

PEER LEARNING – PARADIGMATIC FOUNDATIONS AND PRACTICAL MILESTONES

Veronica PEICU¹

Abstract: *The peer learning approach begins with a mindset, moves to behaviors, and ends with results. One's need for peer learning behaviors increases as the situation becomes less routine, the stakes become higher, emotions become more intense, points of views increasingly differ, or something unexpected happens. The teacher is no longer the only master of knowledge. He accompanies the students in search of information and has the role of teaching them how to manage the flow of information. The aim of the paper is to explore the use of peer learning, ways of optimization, and issues that need to be considered by teachers and pupils.*

Key words: *peer learning, reciprocal, mutual.*

1. Introduction

People can easily adapt to dynamic environments that require a form of learning. As social agents, they usually learn to interact communicating with others using natural language. Language is essentially a way of achieving information coordination, that is, a device to ensure that we share enough information to be able to do things together. When we talk, we release our own point of view in the discussion. This type of linguistic coordination can be described as a way of mutual learning – a process through which interaction agents learn to communicate with each other (Fernandez et al., 2011).

In the 21st century, people in diverse environments respect each other's differences and coexist in society. They try to learn from each other, just by listening, and while offering their own knowledge without any reservation. Learning is a mutual process in which experience, knowledge and wisdom are shared between teachers and students, as well as between students (Sato, 1999, cit. in Liu & Bu, 2016).

¹ *Ovidius* University of Constanţa Romania, catver99@yahoo.com

2. Problem Statement

Society values intelligence as well as growth and personal development. However, the learning patterns of today's class may prevent this in children. Pupils want to get high marks, and provide to teacher's questions the answers that they think the teacher are looking for, or do not answer at all, fearing not to make mistakes. This does not allow students to express exactly what they learn and think. In the classroom, many children are afraid to talk fearing that the teacher or colleagues will judge them or that they will not be fast enough. Through peer learning, children have the opportunity to help their colleagues learn by guidance and feedback, and also to speak freely when they are in groups and participate in conversations between students. It stimulates communication and lead to increased academic success (Mengping, 2014, cit. in Wessel, 2015).

However, the model that facilitates our understanding of how students help one another is teaching rather than learning. Although the value of the teaching model is obvious, we also need to think about the learning process itself if we want our colleagues to be the best resources for learning (Boud, 2001). Students often expect feedback only from their teacher and do not realize how important it might be the one from their colleagues (Heavey, 2006).

Finding a complete and innovative design solution for a complex design problem is very difficult to achieve in isolation. We need others to check our level of understanding, to identify different approaches as well as new sources of inspiration, to act as a resonant box and provide support (Heavey, 2006). Simply grouping students and telling them to work together does not mean they will know how to cooperate. Working together implies much more than being close to other students (Johnston, 2009).

In any discussion about peer learning we must refer to learners, how can we conceptualize the role of colleagues they work with, what are they learning together, what changes occur as a result of interaction, and how can we know what happens in groups or what has been learned (O'Donnell & King, 1999).

3. Research Questions

This study was designed to explore the following questions:

3.1. What is peer learning?

3.2. Why is peer learning important?

3.3. How does peer learning look in practice?

3.4. Which would be the authentic challenges of peer learning?

4. Purpose of the Study

The purpose of the study was to explain what peer learning is and to establish its paradigmatic foundations and practical milestones. From the study, it is evident that, further research in this area is warranted. In particular, insights generated in relation

to student engagement and participation in peer learning demonstrates the value associated with such an approach for student learning.

5. Research Methods

The idea of this work is justified by the theoretical and practical relevance of the peer learning approach, not only for the education, but especially for its direct beneficiary, the student. Methodological, the main role of the discourse is to solve the possible options and alternatives to the meaning of messages subject to reflection. In order to facilitate the process of approaching the presented problem, the methods of research I established are: narrative analysis, the content analysis, focused on qualitative aspects of messages, generalization, interpretation, and a descriptive but also hermeneutic intervention, with the intention to develop an analytical, critical approach, capable of generating alternative designs (Berg, 2001).

6. Findings

6.1. What is peer learning?

Over the years, peer learning has been poorly theorized, found to be described as „to teach is to learn twice". Over the past 25 years, a number of researchers have contributed to formulating the theory of peer learning (e.g., Chi, Siler, Jeong, Yamauchi, & Hausmann, 2001; King, 1998, apud. Topping, 2005). Because a multitude of theories do not help, Topping and Ehly (2001; Topping, 2005) synthesized existing research into one theoretical assisted learning model, initially dividing some of the main sub-processes into five categories: organization and employment, cognitive conflict, error management, communication and affect.

The term peer learning, found in other studies as mutual learning (Schwarz, 2002) or reciprocal learning (Boyko-Head, 2018; Fernandez et al., 2011; Thievenaz, 2018), however, remains abstract. The meaning used here suggests a mutual learning activity in both directions. Peer learning must benefit both parties involved and allow knowledge, ideas and experience to be shared between participants. This can be described as a way to move from independent learning to interdependent or reciprocal learning (Boud, 1988, apud. Boud, 2001). In a broad sense, we define peer learning as „learners from and between themselves formally and informally". The focus is on the learning process and on the emotional support that pupils provide when helping each other, as well as on the learning task. In peer teaching, the teacher and the student have fixed roles, while in the mutual learning roles can be undefined or can change during the learning experience. The teacher can be actively involved as a facilitator of the group or can only initiate activities for students such as workshops or learning partnerships (Boud, 2001). Bruffee (1999, cit. in Boud, 2001) calls this constructive conversation - an educational experience where students learn to build knowledge while talking to each other and agreeing or having different opinions.

Eisen (2000) speaks about peer learning partnerships, as voluntary, reciprocal helping relationships between two or more individuals who are at a comparable level.

Peer learning refers to the use of teaching and learning strategies where students learn together from one another and with each other without the immediate intervention of a teacher. Such approaches can be established and monitored by the teacher and may even occur in his presence, but this does not mean that the teacher is directly involved in teaching or monitoring the class (Boud et al., 1999).

Thievenaz (2018) uses the concept of „reciprocal learning situations" to name the profile of the activities in which both knowledge and experience are built on both sides of the established relationship. Then interaction appears as a dynamic engagement of activities that is likely to produce reciprocal changes in how to think, position, and act on each subject involved. This notion is preferred to that of „learning by cooperation", of „mutualisation of knowledge", of „sharing of experience" or of „circulation of knowledge", to the extent that the ways of pooling the resources made there are beneficial and functional, and not intentional or anticipated. The reciprocal term is used to point out the common impact that two or more subjects have on one another, which means that learning effects are not identical on both sides of the relationship. If the changes take place on both sides, they differ according to the place of the subject, the specific intentions pursued in the action, and the forms of reason and knowledge involved. So, the lessons learned are not the same and do not refer to the same objects, but they are done in common and in the same field of activity (Thievenaz, 2018).

Peer learning can be defined as acquiring knowledge and skills through the active support of colleagues with the same or equivalent status. This involves people from similar social groups that are not qualified teachers, who can help each other to learn, thus learning themselves (Topping, 2005).

According to O'Donnell (1999), peer learning is an educational practice where students interact with other students to achieve educational goals. One of the reasons why the popularity of peer learning in schools has increased is a shift from the traditional perspectives of the teaching-learning process that emphasize the transfer of knowledge from teacher to student, to a constructivist approach that focuses on learning through discovery and considers knowledge a social activity. A second reason derives from the main purpose of the schools, namely, to prepare pupils for post-graduate life, integration into the workplace and communities. Peer learning courses are an important aspect of lifelong learning after formal education. Learning to work collaboratively is a valuable educational activity that results from the wider cultural context to which the school belongs. The universal introduction of technology into schools, especially computer networks, with its possibilities and problems, is a third reason. The peer learning activities offer students the opportunity to work on projects that require the sharing of technological resources. Finally, as Internet connections in schools and neighbourhoods will be better and better in the next 10 years, students will have virtually unlimited access to the products that others have made and will have the opportunity to interact and share ideas with students in both asynchronous and synchronous ways (O'Donnell, 1999).

6.2. Why is peer learning important?

The great advantage of mutual learning is that it offers students the opportunity to teach and learn from each other, providing a learning experience that is different in terms of quality from the usual interaction between teacher and student and which offers mutual benefits (Saunders, 1992, cit. in Heavey, 2006).

Peer learning promotes certain types of learning outcomes. Some of these are not so easily achieved through other teaching and learning strategies. Compared to the varieties of peer learning that lead to different outcomes, some of the common learning outcomes include: working with others (collaborative skills), critical enquiry and reflection (arguing, justified, formulating questions), communication and articulation of knowledge, understanding and skills, managing learning and how to learn, self and peer assessment (opportunities for giving and receiving feedback on one's work and a context for comparing oneself to others) (Boud 2000, cit. in Boud, 2001).

According to Magolda (1999, cit. in Liu & Bu, 2016), reciprocal learning also improves meta-cognition which is the process of reflecting on the building of knowledge. Through this strategy, students explain their learning to other students and essentially take turns being the teacher, with the teacher acting as a facilitator to assist the student-teacher in clarifying their ideas and activities. This process determines students to put their ideas into words, which leads to organization and retention.

In many countries the significant pressure on university funding, has led to the teachers being asked to teach more students without decrease the quality of the student learning. This has urged a search for teaching and learning strategies that might help teachers to deal with larger student numbers, without exceeding the overall volume of work. Peer learning is promising because it appears to preserve or develop student learning with less involvement from teachers (Boud, 2001).

Technology is now an important guide towards the use of peer learning. Web-based activities seem to be most efficient when there is direct interaction between teacher and students and among students themselves. The nature of the Web as an instrument means that it is impossible for a teacher to personally manage many interactions between a teacher and individual students. This soon becomes far more time consuming than any form of conventional teaching. Peer learning brings a key solution to this problem (Boud, 2001).

Since institutions extended their use of online learning to handle the ranking, and, at the same time, to deliver higher quality mixed courses, the risk of social isolation intensified. Creating blended learning environments not only creates opportunities for increased engagement in learning but also new approaches to develop students' social/peer networks. Both engagement and social networks are important conferrers to student success (Wilcox et al., 2005, cit. in Potts et al., 2018).

Peer learning approaches also contribute to additional flexibility in courses. For example, there are increased options in timing of classes, as teacher and student timetables do not always need to coincide (Boud et al., 1999).

Besides these „mainstream” motives, it is also argued that collective forms of peer learning are more appropriate for some students better than the individualistic

teaching and learning practices of traditional courses (Slavin, 1995; Chalmers & Volet, 1997, cit. in Boud, 2001). This has been particularly true for women and students from some cultural backgrounds, as peer learning activities prize co-operation within groups beyond competition and promote greater respect for the varied experiences and backgrounds of the participants (Boud, 2001).

Schwarz (2002) considers that mutual learning is important because: it increases understanding, reduces conflict and defensiveness, it reduces self-fulfilling and self-sealing processes, it increases effectiveness and the quality of worklife, and, at the same time, consequences reinforce the model (Schwarz, 2002).

6.3. How does peer learning look in practice?

Much peer learning in schools originally targeted core skills areas, such as reading (Topping, 2005) and mathematics (Topping & Bamford, 1998, cit. in Topping, 2005). However, teachers became more confident and trusting in children, and gradually moved to use peer learning in a less mechanistic way and in more challenging subject areas. It extended to spelling and writing (e.g., Nixon & Topping, 2000, cit. in Topping, 2005), and then moved forward to science (Topping, 1998a; Topping, Peter, Stephen, & Whale, 2004, cit. in Topping, 2005). More recently, peer learning has extended to thinking skills (an area in which some teachers feel under-confident; Topping, 2001b; Topping & Bryce, 2004, cit. in Topping, 2005).

Students engaged in reciprocal learning collaborate in well-defined roles of doer and observer to maximize their own and each other's learning (Liu & Bu, 2016). While one learner is doing (doer), the other learner (observer) is observing, investigating the doer's performance, and giving performance-related feedback.

Peer learning is not a single practice. It covers a wide range of different activities each of which can be combined with others in different ways to suit the needs of a course (Boud, 2001). For example, researchers from the University of Ulster identified ten different models of peer learning (Griffiths, Houston & Lazenbatt, 1995, cit. in Boud, 2001). These varied from the traditional proctor model, in which senior students tutor junior students, to the more innovative learning groups, in which students in the same year constitute partnerships to support each other with both course content and personal concerns. Other models required discussion seminars, private study groups, parrainage (a buddy system) or counselling, peer assessment planes, collaborative tasks or laboratory work, projects in different sized (cascading) groups, workplace mentoring and community activities (Boud, 2001).

King (2002) states that some peer learning tasks, demand in the first-place recall and repetition of material or simple application of concepts learned. Such tasks sustain knowledge of abilities and content and may involve students working together to review mathematical facts, learn spelling words, or verify mutual understanding of scientific concepts. Instead, there are other peer learning activities that require a higher and more complex level of cognitive processing. Examples of these tasks include: working together to resolve poorly structured problems and problems with some potential solutions, peers analyzing and integrating ideas to go farther the

presented material to establish new knowledge, group decision making, peer assessment of learning products, and peer tutoring. These more complex learning tasks ask high-level cognitive processing: that is, critical thinking, problem solving, and decision making.

There are subtle differences between reciprocal learning and other social instruction strategies such as active learning, collaborative learning, and autonomous learning. In the case of reciprocal learning strategy, the accent is on collaborative rather than independent learning. Students are taught to help one another. In this strategy, students work together as peer partners, each functioning in turn as the “doer” and the “guide” in fulfilling the task (Liu & Bu, 2016).

Active learning, according to Brown & Campione (1998, apud. Liu & Bu, 2016), is ruled by students’ meta-cognitive understanding of the aims and goals of the instruction. It is strategic, self-conscious, self-motivated, and determined. Collaborative learning, as Mitnik and collaborators (2009, cit. in Liu & Bu, 2016) suggested, is based on the model that knowledge can be developed within a population where members actively interact by sharing experiences and undertake asymmetry roles. Literally, it refers to methodologies and environments in which learners participate in a common task where each individual relies upon and is responsible for each other. As to autonomous learning, learners are considered as individuals who can and should be autonomous (i.e. be in control of their own learning climate). All these strategies are not mutually exclusive or unsuitable in the actual teaching or learning processes. Instead, a variable association of one or two or more strategies is inevitably found in classes (Liu & Bu, 2016).

6.4. Which would be the authentic challenges of peer learning?

Many schools might believe they are performing peer tutoring or cooperative learning, while they only put children together and hoping for the best. Bennett, Desforges, Cockburn, and Wilkinson (1984, cit. in Topping, 2005) found that while children were often disposed in groups, most often they worked separately. Only one-sixth of the time was spent interacting with other pupils, and most of this was not regarding the task (Topping, 2005).

Peer learning appreciates cooperation over competition and emphasizes a greater respect for the various experiences and backgrounds of participants. Still, there are major group management and pedagogical challenges to deal with when groups are formed of students of significantly different ages, life experiences and cultures who are unused to interacting freely with one another (Boud et al., 1999). There are specified wanted behaviours needed. As a result each group member should be capable: to explain how to arrive at the answer, to connect what is being learned to previous information learned, to understand the material and admit the answers, to take part, to listen carefully to what other group members are saying, not to change their minds unless they are logically convinced (majority rule does not support learning) and to judge ideas, not people (Johnston, 2009).

We need to oversee the learning process in ways which are based on the best aspects of traditional peer teaching and learning, without it being excessively managed and rigid. The key to successful peer learning, then, lies in the mutually supportive environment which learners themselves create, and in which they feel free to state opinions, verify ideas and request or provide help when it is needed (Smith, 1983, cit. in Boud, 2001). Delivering a structure within which this can exist is the test for teachers and course designers (Boud, 2001).

Anderson and Boud (1996, cit. in Heavey, 2006) identified the central problems that can emerge from peer learning as issues of difference and interpersonal dynamics. If there is a high level of diversity in a group, students may not think that other students can help their learning. Also, peer learning needs to keep in mind the dynamics existing in any group situation. For example, difference in knowledge and experience support, possible power conflicts, potential for dominant behaviour and outlooks of traditional teacher student roles.

Feedback can be inconsistent when students have not acquired the necessary experience to differentiate and evaluate the appropriate value of a design process, approach or product. It has to be admitted that sometimes students may not be in the best position to decide what they and their peers need to learn (Heavey, 2006).

Good design of peer learning strategies notices the circumstances in which they are brought up and match them suitably. There will always be unpredictable circumstances and problems occurring, but peer learning is no different in this regard than any other approach to teaching and learning. If students are learning efficiently together then other problems with the course can be addressed more useful (Sampson et al., 1999).

7. Conclusion

The mutual learning model arises from a new understanding of traditional social virtues and has enormous consequences for both behavior and learning. It can motivate students, help with the creative generation of new ideas and develop the skills required in the community and the world of work (Adams & Hamm, 1966, apud. Collier & McManus, 2005). Taking into account the positive results of peer learning research, it would be advisable to use these benefits by creating classroom experience so as to encourage peer learning both inside and outside the classroom. The peer learning strategies give the teacher the opportunity to withdraw and let the students do the teaching and talk for a little while. These strategies can be highly valuable to the learning environment and enable a creative and interactive way of involving students (Wessel, 2015). Distinguished, stimulating, comprehensive, reciprocal instruction involves learners in an educational continuum. All participants learn from each other and keep the curriculum developing, extending, increasing and even spiralling into the next repetition of the class (Boyko-Head, 2018).

Overall, the peer learning model leads to effectiveness, flexibility, innovation, high quality, low cost, renewal, competitiveness, high profitability, and growth. Vygotsky

(1978) said that learning is socially constructed during interaction with others. “What children can do together today, they can do alone tomorrow” (Vygotsky, 1978, cit. in Johnston, 2009).

References

- Berg, B. L. (2001). *Qualitative research methods for the social sciences*. Needham Heights: Allyn & Bacon.
- Boud, D. (2001). Making the move to peer learning. In D. Boud, R. Cohen, & J. Sampson (Eds.) *Peer Learning in Higher Education: Learning from and with each other* (pp.1-20). London: Kogan Page.
- Boud, D., Cohen, R., & Sampson, J. (1999). Peer Learning and Assessment. *Assessment & Evaluation in Higher Education*, 24(4), 413-426.
- Boyko-Head, C. (2018). Reciprocal Learning and Learners: (Re)framing the PostSecondary Learning Experience to meet a Complex Future. *Transformative Dialogues: Teaching & Learning Journal*, 11(2), 1-10.
- Collier, K., & McManus, J. (2005). Bridging the Gap: The Use of Learning Partnerships to Enhance Workplace Learning. *Asia-Pacific Journal of Cooperative Education*, 6(2), 7-16.
- Eisen, M.-J. (2000). Peer Learning Partnerships: Promoting Reflective Practice through Reciprocal Learning. *Inquiry: Critical Thinking Across the Disciplines*, 19(3), 5-19.
- Fernandez, R., Larsson, S., Cooper, R., Ginzburg, J., & Schlangen, D. (2011). *Reciprocal Learning via Dialogue Interaction: Challenges and Prospects*. International Joint Conferences on Artificial Intelligence, Barcelona, Spain. Retrieved from https://www.researchgate.net/publication/266452297_Reciprocal_Learning_via_Dialogue_Interaction_Challenges_and_Prospects
- Heavey, A. (2006). *Reciprocal peer learning in design*. Retrieved from <https://arrow.dit.ie/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1006&context=aaschadpoth>
- Johnston, J. (2009). How to Implement Peer Learning in Your Classroom. *Resource & Research Guides*, 1(7), 1-4.
- King, A. (2002). Structuring Peer Interaction to Promote High-Level Cognitive Processing. *Theory Into Practice*, 41(1), 33-39.
- Liu, A., & Bu, Y. (2016). Reciprocal Learning Strategy in CALL Environment: A Case Study of EFL Teaching at X University in Shanghai. *Universal Journal of Educational Research*, 4(5), 1059-1070.
- O'Donnell, A. M., & King, A. (1999). *Cognitive Perspectives on Peer Learning*. New York: Taylor & Francis Inc.
- Potts, B. A., Khosravi, H., Reidsema, C., Bakharia, A., Belonogoff, M., & Fleming, M. (2018). Reciprocal Peer Recommendation for Learning Purposes. *Learning Analytics and Knowledge*. Retrieved from <http://hassan-khosravi.net/publications/Potts2018.pdf>
- Sampson, J., Boud, D., Cohen, R., & Gaynor, F. (1999). *Designing peer learning*. HERDSA Annual International Conference, Melbourne. Retrieved from

https://www.researchgate.net/publication/267822388_Designing_peer_learning

Schwarz, R. (2002). *The skilled facilitator: a comprehensive resource for consultants, facilitators, managers, trainers, and coaches*. New York: Jossey-Bass.

Thievenaz, J. (2018). Les situations d'apprentissages réciproques (le cas de la consultation médicale). In J. Thievenaz, & O. Broussal (Coord.) *Les dossiers des sciences de l'éducation, Apprendre des interactions de soin* (pp. 131-150). Paris: Presses universitaires du Midi.

Topping, K. J. (2005). Trends in Peer Learning. *Educational Psychology*, 25(6), 631–645.

Wessel, A. (2015). Peer Learning Strategies in the Classroom. *Journal on Best Teaching Practices*, 2(1), 14-16.