

Peer Learning: an Overview

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Abstract— Peer learning is not only a teaching method but also a learning method created by educationists based on the psychological and sociological theories: cognitive constructivism, social constructivism, cognitive distribution, social groups and peer groups. Peer learning takes place among group of individuals with the same status who interact one another. Success of the peer learning process depends on the Teacher's role and the parents' and students' readiness for the peer learning. Peer learning and peer teaching opportunities which function under a well-qualified teacher work well with a variety of learners in different classrooms. The facilitator should aware of the theories behind this learning situation. And also the facilitator should make sure that he/she is well aware of types of peer tutoring. In peer learning, the tutor and the tutee should aware that peer learning includes both teaching and learning. When the peer learning and teaching opportunities are implemented properly by avoiding faults it would work as one of the effective learning teaching method due to its multi-function approach. The main aim of this paper was to provide an overview on peer learning method discussed in western approach. In this research, books written on peer learning, relevant research papers and conference papers have been examined as secondary sources since this research based on literary survey. Content analysis method has been used as the research method. Data is analyzed relevant to the content analysis method.

Keywords— Constructivism, criticism, learner, learning teaching process, peer learning, role, theory.

I. INTRODUCTION

Peer learning essentially refers to students learning with and from each other as fellow learners without any implied authority to any individual, based on the tenet that "Students learn a great deal by explaining their ideas to others and by participating in activities in which they can learn from their peers" (Boud, 2001). A peer group consists of group of individuals with the same status who interact one another (Falkchikov, 2001). The influence of the peer group typically peaks during adolescence. Mostly, this method is practiced by the teachers in learning teaching process especially where constructive learning approached is used.

Objective

The main aim of this paper is to provide an overview on peer learning method discussed in western approach.

II. METHODOLOGY

In this research, books written on peer learning, relevant research papers and conference papers have been examined as secondary sources since this research based on literary survey. Content analysis method has been used as the research method. Data is analyzed relevant to the content analysis method.

III. LITERATURE REVIEW

Peer learning is not a new concept. Its history can be traced back to the era of Aristotle, use of Archons or student leaders and to the letter of Seneca the younger (Briggs, 2013). Peer learning is a theory introduced by Scotsman Andrew Bell in 1975. Over the past 30-40 years peer learning has become a very popular teaching method (Ibid). Peer learning is the acquisition of knowledge and skills through active helping and support among peers who are equals in standing or matched companion (Gogus, (2012). Peer learning occurs among peers from similar social groupings who are not professional teachers helping each other to learn and doing so, learning

themselves (Topping & Ehly (1998). Peer learning is a two way process between individuals. Here, two or more people share ideas and help each other master a task that neither of them could accomplish individually (Damon Phelps, 1989). Usually much peer learning occurs without intervention of the teacher. But peer learning which is organized by teachers would be effective than learning opportunities created by peer themselves. A peer teacher has the same status as the learner. He/She assumes the temporary role of the teacher without gaining more authority (Bond et al.). And also peer tutor does not possess any formal teaching experience (Topping, 2005). Universities around the world in the past few decades promotes peer assisted learning massively (Briggs, 2013). There are different forms of peer learning: peer support groups, supplemental instructions, peer tutoring, peer teaching and peer assisted learning. Peer learning occurs inside the classroom as well as the outside of the classrooms. Sometimes teacher does not about it whether the teachers are aware of it or not (Boud, 2001).

IV. THEORIES BEHIND THE PEER LEARNING

Peer learning is a teaching method created by educationists based on the psychological and sociological theories: cognitive constructivism, social constructivism, cognitive distribution, social groups and peer groups. The basic view of constructivism is that the student learns by doing rather than by observing. Dewey (2001) says that education is not an effort of "telling" and being "told". It is active and constructive process. Specifically, the learner uses his previous knowledge in combination with the present learning situation to understand the learning outcome critically and in a way so he/she can evaluate it. Constructivism has developed under two logical approaches: cognitive constructivism and social constructivism in its short history with the influence of both philosophy and psychology till it reached its present stage of development. Jean Piaget (1972), Bruner (1990) and Neisser represent the cognitive constructivist strand, while

Vygotsky (1978) represents the social constructivism. Cognitive constructivists mainly focus on the individual’s cognitive construction of mental structures. It is the view of social constructivism that the learner uses social interaction and cultural practices in the construction of knowledge (Keerthirathne, 2018). The social constructivism of Vygotsky, which is considered as an extension of constructivism, accepts that every function of the child’s cultural development appears on two levels: first, on the social level, i.e. between people (inter-psychology), and secondly, on the individual level, i.e. inside the child (intra-psychological). He further explains that every higher function emerges as a real relationship between the learner and the others around him (Vygotsky, 1980). Theory of Distributed Cognition developed by Edwin Hutchins (2020) expresses that knowledge lies not only within the individual but situated in the individual’s social and physical environment. Cognitive distribution is the process whereby cognitive resources are socially shared; extending individual cognitive resources; and allowing group to accomplish something individuals cannot achieve alone. In social learning adults provide the young the opportunity to work with concrete objects, to make choices, explore things

and ideas, and do experiments. Children expect to interact with peers and adults with security and acceptance under a safe environment (Evans, Meyers, & Ifeld, 2000). Social learning theorists broadened the scope of behaviorism to include not only observed behavior but also how information about the environment is cognitively processed (Santrock, 2006). To Bandura, observational learning (imitation or modeling) is an information processing activity. The process that happens in observational learning takes place when the learner observes information about the environment and transforms them into cognitive representations. Then, the information transformed to cognitive process serves as a guide (Ibid). A peer group consists of group of individuals with the same status with who interact one another (Falkchikov, 2001). The peer group can influence what the child values, knows, wears, eats, and learns. Peer group include shared beliefs, interests and preferences for specific activities. A social group is a set of people who identify with one another and interact in informally structured ways based on shared values, norms and goals. In another way social group is a unit consists of two or more people who come into meaningful contact for a purpose.

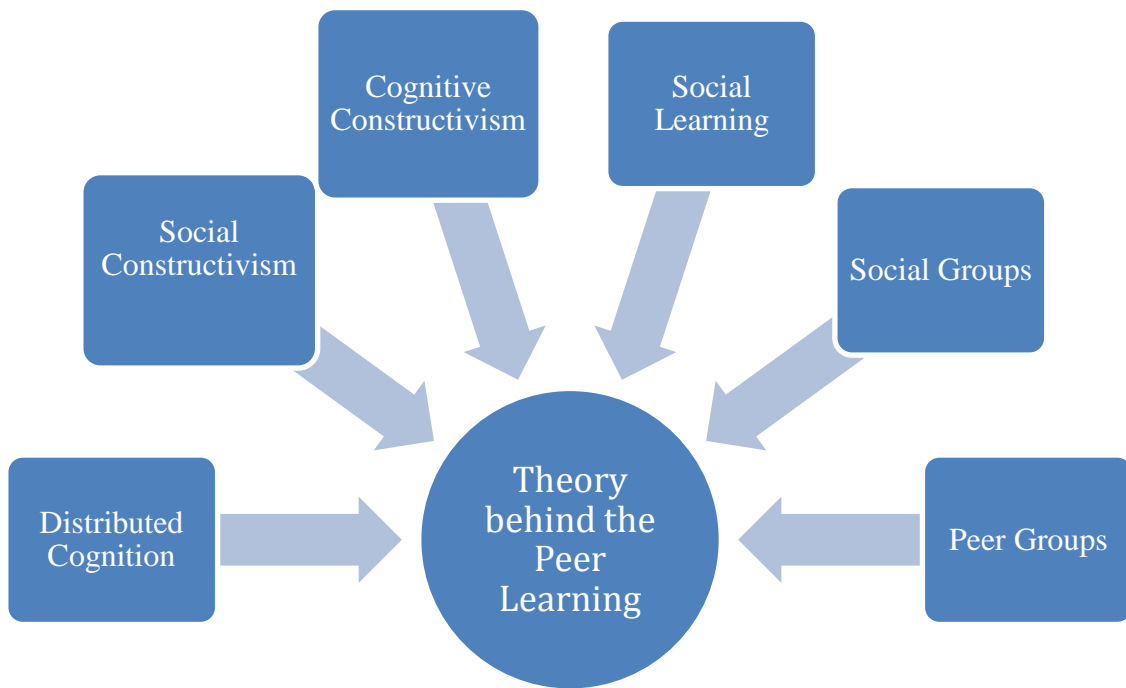


Figure 1. Theories behind the Peer Learning

V. TYPES OF PEER LEARNING

Peer learning is basically a cognitive relationship between an expert and a novice as the apprentice. According to the learning situation and nature of the learning it can be divided into five: same age peer tutoring, cross age peer tutoring, class wide peer tutoring, incidental peer tutoring and structured peer tutoring. In same age peer learning the peer is a classmate. Here, one child instructs another (Diamond and Phelps, 1989). But, in cross age peer tutoring the tutor is older than the tutee

(Gaustad, 1993). The tutor may from an upper grade. Class wide peer tutoring is a teaching strategy based on reciprocal peer tutoring. And also it is a group reinforcement wherein an entire classroom of students is actively engaged in the process of learning. Here, the learners practice basic academic skills simultaneously in a systematic and fun way (Terry, 2000). Incidental peer tutoring often takes place in the classroom or outside of the classroom. If one classmate helps to another in mathematics in the classroom learning or if one player helps to another to improve his/her performance in the playground here

we have cases of incidental peer tutoring. Structured peer tutoring is organized in specific cases of specific subjects. Here, the teacher prepared well-structured plan in order to

combine tutor and tutee appropriately to have a good result. Peer learning is beneficial for both the tutee and the tutor.

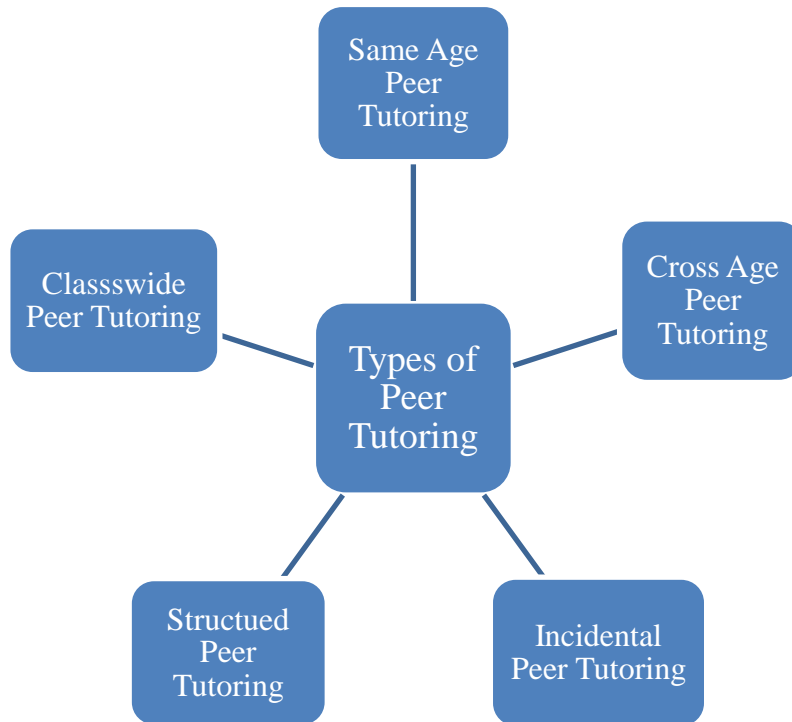


Figure 2. Types of Peer Tutoring

VI. PEER LEARNING IN WESTERN APPROACH

Peer learning is mutually beneficial. It helps learners to share knowledge, attitudes and skills among the group. Peer learning is more effective when learning objectives are clear. Since the learner engages in the learning teaching process throughout the learning experience the learning environment is active in peer learning. The learner is not passive and alone. The learner manage learning situation and reflects how to learn. He/She shares the learning experience with two or more. The learners have opportunities to teach and be taught by one another. Therefore, the learning environment is cooperative. Due to this team based learning environment concepts are understood by the learner deeply. Finally the collaborative nature of learning environment would create an opportunity to form a global network which shows the characteristics of the 21st century learner. Psychological importance of this type of learning is promoting the social leaning as revealed by Albert Bandura and Vygotsky. In peer learning the learner is relaxed. Student feels more comfortable since they are not under the pressure of teacher like in traditional classroom where lecture method is dominated. This type of nature in the learning teaching process provides enjoyable opportunities for students. Another positive aspect of peer learning is the learner sees the causality of the learning experience. There are both self and peer assessment. The learner receives a feedback from the teacher or peers. Since peer learning is a group work the learner cultivate the habit of evaluating each other's learning.

And also they improve promote positive interdependent. Student witness the critical inquiry and reflection due to the independent environment includes in the learning teaching process. The learner shows and promotes the accountability they have regarding the learning teaching process. Since the peer learning avoids passive learning situation motivation is remarkable. Students develop communication skills as they share the learning experience mutually. Positive characteristics of peer learning show that it increases productivity. Due to the productivity, more achievements are available.

VII. TEACHER'S ROLE IN PEER LEARNING

The teacher who creates a peer learning environment should aware of the peer learning principles with its nature. Prior preparation is an important factor in peer learning. The learner should be in a safe atmosphere under a shared leadership in peer learning situations. It is not expected form the teacher to be authoritative where peer learning occurs. Here, the teacher performs the role by monitoring the session rather than influencing them. Resource management is another aspect of peer learning. Different schools have different types of resources. Therefore, the teacher should select both physical and human resources carefully when organizing a peer leaning environment in different types of peer learning situations: same age peer tutoring, cross age peer tutoring, class wide peer tutoring, incidental peer tutoring and structured peer tutoring since it is a flexible and adaptable learning method rather teaching method. Peer tutors should

have similar abilities to share together. Especially, talented students should be managed in a way as both the tutor and tutee are comfortable in the learning teaching process.



Figure 3. Positive Aspects of Peer Learning

Ethical consideration of the teacher is more important in peer learning. The teacher with sound experience in peer learning often thinks that every student is unique and every student has capabilities in thinking and learning. Truth, honesty, and mutual respect are good qualities that should be developed by both the teacher and the students. Each student should be treated fairly and humane manner. Equality should

be a prominent feature and discrimination and favoritism should not be appeared in peer learning. Openness, student's personality and student's privacy are another three prominent features that should be admired in a peer learning classroom setting. Finally, the well-developed professional teacher who promotes peer learning and peer teaching as two important methods in the learning teaching process believes that peer

learning works well with a variety of learners in different classrooms.

VIII. HOW TO SUCCEED IN PEER LEARNING AND PEER TEACHING

In peer learning situations the responsible authority should make sure that the tutors are trained and they are aware of the peer teaching process. They are able to manage the learning and teaching situations without harming the learner personality learning experienced is organized by student themselves under a professionally qualified teacher. Hence,

students are active. The reward system should be very strong, especially positive reinforcement. Adequate response time should be given as the learner himself/herself solves the learning situation. Learning experiences should be organized carefully and appropriately. The facilitator can select group types: buzz groups, affinity groups, and solution and critics groups. The facilitator should emphasize the importance of active learning by implementing scaffolding where necessary. Explanation on provided feedback is essential. As the author believes if parents and students are educated and convinced of the benefits of peer learning and peer teaching they would massively participate in this type of learning teaching process.

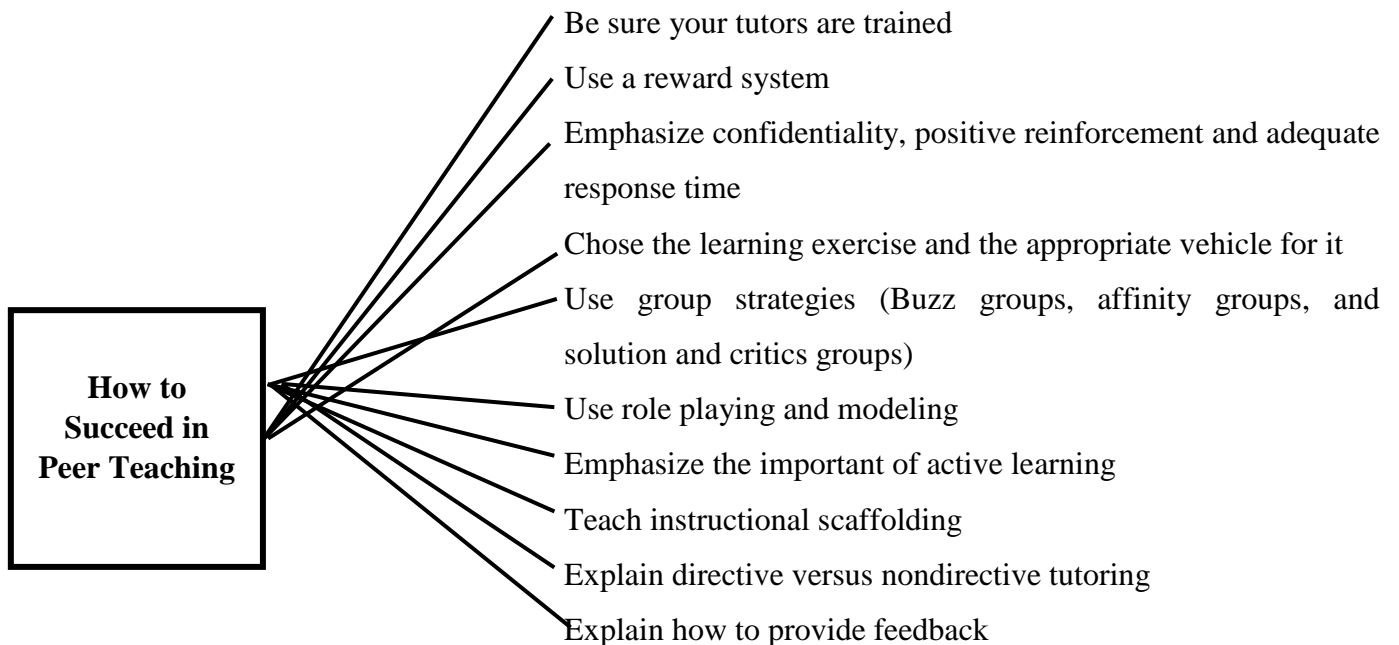


Figure 4. How to Succeed in Peer Teaching

IX. CRITICISM AGAINST THE PEER LEARNING

According to some critics peer learning seems to be a waste of precious classroom time. The reason for this common criticism may be the amply student engagement since the peer learning is one of the aspects of child centered learning. If the teacher is aware of principles behind the peer learning, types of peer learning, theories behind the peer learning, teacher's role and the student role in peer learning and how to pull off peer learning and peer teaching there would not be such a waste of time in classroom time.

In peer learning situations students are considered novices. Therefore, there should be an expert facilitator or a guide to create a useful learning teaching environment as shown by some critics. But, if the peer learning and peer teaching is a teaching method practised by teachers repetitively it would function effectively even in an occasion in which the teacher is absent. Otherwise, the teacher can plan and organize training sessions for peer tutors in order to make them aware regarding their role and responsibilities in peer teaching to gain significant progress. Another important factor is peer learning not only takes place in a formal classroom but also it

functions even out of the formal classroom e.g. incidental peer tutoring. Hence, in every occasions school cannot provide expert facilitators in peer learning situations. Sometimes peer learning situation which emerge without proper instruction would work effectively than a well-planned occasion. Learning experience gather in the playground by a student is a fine example for this argument.

Sometimes students may have the feeling of inferiority since they are facilitated by a more knowledgeable other. In order to avoid this type mentality the teacher can construct a close relationship between the tutor and the tutee since this is part of the collaborative learning. Getting to know each other and developing strong sense of community are two basic principles in peer learning. And also there are opportunities to form peer groups from a group of students who have similar abilities. They are cognitively close each other. Same age peer tutoring would be more effective for students those who have feeling of inferiority. It is the duty of the facilitator organizing the classroom as the learner would not seek the help from the tutor at all the time. This is another solution for the above discussed criticism. The teacher should emphasize students

that they are the knowledge generators and the teacher or the facilitator is here to help them where necessary.

To critics, if the learner is with the lack of confidentiality the learning outcome would not be implemented as the facilitator expect. Constructing the self-confidence in the learner is a major duty of the teacher in peer learning. Peer learning takes place better when the learner engages in learning teaching process with self-confidence. The child with self-confidence goes ahead with a self-directed approach which based on reflection.

If the facilitator is not an expert regarding the peer learning that may be an improper teaching method. As the author believes this improper tutor selection would hinder the proper learning outcome. Hence, the authority can identify the weaknesses of the facilitator through careful supervision and can let them have proper training for experiencing this type of teaching and learning methods effectively (OECD, 2013). Time and scheduling conflict are another two major issues relevant to the peer learning situations. If the learning situation is carefully managed and organized by an expert in peer tutoring this would not be a problematic.

Finally, the author's conclusion is when the peer learning and teaching opportunities are implemented properly by avoiding faults it would work as one of the effective learning teaching method due to its multi-function approach.

X. CONCLUSION

Peer learning takes place among two or more learners who share common status. End of the learning experience learners are competent enough in a task that neither of them could accomplish individually. Success of the peer learning process depends on the Teacher's role and the parents' and students' readiness for the peer learning. Peer learning and peer teaching opportunities which function under a well-qualified teacher work well with a variety of learners in different classrooms. The facilitator should aware of the theories behind this learning situation which promotes peer learning. And also the facilitator should make sure that he/she is well aware of types of peer tutoring: same age peer tutoring, cross age peer tutoring, class wide peer tutoring, incidental peer tutoring and structured peer tutoring before organizing such a learning situation. In peer learning, the tutor and the tutee should aware that peer learning includes both teaching and learning. When the peer learning and teaching opportunities are implemented properly by avoiding faults it would work as one of the effective learning teaching method due to its multi-function approach.

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