CONTINUING MEDICAL EDUCATION - NECESSITY AND OPPORTUNITY

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Abstract:. Both for the individual and for society, education has had, has and will always have multiple roles from the perspective of economic progress and development, of social stability and development, of essential cultural implications and personal development. Educational projects are the natural result of the changes that took place in the life of educational institutions. Since continuing medical education is regulated in almost all states of the world, without claiming to be an exhaustive approach, through this article some considerations of this educational field are presented, also identifying the involvement of the university environment in the organization and conducting of summer schools, focused on major discoveries and advances in medicine, from clinical practice to research, technology and innovation.

Keywords: educational project; permanent education; continuing medical education; improvement; educational innovation

1. Introduction

Having an inter-temporal value in our society, education instills values and shapes attitudes and behaviors in accordance with societal norms (through its primary function) and it gives participants the knowledge and skills they need to succeed in life (through the secondary purpose of education). Whereas 21st century skills refer to critical thinking, communication, collaboration and growth mindset, all educational institutions must reflect on major technological trends and their application in learning and teaching processes. In this context, through Education 4.0 (Fourtané, 2021), the following can be considered:

- The primary requirement of education is to ensure a diversified methodology based on the combination of learning activities and independent work, with cooperative activities, group learning and interdependent work. Thus, learning can be anytime and anywhere.
- Differentiated training is a way of optimizing the educational process and is considering carrying out the teaching-learning process based on didactic strategies adapted to the different possibilities/capacities of the participants in the educational act and their understanding capacities. Setting tasks and individualizing them promotes a positive learning experience, increasing students' confidence in their academic skills, learning thus becoming personalized.
- Although the learning outcomes of a course are presented by the course holder, participants in the educational act are free to choose the learning tools or techniques they prefer, respectively: blended learning (Mocanu, 2021) - creating a variety of learning tasks and activities, using technology, teaching staff and "peer-to-peer" interaction; flipped classroom - a methodology by which the traditional teaching model is reversed, pupils/students having direct access to knowledge, and the teacher functioning as a monitor and mediator (Roehling and Carrie Bredow, 2021); bring your own device - supplementing

existing IT systems through participants' own devices, allowing them to access educational applications and resources, completing projects/studies through their own devices, away from the classroom (Walsh, 2020).

- Based on the idea that an individual builds his knowledge based on experience, project-based learning favors the processes of research, inquiry and active cooperation in solving a problem (Petrović and Hoti, 2020). Participants in the educational act apply their knowledge in completing short-term projects that allow them to practice their organizational, collaborative and time management skills, all of which are useful in their academic careers.
- Practice is the activity aimed at verifying the applicability of theoretical knowledge within the training program. Students will be exposed to more hands-on learning through field experience, including internships, mentorship projects, and collaborative projects (Billett, 2010).

In order to answer the questions that shape Education 4.0, studies and research highlight that in designing new educational innovation projects, the reference framework must aim at: the competences and skills needed by participants in the educational act, in the current conditions of diversity and change; the incorporation of new learning methods centered on the pupil/student/participant and his needs; implementation of current and emerging information and communication technologies; the use of innovative infrastructure to improve teaching-learning processes (Miranda et. all, 2021).

2. Educational projects and permanent education

In recent years, the orientation of education has evolved under the influence of fundamental social, economic and political changes from the simple acquisition of knowledge and the formation of practical skills to the development of social and professional attitudes and skills, that allow the individual to develop as a creative, adaptive person and, as a result, with a high chance of success in career and personal life.

In the specialized literature, a series of articles, studies and research can be found that highlight the role and efficiency of projects in education. Without pretending to be an exhaustive approach, the following can be noted from these studies and research:

- The most appropriate approach to educational project practices, considering the flow of ideas, can lead to the development and implementation of an in-depth innovation process for knowledge transfer, based on the best techniques for transforming combinations for tacit knowledge into explicit knowledge (Adam at. all, 2015).
- One of the ways to learn and evaluate effectively is to carry out an educational project (individual or in a group); in which case, the teacher becomes a facilitator of learning and training. Most project groups start from an educational need/problem and, during the process, the participants in the educational act establish goals and activities for the implementation of the educational project and estimate the necessary resources (Petrescu, 2020).
- To guarantee the educational effect in the educational practice that designates the member of society as an object, it is indispensable to execute the educational design that is based on the method of educational technology such as instructional design (Ohshima, 2009).
- The design, implementation and evaluation of educational innovation projects is a fundamental activity for the development of teaching staff in order to achieve the main objective, which is the improvement of educational systems (Martinez, 2018).

- Globalization calls for new types of concepts and models to ensure the provision of skilled labor by international education systems based on advanced skills networks. Success depends on the professional use of the latest project management theory, methodologies and practices (Schumann at. all, 2014).
- Augmented reality technologies have great application potential in education, leading to: increasing interest in educational material; the formation of new skills; increasing motivation for independent educational and cognitive activity; activation of educational activities; forming a positive motivation for personal and professional growth; creating the conditions for the development of personal qualities, such as creativity, teamwork, etc. (Iatsyshyn at. all, 2020).

In this context, universities (including those in Romania) have developed and are developing projects taking into account the quality indicators on the four pillars (Teaching/Learning; Scientific Research/Artistic Creation/Sports Performance; International Orientation; Regional Orientation and Social Equity). As can be seen from Figure no. 1, the projects carried out or being carried out in Romanian universities address key elements of higher education (institutional capacity, educational effectiveness, quality management), depending on the fields, criteria, standards and performance indicators.

Fig. no. 1 Types of projects carried out/being carried out in Romanian universities

(Source: author processing)

Lifelong learning is a necessity and an essential challenge for inventing the future of every society, becoming a mindset and a habit for people to acquire, beyond the classical purpose of adult education and/or training. Lifelong learning creates the challenge to understand, explore and support essential new dimensions of learning, such as autonomous learning, on-demand learning, collaborative learning and organizational learning (Fischer, 2000). In the widest sense, lifelong learning includes all forms of learning: formal education, non-formal education and informal education.

Rapid technological development makes skills depreciate faster than in the past, thus requiring, the acquisition of appropriate skills and lifelong learning. Appropriate skill

combinations for future jobs include strong cognitive skills, basic information and communication technology, and analytical skills, as well as a range of non-cognitive skills such as creativity, problem solving, critical thinking, and communication (Park and Kim, 2020).

The importance and forms of lifelong learning for Romania, led the Ministry of Education to develop a National Strategy for Lifelong Learning, created on three pillars (access and incentives; quality and relevance; partnerships), with directions for action related to coordination, financing, regulation and action priorities, with reference to: National Qualifications Framework, assessment of skills needs, awareness of the benefits of lifelong learning, quality for lifelong learning, strengthening and securing the funding of the lifelong learning market, financial incentives and advice for the unemployed and people inactive (Ministry of Education from Romania, 2015).

Education must not and cannot be limited to what the school offers at all levels, however high it may be, but it must be continued and supplemented by other educational factors, in order to protect person from sufficiency, from the limits of training and personality development his (David, 2022). Thus, from the perspective of personal development, permanent education provides benefits (Dobraniș, 2018), such as: strengthening the self-esteem of the person who participates in the educational process; providing additional knowledge/skills; punctual improvement of some skills; positive impact on social integration; supporting the professional reorientation process of adults; carrying out activities/actions in an intensive and interactive system.

3. Involvement of universities in continuing medical education

Medicine is, par excellence, a noble profession, permanently dedicated to exhaustive study and research, in order to prevent and treat human suffering. The variability of scientific information, the diversity of human pathology, the particularities, the effort to effectively and proactively solve problems, are the main elements that, for the practice of the medical profession, require a long study, throughout one's life (Miftode, 2020).

Medical knowledge, skills, and social demands for patient care are changing rapidly, thus physicians are expected to be lifelong learners in order to provide effective patient care. For this reason, emphasis must always be placed on the way in which the training of medical students/graduates will be carried out, on the improvement of postgraduate training programs. Education experts argue that self-directed learning becomes an agent in cultivating lifelong learning skills for medical students/graduates (Marzo, 2018).

Regardless of their professional status (student in a medical faculty, resident doctor, specialist doctor, primary care doctor), the professional in the medical field must always pay attention to continuing medical education, respectively theoretical and practical training activities, aimed at to acquire/improve the level of knowledge, skills and attitudes, in order to increase the quality and performance of the medical act (College of Physicians from Romania, 2005).

In this context, the noble mission of improving medical personnel falls to specialized universities, which, through university programs and projects, offer "excellence for life and science" to both resident doctors and medical specialists.

Taking into account the typology of continuing medical education manifestations (College of Physicians from Romania. 2018), as can be seen from Fig. no. 2, higher medical education institutions occupy a unique position at the confluence of education, research and innovation, in the service of society and the economy.

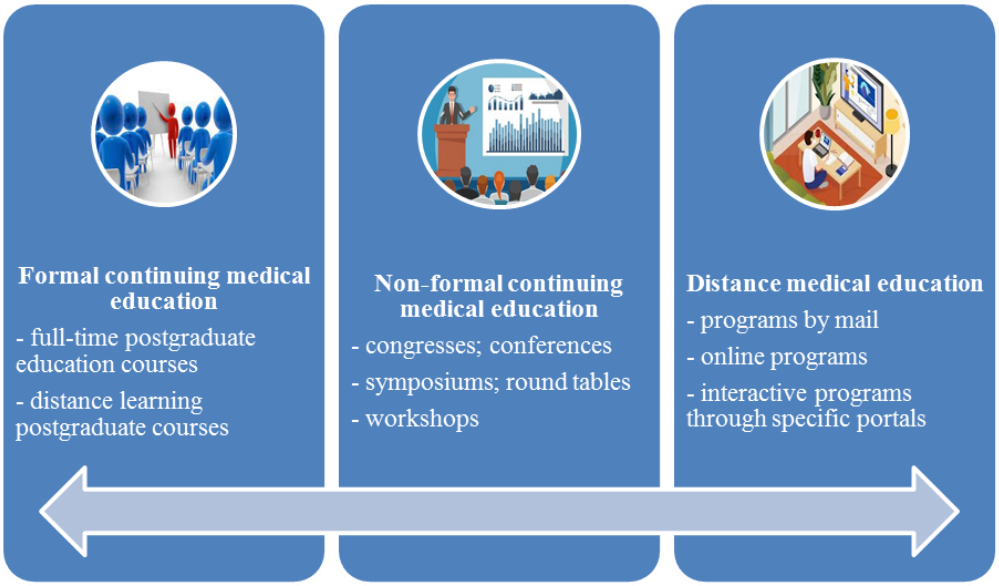

Fig. no. 2 Continuing medical education events
(Source: College of Doctors from Romania, Decision 12/2018)

Participating in such events allows the establishment of direct connections with renowned professors and researchers in the field and the possibility of receiving direct answers from the coordinators on various issues.

4. Summer schools - opportunity for continuing medical education

Regardless of the field in which they are organized, summer schools for students or graduates of university studies are events designed to encourage the development of skills, both general and professional.

A crucial task of higher education is to provide innovative education to students/graduates entering the labor market in the future, using project-based learning and problem-based learning, in order to increase competitiveness and promote the long-term development of society (Guo at. all , 2020).

Participation in a summer school (for self-improvement, for the academic future, for the professional career) organized at national or international level presents the following benefits (Study Portals Master, 2023):

- *Increasing self-confidence; Attention to specific educational needs*. Successfully completing a summer school could be a great way to prove it the participant that he is a capable and autonomous person, that he can discover his potential and reduce self-doubt. Summer schools are meant to offer specialized/specific courses that can satisfy the thirst for knowledge and can be sources of inspiration for new study opportunities.
- *Intensive and interactive learning environment. Promoting independent learning*. A summer school offers a focused academic environment with smaller classes and fewer hours of learning. Because the duration of the study is limited, teachers usually set very specific study objectives. A higher level of interaction offers the chance to ask coordinators for detailed information and participate in group discussions. A summer school places a strong emphasis on skill development, stimulating curiosity, creativity and self-confidence.
- *Excellence in academic activity. Consolidation of knowledge*. In a highly competitive academic environment, participation in summer school courses indicates interest in a specific theme/subject, which can demonstrate

commitment to excel in academic pursuits. Innovative and effective learning methods applied in summer school courses can even provide new ideas on how to approach learning, and acquiring practical skills can ensure successful outcomes in future activities.

- *Relationship between curricular activities and extracurricular activities*. Like any extracurricular activity, a summer school proves the level of commitment to one's own development and the desire to go further.
- *Development of language skills. Study in a famous city. New friends and new partnerships.* Participating in an international summer school offers benefits for improving verbal and written language skills, specific academic terms can be learned and vocabulary developed to complete an international education. Part of the learning experience is also about experiencing other cultures. Participating in a summer school outside the city of residence increases the level of intercultural education. The welcoming and highly interactive study environment typical of a summer school it's the perfect setting to make new friends, to embrace diversity, to create connections and partnerships that lead to new action.

The organization and conduct of summer schools in the medical field allow for the deepening and clarification of the problems faced by medical personnel in medical units, under the careful guidance of established names in medicine. As a rule, the program of the medical summer schools includes lectures given by specialists in the field, followed by workshops, case presentations and discussions organized in small groups, as well as a social program. Most of the time there is an integration of preclinical and clinical notions (problem-based type) and the presentation of the most modern clinical and paraclinical exploration techniques, with an emphasis on the usefulness of each method in diagnosis, with arguments for and against various approaches.

Summer schools have a particularly important role in continuing medical education, since aspects/problems both of a general nature and specific to each medical specialization are addressed, among which are noted:

- *Contemporary diagnostic techniques and procedures*. Accurately establishing the diagnosis has important implications for patient care, research and medical policy. The diagnostic process is a complex, collaborative, patient-centered activity involving information gathering and clinical judgment to determine the patient's health problem (Summer Schools in Europe, 2023a).
- *The impact of medical research*. Medical research involves research in a wide range of fields, such as biology, chemistry, pharmacology and toxicology, with the aim of developing new drugs or medical procedures or improving the application of already available ones. Medical research can encompass both preclinical and clinical research, with interdisciplinary approaches (e.g genetics and clinical application; epigenetics and environment; chemistry and clinical trials; informatics and medicine, etc.). During a summer school, participants will be exposed to cutting-edge research methods, technologies and medical devices in various medical fields (Summer Schools in Europe, 2023b).
- *Medical ethics.* Those working in the medical professions are often faced with decision-making procedures that go far beyond the technological aspects that are involved in the cases being investigated. The purpose of a summer school on medical ethics is to provide medical professionals with an introductory and philosophical inquiry of the question

of whether, when and how ethical considerations can or should play a role in the practice of medical professions (Summer Schools in Europe, 2023c).

- *Summer schools for certain specializations (such as gastroenterology).* The United European Gastroenterology summer school has been organized since 2004, in Prague, and brings together specialists in the field from over 32 countries. The 2023 edition had as objectives: the practical approach of some techniques that are requested by medical professionals in clinical hepato-gastroenterology; improving and acquiring knowledge about new developments and their clinical application. The quality of this event is given by the interactive and intensive way of conducting it, with practical training on various topics with renowned experts (UEG Education, 2023).

5. Conclusions

To stimulate cognitive, spiritual, interpersonal and social development, the extracurricular educational activity always takes into account the need to adapt to the individual and diverse requirements of all participants in the learning process, to their knowledge interests and potential.

Education through projects (considered a pedagogical innovation) broadens the metacognitive competences of participants in the educational process and promotes relevant skills for study and research issues (Stentoft, 2019).

Any educational project in the medical field must take into account the three dimensions of medical knowledge (as it follows from Fig. no. 3), and thus be realized: to ensure efficiency for medical students/graduates; to be aligned with the intended outcomes of medical education; to be integrated with elements of the medical education experience (Billett, 2016).

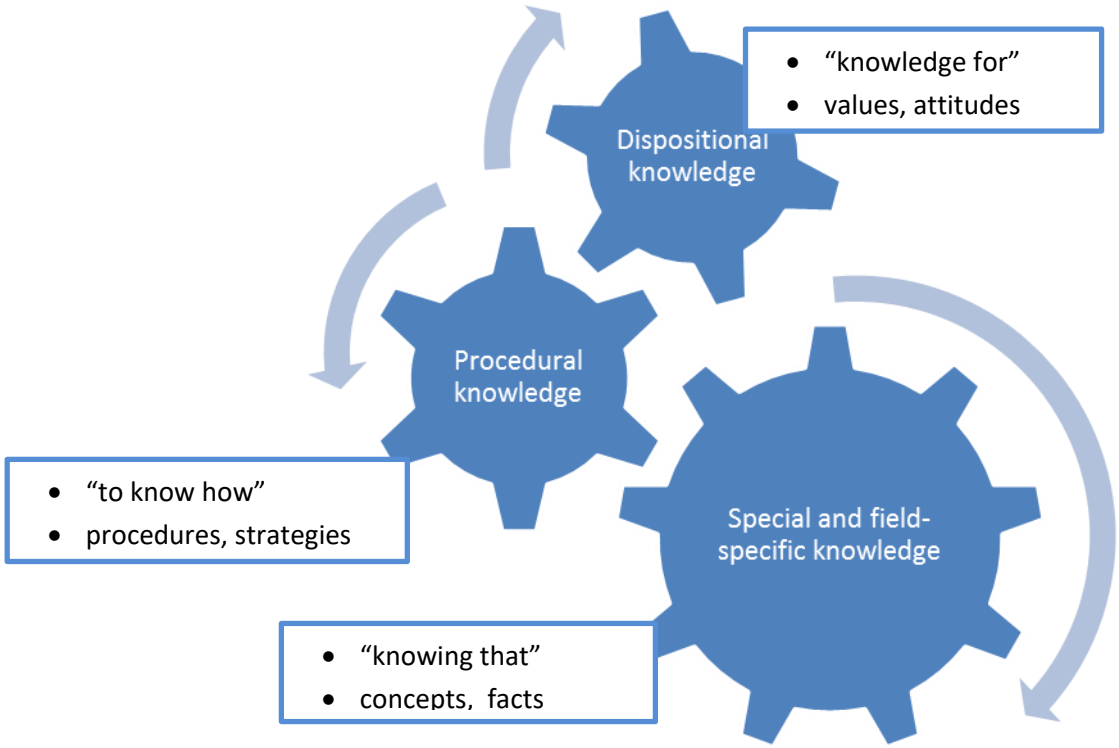

Fig. no. 3 Dimensions of medical knowledge
(Source: Billett, 2016)

A particularly important role to highlight the degree of efficiency of a project, to determine how the effort invested in the implementation/running of the project can be

optimized or if the project deserves to be continued, belongs to the project evaluation process. The object of the evaluation is: the project components (objectives, resources, strategies and procedures, contents addressed, the target group, the time allocated to the actions, the managerial system) and the project's own monitoring and evaluation system (results, impact). In this context, the team implementing an educational project for a medical summer school, based on a SWOT analysis and the feedback received from the participants, it will assess what has been achieved from what was planned, will issue conclusions that will lead to either the continuation of the project in a new, improved form, either to its multiplication (adherence to similar projects), or to the identification and elimination of those obstacles and problems that obstructed the development.

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