

Kasper Sipowicz, Ph.D., <https://orcid.org/0000-0001-7384-2899>

*The Maria Grzegorzewska University in Warsaw
Department of Interdisciplinary Disability Studies*

Tadeusz Pietras, Ph.D., D.Sc. in Medical Sciences, Prof. of MU of Lodz,

<https://orcid.org/0000-0003-1771-3819>

Medical University of Lodz

Department of Clinical Pharmacology

1st Chair of Internal Medicine

Institute of Psychiatry and Neurology in Warsaw

The Second Department of Psychiatry

Peer-teaching method as creative communications in the peer group

Metoda Peer-teaching jako twórcza komunikacja w grupie rówieśniczej

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*"A young man is sensitive to truth,
justice, beauty, to other spiritual values.
A young man wants to find himself,
so he seeks, sometimes vehemently,
true values, and appreciates those people
who teach them and live according to them."*

St. John Paul II,

Address to catechists, teachers and educators,
Włocławek, 6 June, 1991.

Abstract: Peer-teaching is an underestimated form of support for the development of children and young people in the peer group. From the point of view of the communication theory, it is a complex form of communication between peers, which results in teaching and rearing: the phenomena traditionally attributed to parents, educators and teachers. The paper is an attempt to review the knowledge of peer tutoring and the paradigm of the communication theory. It also discusses and describes the historical outline of the concept of peer-teaching and its characteristics in the paradigms of the interpersonal communication theory.

Keywords: communication, peer-teaching, school, student, dyad

Abstrakt: Peer-teaching jest niedocenioną formą wspierania rozwoju dzieci i młodzieży w grupie rówieśniczej. Z punktu widzenia teorii komunikacji jest on złożoną formą komunikowania się między rówieśnikami, której skutkiem jest nauczanie i wychowanie – atrybuty tradycyjnie przypisywane rodzicom, wychowawcom i nauczycielom. Artykuł stanowi próbę przeglądu wiedzy o tutoringiu rówieśniczym i paradygmacie teorii komunikacji. Omówiony rys historyczny pojęcia peer-teaching, jego charakterystykę oraz opisano go w paradygmatach teorii komunikacji interpersonalnej.

Słowa kluczowe: komunikacja, peer-teaching, szkoła, uczeń, diada.

Introduction

Modern didactics moves away from frontal teaching in favor of greater student activation slowly but successively. The peer-teaching method, or tutoring by peers, is a part of this trend. A student who has resources in the specific area of knowledge takes on the role of a tutor to pass on his knowledge and skills to a peer with less competence in the given dimension. The undoubted advantage of this method is that schoolchildren speak the same "language" and are on an equal level in the communication hierarchy. Schoolchildren and students communicate using different meaning codes depending on their age. These codes contain student jargon and hidden meanings incomprehensible to adults. In this context, peer tutoring is a valuable complement to the asymmetric traditional teaching, in which the teacher has a semantic and syntactic advantage over the students. Both forms of teaching are complementary to each other and meet different motivations for developing cognitive resources. As expressed beautifully by our great compatriot St. John Paul II: "[young people] seek patterns that would be a point of reference for them. They also expect answers to many of the fundamental questions bothering their minds and hearts, and, above all, they demand from you an example of life. You have to be their friends, faithful companions and allies in youthful struggle for them. Help them build the foundations for their future lives" (St. John Paul II, 1991). The peer-teaching method demonstrates that young people, in addition to adults, i.e. parents and teachers, can also be assisted by their peers, who, by their social attitudes, values and knowledge, set an undeniably positive example. It is important that this teaching method should be a part of education based on the Christian value system (Słotwińska, 2019).

1. Peer-teaching - historical background

One of the methods belonging to inclusive didactics is peer-teaching, also referred to as peer tutoring. The concept of this method was presented by Kenneth Bruffee in the 1970's. (Sanders, Damron, 2017). Bruffee was an American academic teacher who taught writing courses at Brooklyn College. He noticed that his students were more willing to ask their peers than him for help (Wagner, 1982). The results of the support received from colleagues were reflected in better marks obtained (Newton, Ender, 2010). This prompted the New York professor to take advantage of the observed phenomenon in his teaching work (Bruffee, 1972). Then, in 1972, he published the first handbook for peer tutoring *A Short Course in Writing: Composition, Collaborative Learning, and Constructive Reading*.

2. Peer-teaching as peer communication

The peer-teaching method is based on the individual's natural tendency to ask for help and offer that help to others (Rohr, den Ouden, Rottlaender, 2016). The humans have developed on the path of evolution the ability to avoid danger. The child, as a good observer, notes that asking for the teacher's help can be counterproductive – the educator believes that he/she either does not pay attention during the lesson, since he/she asks questions, or is unintelligent and does not understand the material in question. Therefore, the schoolchildren prefer to consult their doubts with their peers (Philipp, 2010). Another perk in this situation is that a classmate will explain the issue in a more comprehensible language than a teacher. In inclusive classes, children of different ages are often taught, which naturally favors the peer tutoring (Sipowicz, Pietras, 2017). This reminds a family where the older siblings help the younger ones. The child is subject to social modeling not only by adults, but also by peers (Trempała, 2011). One child can become a personal role model for a peer. Tutoring is of particular importance during the adolescence period of, when the teenager rejects the authority of parents and teachers. Young people live in peer cohorts until graduation. During the period of adolescence, the group norms of the peer cohorts are much more important for them than the authority of adults (Brzezinska, Appelt, Ziółkowska, 2015). This is due to the need to participate in the group in the context of evolving personality structure. The cohorts start at that time to include the members of both sexes. The authority of the peers is very important during that period. Therefore, it can be used in the process of teaching and education. However, it must be done skillfully, for knowledge and abilities are often the subject of jealousy and envy. Gifted, outstanding adolescents can be socially isolated and rejected by the peer cohort. The role of the teacher and educator is to intervene in the social network of the peer group in order to positively revalue the perception of a capable and talented person as valuable and exemplary. Preadolescent groups, regardless of race, culture and environment usually consist of members of the same sex (Trempała, 2011). Boys compete with girls, choose a different kind of play based on physical fitness and strength. Girls, on the other hand, are more involved in relationships, and their play often recreates situations known from the lives of adults, e.g. playing house or school (ibid.). From the point of view of developmental psychology, the peer tutoring before adolescence should take place in same-sex dyads due to the disjoint social networks of friendships of boys and girls. During this period, children have the need for intimacy with one or two friends of the same sex (Brzezinska, Appelt, Ziółkowska, 2015). Peer teaching should therefore be conducted within the framework of the child's own sex. The period especially unfavorable for intersexual relationships is the period of puberty in girls, who mature earlier than boys (Przetacznik-Gierowska, Tyszkowa, 2011). At the age of 12-13, they are taller and more emotionally mature. Tutoring relations during this transition period between childhood and

adolescence require special mindfulness on the part of guardians and teachers. During each period, children rejected by the peer group require most vigilance, analysis of the cause of their situation and work on integration. Friendship with the peer tutor may play an important role here. Similar mindfulness is required with respect to children who prefer playing with the opposite sex in the pre-puberty period, which This is often due to the gender identity and sexual orientation different from the majority (Trempała, 2011).

Another important issue of peer teaching is the positive impact of being a tutor on the development of one's own personality. The line between a well-deserved sense of self-esteem and a sense of mission and conceit and a sense of omnipotence is thin. The tutors must be formed so that gaining authority and sharing knowledge they build a positive picture of themselves with the desire to cooperate with other people and the need to share. If this fails to happen, there is a certain risk that the peer tutor will develop dissocial characteristics in adult life (Butcher, Hooley, Mineka, 2018). In order to prevent such personality development of young tutors, the supervising teacher should have excellent preparation for tutoring and interference with the group process (Rüf, 2015). This seems to require paying attention to the laws of developmental psychology and the experience of the group process in the process of teacher education. Such a change in the paradigm of training teachers and educators requires the introduction of elements of interpersonal and intrapsychic training and perhaps also analytical group training in the process of shaping the personality of the teacher and the educator. This is a significant challenge for modern pedeutology, as it requires the integration of pedagogical knowledge with knowledge in the fields of developmental psychology and psychotherapy (Mazur, 2017). However, it is necessary, because correct formation of the educator determines the quality of life of many generations of his wards.

Differences in children's temperament can be observed from an early age. As a consequence, their social functions in the group differ, as well as their interpersonal attractiveness (Brzezinska, Appelt, Ziółkowska, 2015). Some children are liked and others are rejected. Some of the popular children can also learn well and be talented. Their behavior and way of being can be used as a model for other children. A wise teacher interferes with the peer group system, uses this modeling, because positive patterns of behaviour are the result of interpersonal attractiveness. Such capable children can help their classmates to learn teach and to do their homework. However, there are also some hazards associated with peer tutoring. The tutor has a high position, and the other children may feel excluded. On the one hand, tutoring promotes collaboration in the class and on the other, leads to dissections of the group. In addition, acting as a tutor builds excessive self-esteem.

Peer-teaching has evolved from the creative group work methods, with which it has the following common characteristics:

- 1) Positive interdependence – it is the focal point of the peer tutoring. It occurs when the achievement of one's own objectives depends on the behaviour of others. A member of the group remains in a heteronomic relation towards it if his/her individual aspirations can be achieved only together with the whole group. *Ipsa facto*, success of the individual is achievable only if all members of the given community succeed (Sanft, Jensen, McMurray, 2007). A clear example of such positive interdependence is staging of school performances. On the other hand, negative interdependence occurs, for example, in the case of sports competitions, where one person's success means another player's defeat at the same time. Positive interdependence can be used in school teaching so that the material is divided into portions and each student receives only some of the information needed to complete the task. Communication and cooperation in the group are then triggered naturally (Borsch, 2010).
- 2) Interpersonal communication and mutual support – the success of the peer-teaching method depends mainly on the fact that students in the classroom do not work individually to solve the task assigned to them in order to achieve the goal, but interact with each other, offer assistance and encouragement. It is also important that the resources, materials and information should give the students motivational feedback, but do not suggest a solution. The explanations of the material provided by the students to one another promotes logical argument, exchange of perspectives and experiences and, consequently, effective work. In addition, the group members check on an ongoing basis whether they have properly understood the teacher's instructions and therefore whether their individual objectives are appropriate to the objectives of the group as a whole. Interpersonal communication and mutual support contribute to students taking over the functions of mutual motivators (Ogonowska, 2019; Hasselhorn, Gold, 2009).
- 3) Individual responsibility – observation of the students working in a group allows to notice some people who are less motivated to work and thus less effective, who are waiting for the other members of the group to do their tasks. In Anglo-Saxon literature of the subject, such a phenomenon is referred to as free-rider problem. This situation may make strong members of the group even stronger and the weak ones are increasingly weaker (so-called Matthäus effect). Another option: a strong member of the group will feel exploited by his peers, which is why he will avoid group work, or fail to carry out the assigned tasks (Sucker effect). In order to prevent the aforementioned situations from being created, each member of the group should be held responsible for carrying out the assigned task. The effect of each individual's work should be easily measurable. Individual responsibility is easier to enforce in groups consisting of a few members. The more numerous the group is, the more responsibility is blurred. In addition, each member of the group should summarize,

evaluate and inform other colleagues about the current state of their work. A principle of detailing the individual contribution of each member when presenting the final results of the group work can also be introduced (Kerr, 2014; Johnson, Johnson, 1994).

- 4) Interpersonal skills – people working in a group face two challenges. Firstly, they have to be up to the task, and secondly, they have to do their best to make the team work efficient. In order for this to happen, interpersonal capabilities of all members of the group are necessary. The competences to overcome conflicts that contribute to the smooth execution of teacher's instructions are especially important (Schrumpf, Crawford, Bodine, 1997). Interpersonal competences (Referda, 2019) should therefore be practiced with students as early as possible. Of course, this can be a daunting for autistic or dissocial individuals, (Topping et al., 2017).
- 5) Insight into the group process – it is the ability of group members to self-reflect, to look retrospectively at what went well and what needs to be improved in the teamwork. It belongs to human metacognitive abilities and enables the process of evaluation (Wasilewski, Engel, 2011).

Peer-tutoring takes place in dyads, i.e. social groups consisting of two members (Cloth, 2007). Initially, the teacher selected a student talented in a specific area and a student who had less resources in the same discipline of knowledge. Then, replacement peer tutoring, where the role of the tutor was entrusted successively to the students from the dyad, was tested successfully. Within that framework, a student with less resources had to master the material first, so that he/she could later pass it on to a colleague. According to studies by Fuchs et al., (1997), the situation described above mobilizes and activates the student to the extent that he/she assimilates knowledge better than in the traditional way, as evidenced by the analyses of the students' school achievements (Fantuzzo, Ginsburg-Block, 1998). Within such concept of tutoring, the greatest benefits are derived from those dyads, in which there are small or medium differences in knowledge resources between pupils (Riegler, 2019).

The next version of peer-teaching is the concept of Classwide Peer Tutoring (CWPT). The method was developed in the 1980's as a part of the Juniper Gardens Children's Project with a view to integrating children with learning disabilities into classrooms. CWPT consists of the following four components (Harper, Mallette, Moore, 1991):

- 1) The class is divided into two teams competing against each other. Each team contains many dyads assimilating knowledge, competences and social skills on a peer-tutoring basis.
- 2) The members of the dyad exchange the roles of the tutor and the student (so-called tutee). The teacher must describe the task assigned to the students accurately. This

task should not be completely new, but should be based on materials previously introduced during the lessons.

- 3) The teacher monitors the progress of the individual dyads on the ongoing basis, awarding points to students who are working best. The scores are written down on the blackboard so that all students in the classroom know how their classmates' work progresses.
- 4) The scores earned by the individual dyads are counted against the achievements of the whole team. The latter are evaluated once a week by the teacher, who announces which team won the competition.

CWPT was the basis for the development of Peer Assisted Learning Strategies (PALS), which focus primarily on improving the students' competences in reading (PALS-R) and counting (PALS-M) and in subjects such as biology and social sciences. This method can be used in work with children from the kindergarten to primary school level inclusive. It includes three basic elements (Gibbs, Potter, Goldstein, 1995):

- 1) The student reads the text aloud. The possible errors are corrected by the tutor on an ongoing basis.
- 2) Then, the student cites the previously read text in his own words. The idea is that the student should identify correctly the most important information contained in each paragraph. Thus, reading comprehension is practiced.
- 3) The next step is that the student is asked to predict a possible continuation of the text being read, whereas the task of the tutor is to give feedback as to whether the proposed end of the text makes sense.

Compared to traditional teaching methods, peer-tutoring allows to achieve many goals at the same time, both by improving the students' achievements and by affecting positively their integration. Studies by Fuchs et al. (2002) demonstrated that owing to this method students with learning disabilities were accepted by the class better than in the case of traditional teaching methods. In addition, peer-teaching contributes to strengthening social bonds between students who work together in dyads with classmates, who are often outside their circle of school friends. This allows to break stereotypes (Van Note Chism, 2007). Students have the opportunity to get to know a person from the class, whom they had previously considered unlikeable. Peer-tutoring increases the students' motivation to learn and activates them during the lessons. They feel they are the subject of the teaching process, they feel jointly responsible for its course (ibid.). Importantly, this method extends the students' autonomy. They do not feel dominated by the teacher as they do in the case of frontal teaching.

In inclusive school, there are significant differences in the levels of knowledge, competences and skills of the students. In traditionally understood teaching, this is considered a serious obstacle, while in inclusive didactics it is perceived as a diverse source

of resources that the whole class can benefit from (Laugeson, 2014). This allows children with impaired cognitive functions (e.g. intellectual disabilities) and social disabilities (e.g. Asperger's syndrome) to be taught together. Research by Dugan et al. (1995) shows that students with autism taking part in peer-teaching classes are more involved in the teaching process than during traditional lessons. These students were more likely to maintain eye contact with their colleagues in the dyad and were more willing to take an active part in classes (ibid.). Naturally, peer-teaching with the exchange of roles is not used for students with intellectual disabilities (Gillespie, Lerner, 2007).

Conclusion

The problems we have raised in the presented paper are a relatively new approach to teaching. It is understood here not only in the vertical teacher-student aspect, but also in the transverse student-student one. The fact that the teacher also acquires experience and knowledge through working with the student is often overlooked. This represents the so-called bottom-up aspect of teaching, which needs to be developed separately. No matter how we understand didactics, it is probably a much broader concept than that expressed in the traditional vertical terms. However, such a view requires theoretical studies and quantitative and qualitative research.

Bibliography:

- Borsch, F. (2010). *Kooperatives Lehren und Lernen im schulischen Unterricht*, Stuttgart: Kohlhammer Verlag.
- Bruffee, K. (1972). *A Short Course in Writing: Composition, Collaborative Learning, and Constructive Reading*, London/New York: Pearson.
- Brzezińska, A.L., Appelt, K., Ziółkowska, B. (2015). *Psychologia rozwoju człowieka*, Sopot: Gdańskie Wydawnictwo Psychologiczne.
- Butcher, J.N., Hooley, J.M., Mineka, S. (2018). *Psychologia zaburzeń*, przeł. S. Pikiel, A. Sawicka-Chrapkowicz. Sopot: Gdańskie Wydawnictwo Psychologiczne.
- Fantuzzo, J., Ginsburg-Block, M. (1998). Reciprocal peer tutoring: Developing and testing effective peer collaborations for elementary school students, (in:) K. Topping, S. Ehly, (eds.), *Peer assisted learning*, 121-144, Mahwah; NY: Erlbaum.
- Fuchs, D., Fuchs, L. S., Mathes, P. G. & Simmons, D.C. (1997). Peer assisted learning strategies: Making classrooms more responsive to diversity, *American Educational Research Journal*, 34 (1), 174– 206.
- Fuchs, D., Fuchs, L.S., Mathes, P. G., Martinez, E.A. (2002). Preliminary evidence on the social standing of students with learning disabilities in PALS and No-PALS classrooms. *Learning Disabilities Research & Practice*, 17 (4), 205 – 215.

- Gibbs, J.C., Potter, G.B., Goldstein, A.P. (1995). *The EQUIP Program: Teaching Youth to Think and Act Responsibly Through a Peer - Helping Approach*. Champaign, IL: Research Press.
- Gillespie, P., Lerner, N. (2007). *Longman Guide to Peer Tutoring*, London: Pearson.
- Harper, G., Mallette, B., Moore, J. (1991). Peer-mediated instruction: Teaching spelling to primary schoolchildren with mild disabilities. *Journal of Reading, Writing, & Learning Disabilities International: Overcoming Learning Difficulties*, 7 (2), 137-151. doi:10.1080/0748763910070205.
- Hasselhorn, M., Gold, A. (2009). *Pädagogische Psychologie. Erfolgreiches Lernen und Lehren*, Stuttgart: Kohlhammer Verlag.
- Jan Paweł II, św. (1991). *Przemówienie do katechetów, nauczycieli i wychowawców*. Włocławek 6 czerwca 1991r., za: <https://idmjp2.pl/index.php/pl/jan-pawel-ii/artykuly-o-janie-pawle-ii/1339-jan-pawel-ii-do-nauczycieli-wychowawcow-katechetow> (pobrano: 07.05.2020).
- Johnson, R.T., Johnson, D. W. (1994). An overview of cooperative learning: A practical guide to empowering students and teachers, (in:) J.S., Thousand, R.A., Villa, A I., Nevin (eds.), *Creativity and collaborative learning*, 31-44, Baltimore: Brookes Press.
- Kerr, D.W. (2014). *The Instructional Skills Program: A Peer-based Forum for Improving Teaching and Learning*, Victoria: Reciprocity Publishing.
- Laugeson, E.A. (2014). *The PEERS Curriculum for School-Based Professionals*, New York: Routledge.
- Mazur, E. (2017). *Peer Instruction: Interaktive Lehre praktisch umgesetzt*, Berlin: Springer Spektrum.
- Newton, F.B., Ender, S.C. (2010). *Students Helping Students: A Guide for Peer Educators on College Campuses*, San Francisco: Jossey-Bass.
- Ogonowska, A. (2019). *Komunikacja i porozumienie. Sztuka bycia razem, tworzenia więzi i rozwiązywania konfliktów*, Kraków: Wydawnictwo Edukacyjne.
- Philipp, M. (2010). *Lesen Empeerisch: Eine Längsschnittstudie zur Bedeutung von peer groups für Lesemotivation und verhalten*, Wiesbaden: VS Verlag für Sozialwissenschaften.
- Przetacznik-Gierowska, M., Tyszkowa, M. (2011). *Psychologia rozwoju człowieka. Zagadnienia ogólne*, Warszawa: Wydawnictwo Naukowe PWN.
- Referda, M. (2019). *Zdolności a porażka szkolna. Jaką rolę odgrywa osobowość?* Toruń: Adam Marszałek.
- Riegler, P. (2019). *Peer Instruction in der Mathematik: Didaktische, organisatorische und technische Grundlagen praxisnah erläutert*, Berlin: Springer Spektrum.
- Rohr, D., den Ouden, H., Rottlaender, E.M. (2016). *Hochschuldidaktik im Fokus von Peer Learning und Beratung*, Weinheim und Basel: Beltz Juventa.
- Rüf, R.L. (2015). *Coaching und Peer-Mediation in der Schule: Chancen und Herausforderungen*, Saarbrücken: Akademikerverlag.

- Sanders, J., Damron, R.L. (2017). *"They're All Writers": Teaching Peer Tutoring in the Elementary Writing Center*, New York: Teachers College Columbia University Press.
- Sanft, M., Jensen, M., McMurray, E. (2007). *Peer Mentor Companion*, Belmont: Wadsworth Cengage Learning.
- Schrumpf, F., Crawford, D.K., Bodine, R.J. (1997). *Peer Mediation: Conflict Resolution in Schools: Program Guide.*, Champaign, IL: Research Press.
- Sipowicz, K., Pietras, T. (2017). *Wprowadzenie do pedagogiki inkluzyjnej (włączającej)*, Wrocław: Wydawnictwo Continuo.
- Słotwińska, H. (2019). *Wychowanie chrześcijańskie szansą integralnego rozwoju człowieka. Studium z pedagogiki religii*, Kraków: Oficyna Wydawnicza Impuls.
- Szmatka, J. (2007). *Małe struktury społeczne*, Warszawa: Wydawnictwo Naukowe PWN.
- Topping, K., Buchs, C., Duran, D., van Keer, H. (2017). *Effective Peer Learning: From Principles to Practical Implementation*, New York: Routledge.
- Trempała, J. (2011). *Psychologia rozwoju człowieka*. Warszawa: Wydawnictwo Naukowe PWN.
- Van Note Chism, N. (2007). *Peer Review Teach: A Sourcebook*, Bolton: Anker Publishing Company.
- Wagner, L. (1982). *Peer Teaching: Historical Perspectives*, Westport: Greenwood Press.
- Wasilewski, B.W., Engel, L. (red.) (2011). *Grupowy trening balintowski. Teoria i zastosowanie*, Warszawa: Eneteia.