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## **Introduction**

### **Animation of science culture as one of top priorities in contemporary education**

Formal and informal education is vital for the society. It is the means to realizing the need for human development emphasized by contemporary psychology, civilization transformations and the necessity to acquire new qualifications and competencies. Adapting to the ever-changing reality, broadening one's knowledge and mastering skills, developing one's character and finally understanding culture and the needs of society are all factors contributing to the development of global society. All of the elements mentioned are connected to constant and life-long education allowing to fill any gaps in knowledge, as well as to perceive science and its popularization as values by both students (throughout their education) and adults. Teachers, educators of informal education and cultural animators take active part in the process. Therefore, the demand for educating specialists in this particular field is a key notion of current didactics.

The first volume is concerned with transformations within the didactics of biology understood as a subdiscipline of pedagogy and part of nature studies. The second volume deals with educational models promoting the notion of biodiversity. The third volume includes articles on "health literacy" – knowledge and skills in health issues that every member of knowledge-based society should possess. The fourth volume focuses on one of the key tasks of didactics of biology, that is life-long education in terms of interdisciplinary understanding of balanced development and, in particular, environmental protection.

The topic of the fifth issue of the *Annales* is animation of nature culture as a way of influencing formal and informal education, education through culture and for culture, as well as supporting balanced development of knowledge-based society. The theory of pedagogy of culture animation is connected to cultural socialization of young people and to cultural education through getting them involved in creating, mastering and popularizing knowledge. The authors of the present issue deal with issues such as: teachers' competencies necessary for realizing integrational

education; sense of responsibility; universalism and cultural identity; responsibility for nature; the use of information and communication technologies; identifying global and local character of processes surrounding a person in the modern world. What is also of great importance is the necessity of realizing the needs of children, teenagers and adults in the area of increasing their involvement in science, culture and social life.

Popularization of knowledge is connected with the search for forms of proper sharing of the latest scientific and academic achievements to various recipients. The ability to present information in an attractive form that catches attention is of vital importance. Also important is enabling participation in various interdisciplinary projects aimed at promoting cultural events, as well as solving global and local environmental issues by involving creativity, motivation and emotions of the audience.

Culture encompasses knowledge, understanding, skills, relations, and convergence of different forms of reality – everything that facilitates human thinking and evaluation. One of cultural activity enabling reflection upon and transmission of knowledge based on the above-mentioned criteria is writing and interpreting literature, as well as creating or taking part in scientific theatre. All of those activities inspire and solidify academic interests. Furthermore, they encourage social activities in cultural sphere.

People live in the world of values constituting their personalities and surroundings, influencing development of identity, culture, history, activity, physical and psychological well-being, and various types of relationships. One of such values is nature, promotion of which calls for the involvement of numerous institutions and organizations of formal and informal education which popularize knowledge through various projects, such as museums, festivals, contests, campaigns, social work, trips, field work, publishing periodicals. Those are manifestations of integration and collective management of development of natural and cultural heritage both on a local and global scale.

Global education is based, among other things, on living by certain values, interdependence, challenges, and scientific and cultural correlations. The task of societies is devising strategies to solve problems of the modern world. This is accomplished through school programs aimed at educating students about proper approach to scientific knowledge, as well as cultural, religious, social and ethnic differences between countries. The purpose is to teach them proper forms of communication with people from all over the world, to shape individual attitudes, and to make students aware of multiculturalism and interculturalism. It is necessary to use such techniques and methods of teaching which facilitate solving socio-emotional problems through students' democratic communication with cultural community and social organizations.

Everything that constitutes nature culture can influence human activity and have a key role in shaping people's attitude to the world of science and art.

An interesting encounter with a given branch of science, even though at times occasional or onetime, can spark the emergence of hidden potential of a given person. Therefore, the animator of science culture is given a key role. Such a person should co-operate with different social groups in a competent way in order to responsibly promote knowledge and art through “academic debate” based on cognitive systems, correcting errors in the audience’s existing knowledge, using proper forms of communication.

Promoting integrational education is another key issue. Such integration can be implemented in the case of children with developmental disorders such as Asperger’s Syndrome whose symptoms include difficulties in establishing relations with other people and in adapting to the reality present. Therefore, creating opportunities of overcoming such difficulties is yet another task of science culture animation. This is accomplished, among other things, through “therapy” making use of the richness of the world of science, as well as knowledge in the areas of psychology and pedagogy.

One of the elements influencing the formation of proper relations between people thus improving sharing knowledge and scientific dialogue is recognizing people as social beings. This in fact is what drives them to search for new information and share it in the process of socialization.

Self-organization, self-development, linguistic correctness, a form of educational coaching, awareness of technological innovations, monitoring the outcomes of scientific, academic and educational researches, giving feedback are all components necessary for the development of animators of science culture. They in turn contribute to the development of institutions of formal and informal education. Connected to the issue is the debate on teachers’ training and methods used in the process (both theoretical and practical). Those should enable the development of professional competencies of future educators.

The increasing interest in events oriented at popularizing knowledge, interactive museums, exhibitions, etc creates the need for equipping future scientists not only with theoretical knowledge, but also with the skill of sharing said information with different audiences and with the skill of shaping proper social attitudes towards the environment, nature and one’s own health. Meeting the expectations of future employers should be realized at university level through introducing new subjects and fields of study. That is why, in the academic year 2014/2015, the Pedagogical University of Cracow introduced a new specialization field: “Animation of science culture”. It was dedicated to students with Bachelor’s Degrees in Biology and Environmental Protection. The University of Burgundy served as the example. Based on their already tested and verified methodology, the Cracow’s university developed their own curricula of the specialization. The French model of teaching science culture animators was adapted to the Polish reality. It was also emphasized that an animator of science culture should not only be fluent in the sciences but should also possess certain traits of character and social skills.