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Educational Goals for Creativity Formulated by Polish High School Teachers

ABSTRACT

Developing creativity is regarded as a crucial task for teachers and entire education systems. It is one of the goals of education defined in the curricula of many countries, including Poland. Therefore, the aim of the study discussed in this article was to analyze the goals of creativity education as formulated by high school teachers.

The study involved 219 mathematics and Polish language teachers from 32 high schools, who were asked to identify what they considered to be the five most important educational goals for preparing high school students for independent creative activity in adult life. An expert assessment of these goals revealed that only about one third (31.08%) related to broadly defined education for creativity. Despite having the opportunity to list up to five creativity-related educational goals, on average, teachers mentioned only one (M = 1.20; SD = 1.19). One third of the surveyed teachers did not list any goals that the experts deemed as contributing to creativity education (36.99%), one quarter listed only one such goal (26.48%), one in five listed two (21.46%), one in ten listed three (10.05%), and only one in twenty listed four such goals (5.02%).

KEYWORDS:
creativity, education for creativity, creative education, educational goals

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Miscellanea

Introduction

In the 21st century, creativity is seen as one of the key human qualities (Brundrett 2007; McLellan, Nicholl 2013; Wiśniewska 2021). It is also indicated as a fundamental ability that should be developed in the younger generation during schooling (Cachia, Ferrari 2010; Gralewski 2022). Developing students' creativity and preparing them for independent creative activity is treated as one of the important tasks facing teachers (Cachia, Ferrari 2010; Craft 1999) and is increasingly one of the goals of educational activities within the educational programs of many countries (Cachia et al. 2010; Heilmann, Korte 2010; Pang, Plucker 2013; Skiba et al. 2010). This is clearly emphasized in European countries (Cachia et al. 2010; Heilmann, Korte 2010), including Poland (Dz.U. 2019, item 1148; Dz.U. 2019, item 1481). This results, among other things, from the recommendations of the Council of the European Union (2008, C 319/08), which obliges the schools of the Member States to organize education in such a way as to enable pupils to adapt to life in an increasingly global and competitive environment in which creativity, the ability to generate innovation, initiative, and entrepreneurship, and a commitment to continue learning are as important as subject knowledge. Consequently, it is also increasingly being argued that teachers should play a key role in professionally stimulating students' creativity (Maksić, Pavlović 2011) and educating them to be creative (Craft 2003) and that this process should refer to all school subjects irrespective of the level of education (Cachia, Ferrari 2010; Heilmann, Korte 2010). Therefore, the aim of this article is to analyze the objectives of education for creativity as formulated by the teachers of Polish secondary schools.

Creativity and its role in being innovative

Creativity is understood as a person's innovative potential to generate something new and, in some sense, useful or valuable (Barbot et al. 2015; Runco, Jaeger 2012). Maciej Karwowski understands creativity as "the personality potential of most people to achieve significant—at least on a psychological scale—creative outcomes" (Karwowski 2009: 27). In this sense, creativity represents the lowest,

elementary level of creativity (Kaufman, Beghetto 2009; Nęcka 2001), related to the learning process (Barbot et al. 2015; Beghetto, Kaufman 2007; Runco 2003), solving problems of everyday life (Modrzejewska-Świgulska 2014), and creative expression or hobbies (Szmidt 2017a), which—properly supported—can develop into creativity for generating works of objective value (Kaufman, Beghetto 2009; Szmidt 2017a).

Creativity is otherwise known as the personal, personological dimension of innovativeness (Szmidt 2007, 2018). Creativity encompasses creative abilities (Guilford 1978) and personal traits relevant to creativity, such as curiosity, openness to experience, independence, or motivation for creative activities (Gralewski 2022; Karwowski 2009; Szmidt 2018). Creativity is distributed in the population like other human traits (Karwowski 2009; Nęcka 2001), which results in the fact that the vast majority of people have certain predispositions to become creators and have objective achievements in the future.

Purposes of education for creativity

According to Ronald Beghetto and James Kaufman (2014), the learning environment is one of the most important factors in determining whether or not the creativity of the younger generation will be developed. However, fostering students' creativity requires a number of conditions (Davies et al. 2013) which include, first and foremost, a deliberate effort by teachers to stimulate the creativity of children. Unfortunately, a somewhat paradoxical situation is observed in this respect, which boils down to the fact that, despite politically correct declarations by teachers related to the fact that students' creative potential can be successfully developed in the school setting (Aish 2014; Aljughaiman, Mowrer-Reynolds 2005; Gralewski 2016; Shaheen 2011), this area remains separate from the other educational goals being fulfilled at school (Beghetto et al. 2015; Beghetto, Plucker 2006), as a result of which they fail to connect with teaching particular subjects at school (Schacter et al. 2006).

Meanwhile, taxonomies of educational objectives indicate that creativity should be one of the key goals of education (Anderson et al. 2001; Niemierko 1999, 2005, 2016). These taxonomies pay attention to students' higher cognitive processes, which go beyond remembering

and reproducing knowledge or simply imitating activities presented by teachers, and at their highest level presuppose the generation of new information or the creative use of knowledge. Lorin Anderson and colleagues' (2001) revision of Benjamin Bloom's taxonomy of learning objectives indicates that creativity represents the highest rank of cognitive processes that should be developed during education. Indeed, the authors list, in terms of cognitive processes, remembering, understanding, applying, analyzing, evaluating, and creating (Anderson et al. 2001). Similar assumptions can be found in the taxonomy of educational goals by Bolesław Niemierko (1999, 2009, 2016), which distinguishes four categories of goals, in the cognitive domain: remembering messages, understanding messages, applying messages in typical situations, and applying messages in problematic situations. Although Niemierko (1999, 2009) does not explicitly call this last category creativity, in reality, the activities of a student at this level are reduced to creativity. This is because the author suggests that a student who has mastered the use of knowledge in problematic situations is capable of combining knowledge into new and original structures and creatively applying it, for example, in the process of problem-solving and generating solutions. A similar understanding of creation as a top-level cognitive process was adopted by Anderson and colleagues (2001), who claimed that it involves generating new knowledge by combining different information, often from disparate areas, into a new and coherent whole, but also applying knowledge to new contexts and situations. In this sense, creation involves generating specific ideas, solutions, or hypotheses, looking for alternative solutions to a problem, and identifying the effects of specific phenomena or situations—but also planning specific solutions, inventing new procedures, and constructing new products (Anderson et al. 2001).

The taxonomies of learning objectives cited here indicate that creativity is an integral part of any learning process. It should be emphasized that this view is shared by the vast majority of creativity researchers (Beghetto 2016; Gralewski 2021; Kaufman, Beghetto 2009; Runco 2003; Szmidt 2007). Furthermore, these taxonomies make it very clear that teachers should, in their interactions, aim for students to be able to perceive problems and solve them using their existing knowledge, thus generating solutions that are entirely new to them. The taxonomies also point out that, irrespective of legal

regulations or guidelines formulated in basic curricula, teachers at all levels of education and of all subjects—guided by their knowledge of elementary didactic principles—should endeavor to provide students with opportunities for creative thinking within their subjects and that young peoples' creativity should be the "daily bread" of education (Niemierko 2016).

Education for creativity in light of educational law

In the Polish education system, the idea of education for creativity, understood as supporting the development of students' innovativeness, is directly mentioned in the Education Law (Dz.U. 2019, poz. 1148). Article 1(18) of this act establishes that the education system shall shape in students an attitude of entrepreneurship and creativity and shall foster active participation in economic life, through the application of innovative curricular, organizational, or methodological solutions. In turn, Article 44(1–2) indicates that schools are obliged to take necessary measures to create optimal conditions for the implementation of didactic, educational, and caring activities and other statutory activities, as well as to ensure conditions for each student to develop, including the development of creativity. Developing students' creativity, according to Article 109(6) of the Education Law, is linked to the basic forms of didactic and educational activities of the school within the framework of which institutions should organize activities that develop pupils' interests and talents in order to stimulate their creativity.

These statutory provisions outline a general direction related to schools of various types pursuing the development of students' creativity. Activities in this area are part of a broad current of activities supporting the development of gifted students (Limont 2010). In this understanding, creative abilities are treated as one of the types of abilities, while creativity is treated as a distinctive feature of a gifted pupil (Lewowicki 1986; Szumski 1995). According to this understanding, it is the duty of both the school and the teachers to provide gifted students, including creative students, with opportunities to develop their abilities and interests (Dz.U. 2019, poz. 1148, art. 1, ust. 3 i 20).

Assumptions concerning the aims of education related to creativity and the material to be taught can be found in the core curriculum for preschool education and general education for elementary school (Dz.U. 2017, poz. 356), as well as in the core curriculum for general education in general secondary schools and technical secondary schools (Dz.U. 2018, poz. 467). Among the learning objectives fulfilled at the elementary-school level, the core curriculum for general education includes the development of competencies such as creativity, innovation, and entrepreneurship (Dz.U. 2017, poz. 356: 14). In the core curriculum for general and technical secondary schools (Dz.U. 2018, poz. 467: 2–3), the development of students' creative thinking, the ability to formulate questions and problems, solve problems in a creative manner, formulate independent judgments and justify them, and creative writing are among the eight key learning objectives. In addition, the qualities and attitudes of students indicated at this stage of education as being key to their further individual and social development include cognitive curiosity, creativity, and entrepreneurship (Dz.U. 2018, poz. 467: 4). The educational objectives and content related to education for creativity in general are formulated within the majority of subjects at this stage of education, ranging from artistic subjects, through social and humanistic subjects, to scientific subjects. These objectives usually concern the development of (1) the ability to formulate questions and hypotheses or to perceive problems, (2) the ability to solve problems related to specific areas of science and society, (3) students' own suggestions for action and solutions to problems within the framework of individual subjects, (4) the ability to create one's own statements (both oral and written) for presenting, justifying, or defending one's view on a given topic, and (5) creative expression— creating original works of a creative nature.

Method

Research objective

Bearing in mind the societal expectations of supporting and developing the creativity of the younger generation and reports by various authors indicating that teachers encounter numerous problems in

this field (Gralewski 2016; Rubenstein et al. 2018; Szmidt 2017a), it was decided to determine what goals of education for creativity are formulated by general secondary-school teachers at the Polish secondary-school level. This was dictated, among other things, by the fact that research conducted in other countries (Beghetto et al. 2015; Beghetto, Plucker 2006; McLellan, Nicholl 2013; Schacter et al. 2006) and in Poland (Gralewski 2016) indicates that teachers treat education for creativity as a less important goal than other educational goals connected with acquiring knowledge and skills related to particular subjects.

Research participants

A total of 219 general secondary-school teachers took part in the survey, of whom 50.2% were mathematics teachers and 49.8% Polish language teachers. The vast majority of the respondents were women (88.9%). The teachers ranged in age from 26 to 68 years with a mean of 45.99 years (*SD* = 8.50) and their average length of service in the teaching profession was 20.44 years (*SD* = 8.28). The vast majority of the respondents were certified teachers (76.8%), followed by appointed teachers (15.9%), contract teachers (4.3%), and trainees (2.9%).

The selection of participants was random and multistage. The survey was conducted on a nationwide sample of 110 general secondary schools for young people, located in 32 cities throughout the country with populations of more than 100,000. The administrative areas of the selected cities were drawn first, then schools were drawn within these areas based on a list obtained from the IT Centre for Education of the Ministry of National Education. Within the schools, one class was drawn from among all second-year classes. Only two teachers of a given class could participate in the survey: a mathematics teacher and a Polish language teacher.

Research procedure

The findings presented here are part of a larger research project involving both students and teachers. For the purposes of the study described here, the selected teachers were asked to identify what they

considered to be the five most important learning objectives relevant to preparing secondary-school students for independent creative activity in adult life. Each of the learning goals was then assessed by two experts who have been involved in both creativity education and research in this field for more than a dozen years. The experts were asked to assess which of the goals could be used for creativity education. The evaluations made by the experts were characterized by a high level of internal consistency (Cohen's kappa = 0.79).

Research results

A total of 843 objectives formulated by the teachers were assessed, of which 262 (31.08%) were considered by the experts to be potentially related to education for creativity, generally speaking. Although the respondents were given the opportunity to indicate as many as five objectives that they thought were relevant to preparing secondary-school students for independent creative activity in adult life, on average, they indicated only one learning objective (M = 1.20; SD = 1.19), which the experts considered fitting in with the idea of education for creativity.

Overall (see Table 1), one in three of the surveyed teachers did not formulate a single learning goal that would be considered conducive to creativity education (36.99%); one in four formulated only one such goal (26.48%); one in five formulated two (21.46%); one in ten formulated three (10.05%); and one in twenty formulated four such goals (5.02%), while none formulated five. The mathematics teachers (M = 1.28; SD = 1.20) did not differ from the Polish language teachers (M = 1.11; SD = 1.20) in the number of objectives considered conducive to education for creativity (F (1. 217) = 1.20; $p > 0.05$; d = 0.15).

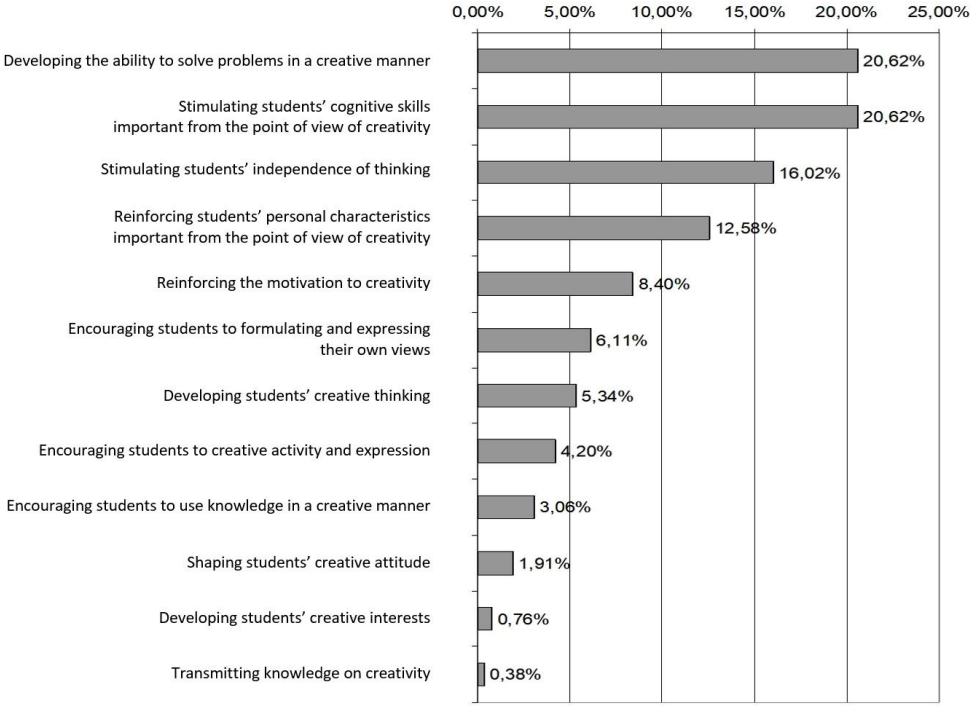
Table 1. Number of learning objectives identified by secondary-school teachers which experts evaluated as conducive to education for creativity

Number of educational goals	Teachers in total		Mathematics teachers		Polish teachers	
	n	%	n	%	n	%
Zero	81	36,99	35	32,11	46	41,82
One	58	26,48	31	28,44	27	24,55
Two	47	21,46	25	22,93	22	20,00
Three	22	10,05	13	11,93	9	8,18
Four	11	5,02	5	4,59	6	5,45
Five	0	0,0	0	0,0	0	0,0

Source: own research.

In the next step of the analysis, the learning objectives for creativity identified by the expert judges were categorized on the basis of their content. This analysis revealed the existence of 12 distinct categories (Fig. 1). The two most frequently identified categories of these objectives were developing creative problem-solving skills (20.62%) and stimulating students' cognitive abilities relevant to creativity (20.62%). The next categories were stimulating students' independent thinking (16.02%), enhancing their personal qualities relevant to creativity (12.58%), and strengthening their motivation for creativity (8.40%). The other categories of learning objectives for creativity mentioned by the teachers were rather sporadic and entailed encouraging students to formulate and express their own views (6.11%), developing students' creative thinking (5.34%), encouraging students to be active and express themselves creatively (4.20%), encouraging them to use knowledge creatively (3.06%), shaping a creative attitude in them (1.91%), developing their creative interests (0.76%), and transmitting knowledge about creativity (0.38%).

Figure 1. Categories of educational goals for creativity indicated by the secondary-school teachers



Source: own research.

Within the learning objectives that refer to the development of creative problem-solving skills (see Table 2), the teachers surveyed most frequently mentioned those related to the development of problem-solving skills, including solving problems in a creative manner (7.64%), and teaching students to develop strategies or different types of concepts or plans for solving problems (4.96%). In addition to this, they emphasized a number of specific skills that constitute the problem-solving process, such as perceiving and analyzing problems (3.82%), but also problem-solving skills in a group work setting (1.15%) or elaboration, understood here as developing or improving solutions and the results of individual or group work (0.38%). Some (2.67%) of the learning objectives concerned teaching methods and ways of creative problem-solving and coping with new and unusual situations.

Just as often, the teachers formulated learning objectives that related to stimulating students' cognitive abilities relevant to creativity. Within this category, in addition to developing students' creativity in general (4.20%), the surveyed teachers mentioned objectives referring to stimulating the many specific abilities that make up a person's creative potential (Barbot et al. 2015), concerning the development of imagination (3.43%) and independent thinking (3.05%), the ability to generate multiple solutions to a given problem (1.53%) or different and/or distinct solutions to a given problem (1.15%), developing original thought (2.67%) or the ability to associate facts, phenomena, and objects (1.15%), and to recognize and make analogies (0.38%). It should be emphasized that this category of objectives is very broad and includes the key human creative abilities (from the point of view of education for creativity). If we add to it the abilities that are responsible for the skills mentioned in the first category of perceiving and analyzing the essence of problems, it becomes apparent that the respondents referred to all the key creative abilities indicated in the literature as being responsible for the effects of human creative activity (Limont 1994).

One in six of the learning objectives mentioned in the study referred to stimulating students' independent thinking. Within this group, the teachers most frequently mentioned strengthening independent thinking, understood as the ability to independently evaluate facts and events (11.83%), as well as critical thinking (2.67%). The pursuit of such goals under certain conditions can foster creative activity in students. Although critical thinking is very frequently contrasted with creative thinking, it actually has important functions in the creative process, as it influences decisions to complete or continue it (Charzyńska, Wysocka 2015; Czaja-Chudyba 2018).

Another category of goals indicated by the teachers referred to fostering personal qualities relevant to creativity. The main core of this category is the teachers' orientation toward fostering students' curiosity (4.58%), openness (2.29%), and tolerance of different views and beliefs (0.76%). This category also included objectives referring to students forming a belief in their own abilities, including creative abilities (2.67%). It was characteristic in this category that educational goals referring to the strengthening of other personal qualities, important from the point of view of creativity, were sporadic and

concerned the shaping of non-conformism (0.76%), readiness to take risks (0.76%), self-confidence (0.38%), or a sense of humor (0.38%).

Objectives related to enhancing students' motivation to be creative were also mentioned in quite large numbers. Within this category, teachers most frequently referred to awakening students' motivation to undertake creative activity (3.82%), shaping their persistence in the implementation of creative activities (2.29%), and addressing fears or anxieties related to creative activity (1.53%); they less frequently referred to developing their intrinsic motivation (0.38%) or arousing their readiness to take on challenges (0.38%).

About one in twenty of the formulated learning objectives (6.11%) concerned encouraging students to formulate and express their own views and opinions. This group of objectives included encouraging pupils to express their own opinions or views on specific topics (4.20%) and developing the ability to discuss, argue, and defend their own views (1.91%). One in twenty of the objectives (5.34%) related to the general category of developing students' creative thinking. However, the respondents did not indicate which specific aspects of creative thinking they had in mind.

Slightly less frequently, respondents formulated objectives that related to encouraging students to act creatively, such as those directly related to encouraging students to make their own attempts at creative activity (1.91%), encouraging creative expression (0.76%), creating their own literary or artistic works (0.38%), and encouraging entrepreneurship (1.15%). These objectives were somewhat related to encouraging students to generate specific creations that have at least a subjective creative value.

Contrary to the above-mentioned taxonomies of educational objectives (Anderson et al. 2001; Niemierko 1999, 2009, 2016), the teachers rarely formulated objectives related to encouraging students to use knowledge creatively (3.06%), but also to shaping students' creative attitudes (1.91%), developing creative interests (0.76%), or transmitting knowledge about creativity (0.38%).

Table 2. Detailed characteristics of the learning objectives for creativity indicated by secondary-school teachers

General category	Detailed category	%
Developing the ability to solve problems in a creative manner	Developing the ability to solve problems creatively	7,64
	Teaching how to create strategies and solve problems	4,96
	Developing the ability to see and analyze the essence of problems	3,82
	Teaching methods/ways of creative problem-solving and coping with new and/or unusual situations	2,67
	Developing the creation of ideas and solutions to problems	0,38
	Teaching the ability to solve problems in groups	1,15
Stimulating cognitive skills in students that are important from the point of view of creativity	Developing creativity	4,20
	Developing imagination	3,43
	Stimulating independent thinking	3,05
	Developing the ability to think in a creative manner	1,91
	Developing the ability to generate many solutions to a given problem	1,53
	Developing the ability to show various and/or different solutions to a problem	1,15
	Developing original thinking	2,67
	Stimulating the ability to associate facts, phenomena, and objects	1,15
	Teaching to see and create analogies	0,38
	Teaching to overcome cognitive schemes	1,15
Stimulating students' independent thinking	Reinforcing the independence of thinking, developing the ability to evaluate facts and events on one's own	11,83
	Stimulating critical thinking	2,67
	Developing abstract thinking	0,76
	Stimulating thinking	0,76
Reinforcing personal characteristics of students that are important from the point of view of creativity	Stimulating curiosity	4,58
	Shaping openness	2,29
	Shaping the attitude of tolerance for different views and convictions	0,76
	Shaping the sense of faith in one's own abilities	2,67
	Shaping nonconformity	0,76
	Shaping the readiness to take risk	0,76
	Shaping self-confidence	0,38
	Shaping sense of humor	0,38

General category	Detailed category	%
Reinforcing the motivation to creativity	Stimulating motivation to take up creative action/developing initiative	3,82
	Shaping perseverance in solving complex or creative problems	2,29
	Reducing the fear(s) of creativity	1,53
	Developing natural motivation	0,38
	Stimulating the readiness to take up challenges	0,38
Encouraging students to formulate and express their own views	Encouraging students to formulate/express their own judgments and opinions on a specific topic	4,20
	Teaching to discuss, put forward arguments, and defend one's opinion	1,91
Developing students' creative thinking	Developing creative thinking	5,34
Encouraging students to engage in creative activity and expression	Encouraging taking up one's own attempts at creative activity	1,91
	Encouraging creative expression	0,76
	Encouraging creating one's own literary or artistic works	0,38
	Encouraging entrepreneurship	1,15
Encouraging students to use knowledge in a creative manner	Teaching the ability to combine knowledge from different (sometimes very distant) areas	1,91
	The ability to apply knowledge in new situations	1,15
Shaping students' creative attitude	Shaping creative attitude and/or creative approach to problem-solving	1,15
	Encouraging self-creation/one's concept of one's own life	0,76
Developing students' creative interest	Developing students' creative interests	0,76
Transmitting knowledge on creativity	Presenting the history of great discoveries	0,38

Source: own research.

Summary of the research results and discussion

Regardless of the way in which the teacher is thought of in various pedagogical concepts, they play the key role in shaping the educational environment in which the everyday teaching/learning processes of creativity take place. It is up to them which developmental impulses this environment is equipped with and how the student will experience them (Sajdak 2013). Krzysztof Szmidt (2007, 2018) writes that some of the main tasks of creativity teachers are

to formulate and subsequently implement the goals of education for creativity. In his opinion (Szmidt 2018), these goals should describe a certain pattern of a developed creative personality. According to academic concepts, these goals should refer to the formation of abilities, qualities, attitudes, values, and skills that are relevant to the independent creative activity of students. Transmitting well-established knowledge of creativity is also important here (Beghetto 2016; Szmidt, Majewska-Owczarek 2020). The effective implementation of such objectives can contribute to the development of creativity in children and adolescents and can prepare them for independent creative activity in adult life. Taking into account the aforementioned issues, it was decided to check what kind of goals for education for creativity are formulated by teachers of general secondary schools. The results indicate several important regularities.

Fewer than one in three of the learning objectives for creativity indicated by the teachers were recognized as such by the experts. The vast majority of these learning objectives, although they were supposed to be about preparing secondary-school students for independent creative activity in adult life, were not about creativity. This is an extremely dangerous situation because it means that the teachers surveyed are wrongly defining the goals related to education for creativity. This may be caused by insufficient knowledge or preparation to support students' creativity, as noted in earlier studies (Aish 2014; Bałachowicz 2013; Burnard, White 2008; Cachia, Ferrari 2010; Ekiert-Oldroyd 2003; Eckhoff 2011; Gralewski 2016; Hong, Kang 2010).

What is surprising is that almost 37% of the teachers surveyed did not indicate a single educational objective that would be considered by experts to be part of the idea of education for creativity in even the broadest sense. The average teacher participating in the study indicated only one objective that they believed was relevant to preparing secondary-school students for independent creative activity in adult life. This is decidedly little if one assumes that these objectives could apply to all subjects taught at this stage of education, which, after all, lasts several years. This therefore indicates that the teachers rather rarely take conscious, deliberate action to educate for creativity. Such a situation clearly contradicts societal expectations (Brundrett 2007; McLellan, Nicholl 2013; Shaheen 2011) and didactic

concepts (Anderson et al. 2001; Niemierko 1999, 2009, 2016), as well as guidelines based on the Education Law (Dz.U. 2019, poz. 1148; Dz.U. 2019, poz. 1481; Dz.U. 2018, poz. 467). Unfortunately, this situation is neither new nor specific to Polish teachers. Researchers from around the world report that although teachers' attitudes toward student creativity are very positive, it happens that they do not always feel responsible for developing it (Aljughaiman, Mowrer-Reynolds 2005; Beghetto 2010; Kampylis 2010) or they point to numerous constraints that make it difficult or even impossible for them to do so (Rubenstein et al. 2018). This problem also affects Polish teachers (Gralewski 2016) and seems to intensify at the secondary-school level. Indeed, among the key factors hindering them from stimulating their students' creativity, Polish secondary-school teachers most often include the guidelines of their curricula, which are overloaded and insufficiently emphasize the goals of education for creativity (Gralewski 2016). Teachers believe that stimulating students' creativity is not one of the main goals of education; it is less important than achieving the didactic goal of the school, which is to cover the curriculum and prepare students for the secondary-school final exam (Gralewski 2016). Teachers feel compelled to cover as much material as possible with their students every day, while they treat the development of creativity as a luxury reserved primarily for gifted students who more quickly achieve the intended learning goals (Beghetto 2007; Gralewski 2016).

The objectives for education for creativity indicated by the teachers were dominated by those that refer to the development of creative abilities, creative thinking, independent thinking, and creative problem-solving skills, which together accounted for 62.6% of all creativity education objectives. Learning objectives relating to personal qualities relevant to creativity, including strengthening motivation to be creative, appeared much less frequently in the respondents' statements, accounting for 20.98%. Objectives concerning the shaping of a creative attitude (1.91%) or encouraging students to undertake creative activity (4.20%) were rare, while objectives concerning increasing students' knowledge of creativity (0.38%) or developing their creative interests (0.76%) were even absent.

The learning objectives formulated by teachers referring to the development of cognitive abilities relevant to creativity, the

development of students' creative thinking, the stimulation of students' independent thinking, and the development of creative problem-solving skills together constitute a comprehensive picture of cognitive predispositions to creativity (Guilford 1978; Nęcka 2001; Gralewski 2022), which, as is well known, are responsible for the quality of a person's creative output (Barbot et al. 2015; Jauk et al. 2014; Runco, Jaeger 2012). Moreover, these goals include creative thinking, independent thinking, critical thinking, and specific problem-solving skills, which make up a comprehensive picture of the creative process (Mumford, McIntosh 2017). However, it is important to note that this structure is the result of considering the indications of all the teachers surveyed, rather than each teacher individually.

In terms of personal qualities relevant to creativity, the respondents focused primarily on stimulating students' curiosity, openness, and self-confidence. On the other hand, they rarely formulate goals indicating a readiness to support other personal qualities of students, such as non-conformism, a willingness to take risks, or self-confidence, which may indicate that they are not ready to support these qualities. This confirms previous findings by Aleksandra Tokarz and Aleksandra Słabosz (2001), according to whom teachers value students' independent thinking, understood as the ability to independently assess various facts and events, but are not willing to support students' non-conformism, defined as the ability to defend one's own opinion or not to succumb to group or authority pressure. The personal pattern of a creative student shaped in this way may be incomplete, as independence is one of the key mechanisms of creativity (Nęcka 2001).

The teachers clearly emphasized objectives referring to the promotion of students' motivation for creativity. Almost one in twelve goals of education for creativity concerned this aspect of their students' functioning. The tendency noted in the described study is consistent with earlier research on the beliefs of Polish teachers concerning the personal characteristics of a creative student, in which the crucial features are motivation to act and persistence (cf. Gralewski 2019; Gralewski, Karwowski 2018; Pufal-Struzik 2006; Tokarz, Słabosz 2001).

In summary, the objectives for education for creativity as defined by the teachers interviewed were largely consistent with academic

concepts. This applies in particular to the fact that the objectives refer to key abilities and personal qualities that are relevant to creativity. The only thing that may cause some dissatisfaction in this respect is that the respondents focused excessively on the cognitive predisposition for creativity and less often on the personal qualities of their students, including fostering their non-conformism. A clear mistake is that, at the secondary-school stage, they rarely pay attention to encouraging their pupils to be creatively active and almost completely neglect learning objectives related to teaching about creativity, such as imparting knowledge about what creativity is, how it takes place, and on which conditions it depends (Beghetto 2016; Szmidt, Majewska-Owczarek 2020). Particularly dangerous, however, is the fact that the vast majority of the teachers surveyed list as goals of education for creativity those that have nothing to do with fostering students' creativity or preparing them for independent creative activity.

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