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ABOUT SOME ASPECTS OF INNOVATIONS IN PEDAGOGY

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Abstract

In this paper we will try to describe the pedagogical approaches born from technological development, to define the level of innovation and we will focus on the psychological aspects that are affected by the use of new technologies in learning.

Key words: pedagogica, higher education, development, technological, level of innovation, innovative teaching methods, new ways of teaching**.**

О НЕКОТОРЫХ АСПЕКТАХ ИННОВАЦИЙ В ПЕДАГОГИКЕ

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Аннотация

В этой статье мы попытаемся описать педагогические подходы, порожденные технологическим развитием, определить уровень инноваций и сосредоточимся на психологических аспектах, на которые влияет использование новых технологий в обучении.

Ключевые слова: педагогика, высшее образование, развитие, технология, уровень инновационности, инновационные методы обучения, новые способы обучения.

ПЕДАГОГИКАДАҒЫ ИННОВАЦИЯЛАРДЫҢ КЕЙБІР АСПЕКТІЛЕРІ ТУРАЛЫ

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Аңдатпа

Бұл мақалада біз технологиялық даму нәтижесінде туындайтын педагогикалық тәсілдерге сипаттама беруге, инновация деңгейін анықтауға және білім беруде жаңа технологияларды қолдану әсер ететін психологиялық аспектілерге тоқталуға тырысамыз.

Түйінді сөздер: педагогика, жоғары білім, даму, технология, инновация деңгейі, инновациялық оқыту әдістері, жаңа оқыту.

Introduction

Our age is characterised by accelerated technological development which has brought about substantial changes in our way of life. The knowledge and skills required to do a job have

also changed radically compared to the recent past. This has led to significant changes in education, not only by partially modifying the content of school curricula but also by introducing new ways of teaching. In this paper we will try to describe the pedagogical approaches born from technological development, to define the level of innovation and we will focus on the psychological aspects that are affected by the use of new technologies in learning.

Pedagogy and technology. Compared to the beginning of the 20th century, the educational approach has undergone substantial changes from the individual teacher-student relationship to the cooperative one in which the teacher conducts the activities that are carried out in groups by the students. The increased attention to the cooperative approach has not been determined by the contrast between individualism and collectivism but by the increasing demand of the labour market for the ability to work in groups. This need is due to the increasingly high and diversified levels of specialisation required by production processes that are difficult for one person to possess at the same time. Hence the need for teamwork that involves interpersonal skills, openness to comparison and willingness to share

Cooperative Learning is a specific teaching methodology through which students learn in small groups, helping each other and feeling co-responsible for each other's path. The teacher takes on the role of facilitator and organiser of the activities, structuring "learning environments" in which students, favoured by a positive relational climate, transform each learning activity into a process of "group problem solving", achieving objectives whose realisation requires the personal contribution of all. These objectives can be achieved if, within small learning groups, students develop specific social skills and competences, understood as a set of "interpersonal and small group skills indispensable for developing and maintaining a high level of cooperation".

Cooperative Learning is a teaching method in which students work together in small groups to achieve common goals, trying to improve their learning mutually. This method distinguishes itself from both competitive and individualistic learning and, unlike these, lends itself to being applied to every task, every subject, every curriculum. Teamwork is not new in school, but research shows that students can also work together without profit. They may work together, but they have no interest or satisfaction in doing so. In cooperative learning groups, on the other hand, students enjoy working together and are involved in all phases of their work, from planning to evaluation, while the teacher is primarily a facilitator and organiser of the learning activity.

What are the advantages? Compared to a traditional work approach, Cooperative Learning usually has these advantages:

- Better student performance: all students work longer on the task and with better results, improving their intrinsic motivation and developing more reasoning and critical thinking skills;
- More positive relationships between students: students are aware of the importance of each other's contribution to the common work and therefore develop mutual respect and team spirit;
- Greater psychological well-being: students develop a greater sense of self-efficacy and self-esteem and are better able to cope with difficulties and stress.

What makes cooperation effective?

The five elements that make cooperation useful are:

- Positive interdependence: students strive to improve the performance of each member of the group, as individual success is not possible without collective success;
- Personal and group responsibility: the group is responsible for achieving its objectives, and each member is responsible for his or her contribution;

- Constructive interaction: students must relate directly to each other to work, promoting and supporting each other's efforts and praising each other for their successes;

- The implementation of specific and necessary social skills in interpersonal relationships within the small group: students engage in the various roles required by the work and in creating a climate of collaboration and mutual trust. Conflict management skills are of particular importance, more generally we will talk about social skills, which must be the subject of specific teaching;

- Group evaluation: the group evaluates its results and its way of working and sets itself objectives for improvement.

Currently, the primary research groups on Cooperative Learning are those of D. Johnson and R. Johnson at the University of Minnesota in Minneapolis, that of R. Slavin at John Hopkins University in Baltimore and that of S. Sharan at Tel Aviv University in Tel Aviv. Some aspects of Cooperative Learning are still subject of discussion and deepening: the situation of the most gifted, the inclusion of severely handicapped pupils, the modalities about specific transversal objectives, the possibility of developing this method by combining it with others and with the use of new technologies. In US schools there seems to be a tendency to arrange the desks in a circle or horseshoe shape, or divided into many squares or triangles for 4 to 6 pupils each. In the first case, the teacher is in the middle; in the second, he moves from one group to another. In some schools, the arrangement of the desks changes several times a day, depending on the teachers or subjects. And there is no lack of classrooms where instead of desks there are tables, or where the children sit on the floor on the carpet.

There are different opinions about this innovation among teachers, among pupils and among their parents: some consider positively the setting changed from the traditional desks placed in parallel rows, others believe that it introduces elements of distraction making learning perhaps more fun but certainly less effective. Doctors oppose the arrangement of the desks in squares or triangles because the 4-6 pupils are forced to turn around to follow the teacher or look at the blackboard, often for very long periods.

The only wise alternative to the rows is the horseshoe. Cooperative learning is not the only innovative teaching methodology, but it is well combined with the adoption of technological tools such as tablets and mobile phones that greatly expand the possibilities of cooperation among students reducing costs and time spent to prepare materials.

Innovation or simple use of technological tools? The attention of educators seems to be focused on the potential that technology offers for learning. The theoretical debate instead revolves around the question "Is this real didactic innovation or more merely the use of technological tools to support already known educational approaches?" I would tend towards the second hypothesis. The real innovation has been the shift from the individual to the collective approach, from the competitive to the cooperative approach. The introduction of technology made it possible to use large amounts of information in real-time; to know, discuss and correct the cognitive progress of the students; to provide or allow the research of the materials needed to carry out a task. The most popular platforms, such as Moodle, offer different tools to propose learning and testing activities to learners. These can involve both a passive and an active role on the part of the student but also the interaction between participants with the sharing of the results obtained and the comparison between peers as well as with the teacher.

The Wooclap platform allows to prepare a series of questions/problems in various formats (multiple-choice, open-ended questions, completion text, topographical location, etc.) to be proposed to the students during the lesson to verify, for example, the possession of the minimum requirements necessary to deal with a specific teaching unit or the understanding of what

explained in the lesson. The questions/problems are displayed directly on the students' mobile phones/tablets, and the teacher can see the results in real-time and project them to the class and then discuss them together. It seems, therefore, that technological development has provided teachers with tools capable of allowing learning activities to be carried out flexibly and immediately, favouring cooperative approaches such as Team-Based Learning.

Psychological aspects of educational innovation. The importance of a pedagogical approach is assessed on the basis of whether it is more or less effective in learning than previous approaches. From this point of view, there does not seem to be agreement among those who use cooperative learning: some underline its capacity to develop cooperation and sense of belonging; others underline the higher expenditure of time to prepare the teaching units compared to traditional frontal lessons. But there are no certain data about better learning by learners using a collaborative approach compared to the traditional one. We can affirm that the introduction of different approaches compared to the traditional one can favour the involvement of students who are less able to face the study individually and benefit from sharing means and objectives with their peers.

Moreover, they spread the idea of teamwork, a way of working which is very common in companies nowadays. But what is the impact of using new technologies on learning from a cognitive point of view? Apparently, tools such as mobile phones and tablets greatly facilitate access to information and the exchange of interactions between learners and between learners and teacher. However, access to more information only facilitates learning if there is the ability to discern the different importance of the information; otherwise, the abundance of material is confusing. Therefore, the teacher must ensure that learners have the tools to navigate through the information before using technologies that make it easily available. While the collaborative approach may develop cooperative behaviour that could lead to better results than those achievable by each learner, it may also lead to a flattening of the leadership or parasitism of those who use the results of the work of other members of the group rather than collaborating to achieve a goal.

Conclusion

From a strictly cognitive point of view, the teacher must favour the instrumental use of technology which cannot and must not replace conceptual elaboration by the student: search engines allow access to millions of pieces of information but their relevance depends on the formulation of the search keys, and the possibility of choosing only reliable sources depends on the critical capacity of the students. The development of critical thinking is what makes possible the optimal exploitation of any educational approach, including the technologically assisted cooperative one. It is necessary to avoid that technological tools become prostheses and are used as substitutes and not integrative to decision-making and thinking processes. In other words, the introduction of technology in educational processes is welcome as long as teachers and pupils do not give up the autonomous use of cognitive processes: the introduction of calculators in primary school in Western countries has brought pupils closer to the use of technology but has made them less skilled in mental calculus and very dependent on the technological tool. An error we cannot repeat.

References:

1. Davis R., King J. An overview of production systems // Machine Intelligens, Edinburg University Press. 1977.
2. Educational Goals / Stadies and surveys in comparative education / Paris: Unesco, 1980. 231 p. 17.
3. White J.P. The Aims of Education Restated. London: Routledge Je. Kegan Paul. 1987. Up.

4. Steinberg V.E. Education of the third millennium: from mythology - through the crisis of pedagogy - to technology. Part 2. Problems and ways of technologization of education. / Valery Emanuilovich Steinberg. - Ufa: BSPI, 1997. - 95 p. fourteen.
5. Wang, M.C. and Baker, E.T. (1986). 'Mainstreaming programs: Design features and effects'. Journal of Special Education, 19, 503–526.
6. Saint–Laurent, L., Dionne, J., Giasson, J., Royer, E., Simard, C. and Pierard, B. (1998). 'Academic achievement effects ofan in class service model on students with and without disabilities'. Exceptional Children, 64(2), 239–253.
7. Waldron, N.L. and McLeskey, J. (1998). 'The effects of an inclusive school program on students with mild and severe learning disabilities'. Exceptional Children, 64(4), 395–405.
8. Fryxell, D. and Kennedy, C. (1995). 'Placement along a continuum of services and its impact on students' social relationships'. Journal of the Association for Persons with SevereHandicaps, 20(4), 259–269.