrected mistakes, and provided feedback. Active learning is proven more effective to improve the students’ achievement instead of simply watching and listening to the teacher (passive learning) (Gordon, 2005).

From the tutees’ points of view, this peer tutoring program was very beneficial for them and the tutees felt more comfortable because they were taught by their friends that they might ask any question or difficulty to the tutors relatively in contrast when they were taught by their lecturers or even professors. Conversely, the finding of research conducted by Campbell (2019) explained that sometimes the tutees were lack of confidence on how to expression their questions contributed to the initial low participation. Thus, their material understanding should be well improved. Next, the learning activities might become more relaxing and easy for the tutees as supported with the tutors’ more familiar, easier, and better to understand language and terms used during the learning processes. Sharif *et al.* (2012) found that narrow age gap was the main reason that the tutees could understand well to the materials explained by the tutors when compared to their teachers or lecturers. Thus, the tutees felt more comfortable having peers to help

them learn the target materials. These findings have significant implications in terms of development of practical skills and competencies assisting the students' competitiveness. The results of this study demonstrate that the peer tutors may effectively direct and enhance the tutees' learning achievements the practical assessments. This implies that peer tutor might become a promising facilitator in improving higher communication and collaboration skills (Seo & Kim, 2019).

CONCLUSION

It can be concluded that peer tutoring is a greatly effective learning strategy. Peer tutoring has improved both tutors' and tutees' academic achievement, communication and collaborative skills, responsibilities, patience, empathy, sympathy, as well as strengthening the social skills both for tutees and tutors. Those skills were greatly required in various life aspects that those should be utilized within the premises of educational institutions. All polytechnic students should be equipped with skills which greatly impact on the development of their careers in the future. The graduates equipped with various skills are expected to be able to perform productively in the society at any context to ensure that they would be able to function in line with the recently more complex world. Beside some interesting findings on peer tutoring, this research has also some limitations. First, the results need to be defined with caution, since the research participants might not represent the higher education institutions' students or those with different peer tutoring settings. Second, the absence of control group also remains a methodological challenge and different result in this study. The author suggests for the future research to examine the impact of peer tutoring on wider but more detail and controlled settings.

REFERENCES

- Alegre, F., Moliner, L., Maroto, A., & Lorenzo-Valentin, G. (2019). Peer tutoring in algebra: A study in Middle school. *Journal of Educational Research*, 112(6), 693–699. <https://doi.org/10.1080/00220671.2019.1693947>
- Ali, N., Anwer, M., & Abbas, J. (2015). Impact of Peer Tutoring on Learning of Students. *Journal for Studies in Management and Planning*.
- Alpay, E., Cutler, P. S., Eisenbach, S., & Field, A. J. (2010). Changing the marks-based culture of learning through peer-assisted tutorials. *European Journal of Engineering Education*. <https://doi.org/10.1080/03043790903202983>
- Amamou, S., & Cheniti-Belcadhi, L. (2018). Tutoring in Project-Based Learning. *Procedia Computer Science*. <https://doi.org/10.1016/j.procs.2018.07.221>
- Ayvazo, S., & Aljadeff-Abergel, E. (2019). Classwide peer tutoring in a martial arts alternative education program: Enhancing social and psychomotor skills. *Preventing School Failure*, 63(4), 359–368. <https://doi.org/10.1080/1045988X.2019.1619509>
- Bakare, J., & Orji, C. T. (2019). Effects of reciprocal peer tutoring and direct learning environment on sophomores' academic achievement in electronic and computer fundamentals. *Education and Information Technologies*, 24(2), 1035–1055. <https://doi.org/10.1007/s10639-018-9808-1>
- Benware, C. A., & Deci, E. L. (1984). Quality of Learning With an Active Versus Passive Motivational Set. *American Educational Research Journal*. <https://doi.org/10.3102/00028312021004755>
- Boud, D. (2001). Making the move to peer learning. *Peer Learning in Higher Education: Learning from and with Each Other*.
- Britton, L. R., & Anderson, K. A. (2010). Peer coaching and pre-service teachers: Examining an underutilised concept. *Teaching and Teacher Education*. <https://doi.org/10.1016/j.tate.2009.03.008>

- Burgess, A., McGregor, D., & Mellis, C. (2014). Medical students as peer tutors: A systematic review. *BMC Medical Education, 14*(1), 1–8. <https://doi.org/10.1186/1472-6920-14-115>
- Buzbee Little, P. F. (2005). Peer coaching as a support to collaborative teaching. *Mentoring and Tutoring: Partnership in Learning*. <https://doi.org/10.1080/13611260500040351>
- Campbell, A. (2019). Design-based research principles for successful peer tutoring on social media. *International Journal of Mathematical Education in Science and Technology, 50*(7), 1024–1036. <https://doi.org/10.1080/0020739X.2019.1650306>
- Damon, W., & Phelps, E. (1989). Critical distinctions among three approaches to peer education. *International Journal of Educational Research*. [https://doi.org/10.1016/0883-0355\(89\)90013-X](https://doi.org/10.1016/0883-0355(89)90013-X)
- Day, C., Sammons, P., Stobart, G., Kington, A., & Gu, Q. (2007). Teachers Matter Connecting Lives, Work and Effectiveness. In I. Goodson & A. Hargreaves (Eds.), *Mc Graww Hill*. Mc Graw Hill, <https://epdf.pub/teachers-matter-professional-learning.html>
- De Backer, L., Van Keer, H., Moerkerke, B., & Valcke, M. (2016). Examining evolutions in the adoption of metacognitive regulation in reciprocal peer tutoring groups. *Metacognition and Learning, 11*(2), 187–213. <https://doi.org/10.1007/s11409-015-9141-7>
- Fantuzzo, J. W., Dimeff, L. A., & Fox, S. L. (1989). Reciprocal Peer Tutoring: A Multimodal Assessment of Effectiveness with College Students. *Teaching of Psychology, 16*(3), 133–135. https://doi.org/10.1207/s15328023top1603_8
- Field, L. E. (2019). *A Quantitative Causal Comparative Study on Student Veterans With Peer-To-Peer Tutoring And Student Veterans Without Peer-To-Peer Tutoring* (pp. 1–126). ProQuest LLC. <https://search.proquest.com/openview/e7d5bd8b135c9cd09dad0a7fe2c47f5d/1?pq-origsite=gscholar&cbl=18750&diss=y>
- Flick, U. (2009). *An Introduction To Qualitative Fourth Edition*. SAGE Publications.
- Gordon, E. E. (2005). Peer Tutoring: A Teacher’s Resource Guide. In *Peer Tutoring: A Teacher’s Resource Guide*.
- Gottfried, M., Garcia, E., & Kim, H. Y. (2019). Peer tutoring instructional practice and kindergartners’ achievement and socioemotional development. *Educational Studies, 45*(5), 593–612. <https://doi.org/10.1080/03055698.2018.1509779>
- Herrera Bohórquez, L. I., Largo Rodríguez, J. D., & Viáfara González, J. J. (2019). Online Peer-Tutoring: A Renewed Impetus for Autonomous English Learning. *How, 26*(2), 13–31. <https://doi.org/10.19183/how.26.2.503>
- Kunsch, C. A., Jitendra, A. K., & Sood, S. (2007). The Effects of Peer-Mediated Instruction in Mathematics for Students with Learning Problems: A Research Synthesis. *Learning Disabilities Research & Practice*. <https://doi.org/10.1111/j.1540-5826.2007.00226.x>
- Leach-López, M. A. (2010). International Students As Peer Tutors: Is It Lawful? *American Journal of Business Education (AJBE), 3*(8), 55–58. <https://doi.org/10.19030/ajbe.v3i8.470>
- Leung, K. C. (2019). Compare the moderator for pre-test-post-test design in peer tutoring with treatment-control/comparison design. *European Journal of Psychology of Education, 34*(4), 685–703. <https://doi.org/10.1007/s10212-018-00412-6>
- Miller, D., Topping, K., & Thurston, A. (2010). Peer tutoring in reading: The effects of role and organization on two dimensions of self-esteem. *British Journal of Educational Psychology, 80*(3), 417–433. <https://doi.org/10.1348/000709909X481652>

- Moeyaert, M., Klingbeil, D. A., Rodabaugh, E., & Turan, M. (2019). Three-Level Meta-Analysis of Single-Case Data Regarding the Effects of Peer Tutoring on Academic and Social-Behavioral Outcomes for At-Risk Students and Students With Disabilities. *Remedial and Special Education*. <https://doi.org/10.1177/0741932519855079>
- Nestel, D., & Kidd, J. (2003). Peer tutoring in patient-centred interviewing skills: Experience of a project for first-year students. *Medical Teacher*. <https://doi.org/10.1080/0142159031000136752>
- Orji, C. T., & Ogbuanya, T. C. (2018). Assessing the effectiveness of problem-based and lecture-based learning environments on students' achievements in electronic works. *International Journal of Electrical Engineering Education*, 55(4), 334–353. <https://doi.org/10.1177/0020720918773983>
- Parkinson, M. (2009). The effect of peer assisted learning support (PALS) on performance in mathematics and chemistry. *Innovations in Education and Teaching International*. <https://doi.org/10.1080/14703290903301784>
- Prince, T., Snowden, E., & Matthews, B. (2010). Utilising Peer Coaching as a tool to improve student-teacher confidence and support the development of classroom practice. *Literacy Information and Computer Education Journal*. <https://doi.org/10.20533/licej.2040.2589.2010.0007>
- Ragins, B. ., & Kram, K. (2007). The Handbook of Mentoring at Work. In *Sage Publication, Inc.* Sage Publication, Inc. file:///C:/Users/MIKA/Downloads/The_Handbook_of_Mentoring_at_Work.pdf
- Rudland, J. R., & Rennie, S. C. (2014). Medical faculty opinions of peer tutoring. *Education for Health: Change in Learning and Practice*. <https://doi.org/10.4103/1357-6283.134290>
- Sanchez, S., Miltenberger, R. G., Kincaid, D., & Blair, K. S. C. (2015). Evaluating Check-In Check-Out With Peer Tutors for Children With Attention Maintained Problem Behaviors. *Child and Family Behavior Therapy*, 37(4), 285–302. <https://doi.org/10.1080/07317107.2015.1104769>
- Schaffer, J. L., Wile, M. Z., & Griggs, R. C. (1990). Students teaching students: a medical school peer tutorial programme. *Medical Education*. <https://doi.org/10.1111/j.1365-2923.1990.tb02449.x>
- Seo, E. H., & Kim, M. J. (2019). The effect of peer tutoring for college students: Who benefits more from peer tutoring, tutors or tutees? *New Educational Review*, 58, 97–106. <https://doi.org/10.15804/ner.2019.58.4.07>
- Septarini Rahmasari, B. (2017). Peer Tutoring: An Effective Technique To Teach Reading Comprehension. *KnE Social Sciences*. <https://doi.org/10.18502/kss.v1i3.745>
- Sharif, N. M., Zakaria, M. H., Mansor, W. F. A. W., Nordin, N. A., Fong, N. S., & Mustafa, H. R. (2012). Peer-tutoring and Tertiary ESL Learners. *Procedia - Social and Behavioral Sciences*. <https://doi.org/10.1016/j.sbspro.2012.11.288>
- Sinclair, A. C., Gesel, S. A., & Lemons, C. J. (2019). The Effects of Peer-Assisted Learning on Disruptive Behavior and Academic Engagement. *Journal of Positive Behavior Interventions*, 21(4), 238–248. <https://doi.org/10.1177/1098300719851227>
- Spilles, M., Hagen, T., & Hennemann, T. (2019). Playing the Good Behavior Game during a Peer-Tutoring Intervention: Effects on Behavior and Reading Fluency of Tutors and Tutees with Behavioral Problems. *Insights into Learning Disabilities*, 16(1), 59–77.
- Steele, D. J., Medder, J. D., & Turner, P. (2000). A comparison of learning outcomes and attitudes in student- versus faculty-led problem-based learning: An experimental study. *Medical Education*. <https://doi.org/10.1046/j.1365-2923.2000.00460.x>
- Sytsma, M., Panahon, C., & Houlihan, D. D. (2019). Peer Tutoring as a Model for Language and Reading Skills Development for Students who are English Language Learners. *Journal of Applied School Psychology*, 35(4), 357–379. <https://doi.org/10.1080/15377903.2019.1597796>

- Topping, K. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research*. <https://doi.org/10.3102/00346543068003249>
- Topping, K. (2000). Tutoring. In U. of I. at C. IAE Educational Practices Series (Ed.), *International Academy of Education* (pp. 1–34). International Academy of Education. <https://unesdoc.unesco.org/ark:/48223/pf0000125454>
- Topping, K. J., & Foggie, J. (2008). Interactive behaviours for building independence in exceptional youth. *Journal of Research in Special Educational Needs*. <https://doi.org/10.1111/j.1471-3802.2008.00103.x>
- Walkup-Amos, T. (2020). Creating Inclusive Music Classrooms Through Peer-Assisted Learning Strategies. *Teaching Exceptional Children*, 52(3), 138–146. <https://doi.org/10.1177/0040059919891185>
- World Economic Forum. (2015). *New Vision for Education Unlocking the Potential of Technology*. World Economic Forum. <https://doi.org/10.1063/1.4938795>
- Yaman, B. B. (2019). A multiple case study: What happens in peer tutoring of calculus studies? *International Journal of Education in Mathematics, Science and Technology*, 7(1), 53–72. <https://doi.org/10.18404/ijemst.328336>
- Yin, R. K., & K.Yin, R. (2011). Qualitative Research from Start to Finish. In *The Guilford Press*. <https://doi.org/10.1017/CBO9781107415324.004>
- Zeneli, M., Thurston, A., & Roseth, C. (2015). The influence of experimental design on the magnitude of the effect size -peer tutoring for elementary, middle and high school settings: A meta-analysis. *International Journal of Educational Research*, 76(2015), 211–223. <https://doi.org/10.1016/j.ijer.2015.11.010>