

## Teachers' Beliefs About Creativity and Possibilities for its Development in Polish High Schools: A Qualitative Study\*

Jacek Gralewski

The Maria Grzegorzewska University, Warsaw, Poland

E-mail address: jacekgralewski@o2.pl

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### ABSTRACT

The aim of the present study was to research teachers' beliefs about creativity and possibilities for its development in Polish high schools. The study consisted of in-depth interviews. It was conducted with a group of 15 high school teachers, all of whom taught the key subjects (math, Polish and foreign languages) for the final school-leaving examination. The qualitative thematic analysis applied to the collected data revealed eight themes. Each of them concerned the teachers' understanding of what creativity really is, their attitude towards students' creative activity at school, aims that they formulated to stimulate their creativity, as well as the role and place of students' creative activity at school. In addition, the themes referred to actions that had been taken by the teachers to stimulate their students' creativity and factors that inhibited or stimulated the development of students' creativity at school. The teachers, who were the subject of the analysis, understood creativity as creative potential, that is, the ability to think independently, to give new and original solutions to all sorts of tasks and problems, as well as creative activity oriented towards everyday innovation. Additionally, the study revealed that there exists a creativity gap between verbal support for developing students' creativity at school and classroom practice.

### INTRODUCTION

Developing students' creativity is one of the major aims of educational activities (Craft, 2003; Newton & Beverton, 2012; Skiba, Tan, Sternberg, & Grigorenko, 2010). Members

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of the European Union, including Poland, emphasize the importance of creativity for social and economic development. This is borne out by a resolution of the European Parliament, which states that one of the major aims of the community is “to promote creativity, through lifelong learning, as a driver for innovation, and as a key factor for the development of personal occupational, entrepreneurial, social competences, and the well-being of all individuals in society” (European Parliament and Council, 2008, §9). Alongside critical thinking, collaboration and communication, creativity has become one of the key skills of the 21<sup>st</sup> century (Barbot, Besançon, & Lubart, 2015).

A important role in developing the creativity of students of different ages is played by their teachers (Barbot, Besançon, & Lubart, 2015). It is teachers, due to their professional training, who have become responsible for developing creative abilities in their students, shaping their personality traits and attitudes conducive to creativity, as well as making them learn to think and solve problems creatively (Karwowski, Gralewski, Lebuda, & Wiśniewska, 2007). The way in which teachers comprehend creativity provides a basis for their real actions, which are oriented towards developing students' creativity (Skiba et al., 2010). Therefore, the aim of this article is to analyze teachers' beliefs about creativity and possibilities for its development in the school environment.

### **CREATIVE POTENTIAL**

Creativity is an idea that concerns a great number of areas of human activity, therefore, a strictly agreed definition of the term is difficult to find (Plucker, Beghetto, & Dow, 2004). Creativity researchers usually define it in terms of four categories: the creative product, the creative process, personal creativity and environments that foster creativity (Runco, 2004). Also, there are numerous supporters of the thesis that creativity is a complex system which comprises socio-cultural components as well (Csikszentmihalyi, 1996; Glăveanu, 2010, 2014). However, creativity comes to be defined mostly through the social assessment of a creative product, which is considered by a specific group of recipients as novel and useful (Amabile, 1996; Cropley, 1999; Runco, 2009), and also surprising (Simonton, 2012), or having aesthetic value and authenticity (Kharkhurin, 2014).

In the field of education, creativity is often defined as creative potential (Barbot, Besançon, & Lubart, 2015; Runco, 2003) which is understood as the human capacity to produce original and valuable work that fits within particular tasks or domain constraints (Runco & Jaeger, 2012). According to componental approaches to creativity, creative potential comprises a number of resources which are significant for creative activity, including cognitive resources connected with divergent thinking (Guilford, 1967), imagination (Jankowska & Karwowski, 2015), as well as personality and motivational components re-

lated to the willingness to take risks, and to be open to new ideas and experiences, while tolerating ambiguous situations, stimuli and nonconformity (Barbot, Besançon, & Lubart, 2015). Creative potential must be differentiated from creative achievements. In other words, creative potential is an ability to produce some kind of original idea or work, which means that it may, but does not have to result in creating products of objective creative merit. In this context, creative potential is connected with problem-finding and problem-solving abilities, and provides a necessary, but not sufficient condition for any creative activity and creative achievements (Plucker, 1999). Considering the fact that children and young people very rarely generate products which, in the light of social assessment, may be considered as creative, teachers should take a main interest in the creative potential of their students, rather than their pursuit of creative achievement (Barbot, Besançon, & Lubart, 2015; Kaufman & Beghetto, 2009). Glăveanu (2011) points out that if we restrict creativity only to the product, then we can overlook what student's creativity actually is, or what it may become in the future. On this basis, teachers' focus on developing the creative potential of students, shaping their confidence in their own creative abilities and supporting creative activity, may in the future, result in their developing authentic creative products. However, it does not change the fact that children and young people are able to generate solutions that are surprising, unusual, using a fresh attitude to the problem, even though their general utility or social value is sometimes low (Glăveanu, 2011).

In accordance with the Four C Model of Creativity (Kaufman & Beghetto, 2009), creative potential may be associated with "mini-c" creativity. In this sense, creative potential may be a significant element of the learning process, connected with the dynamic, interpretive process of constructing personal knowledge and understanding within a particular socio-cultural context (Kaufman & Beghetto, 2009). This way of understanding creativity makes the assumption that every human being is capable of creativity, which is expressed in learning processes through the individual interpretation of acquired information, and then the inclusion of it in already existing structures of knowledge. The latest meta-analysis of the connection between creative abilities and academic achievement is fully confirmed by the above-mentioned assumption (Gajda, Karwowski, & Beghetto, 2016).

### **CREATIVITY DEVELOPMENT AND TEACHERS' BELIEFS ABOUT CREATIVITY**

The school environment may influence the development of creativity by encouraging or discouraging creative activity. Such actions may be both explicit and planned, as well as of a completely accidental nature. Teachers are perceived as key persons in developing students' creativity through initiating specific activities, and taking advantage of teaching methods whose aim is to encourage students to ask questions, to make them perceive various aspects of a given problem, to stimulate creative thinking, to support inno-

vation, as well as to foster critical thinking and experimentation (Maksić & Pavlović, 2011). In general terms, this is connected with giving students challenges and tasks, as well as asking them open-ended questions, which enable them to generate various solutions. Teachers are also expected to create for their students, suitable conditions for taking creative action through encouraging them towards creative expression, appreciating their artistic creation, as well as tolerating their opinions (Cropley, 1992). Davis and colleagues (2013) point out factors that are conducive to the development of students' creativity at school, such as the pedagogical environment, relationships between teachers and students, play-based learning, the physical environment, and the availability of resource materials. Barbot, Besançon, and Lubart (2015), in contrast, pay attention to the structure, atmosphere, and operation of the classroom and to the attitude of the teacher towards creativity.

Supporting creativity at school requires, above all, a positive attitude from teachers towards creativity, which is expressed through accepting creative activity and making students aware that the school really is a suitable place for such activities. The next step is to give the students challenges and tasks that require generating new and surprising solutions (Cremin, Burnard, & Craft, 2006), giving them an opportunity for intellectual speculation, experimentation and the development of imagination (Wood & Ashfield, 2008). Research shows that students' creativity rises in schools where they have an opportunity to act freely, take their own decisions (Cremin, Burnard, & Craft, 2006) and where they can be certain of a supportive atmosphere for taking action, and creative thinking. Davis and colleagues (2013) clearly point out that in order to support students' creativity at school, it is necessary to provide a proper balance between structure and freedom, which is, among other things, connected with playful or game-based learning. Of no lesser significance are relationships between teachers and students, founded upon respect and the understanding of students' suggestions (Burnard, Craft, & Cremin, 2006; Burgess & Addison, 2007), talks with students, a friendly atmosphere, and also, a sense of humour (Cumming, 2007).

It seems that another significant factor which supports students' creativity is also teachers' formal knowledge of creativity and their beliefs about it. Creativity researchers have shown that teachers from both Western and Eastern cultures are convinced of the importance and role of creativity for the modern world (Aljughaiman & Mowrer-Reynolds, 2005; Westby & Dawson, 1995). In the majority of cases, they associate creativity with creative products (Aljughaiman & Mowrer-Reynolds, 2005), rather than the creative process or creative people (Lee & Seo, 2006; Levenson, 2015; Liu & Lin, 2014; Maksić & Pavlović, 2011; Newton & Beverton, 2012). In studies on teachers' understanding of creativity, hardly any references are made to conditions in which creativity can be supported, even though this category of understanding creativity is apparently the closest to pedagogical activity.

Numerous studies suggest that teachers identify creativity with its particular domains, especially with art (i.e., literature, music, visual arts and performing arts) (Aljughaiman & Mowrer-Reynolds, 2005; Kampylis, Berki, & Saariluoma, 2009; Newton & Beverton, 2012). Teachers' focus on artistic domains makes them mainly recognize only those actions and students' creations that are connected with artistic initiative, like drawing, painting, writing, playing musical instruments, dancing or acting. Aljughaiman and Mowrer-Reynolds (2005) have demonstrated that every third teacher they tested associated creativity with artistic products. Andiliou and Murphy (2010) claim that even if teachers acknowledge that creativity could be manifested in some other domains, they still have a strong tendency to limit their students' creative thinking to literary and artistic tasks. Newton and Beverton (2012) indicate that the stereotypical association of creativity with artistry renders teachers unable to correctly project actions which are meant to stimulate students' creativity in domains other than art.

Teachers' beliefs about creativity, creative behaviours, and creative products usually only slightly differ from explicit theories of creativity (Aljughaiman & Mowrer-Reynolds, 2005; Andiliou & Murphy, 2010; Dawson, Andrea, Affinito, & Westby, 1999; Westby & Dawson, 1995). Very often, teachers associate creativity with novelty, originality, the ability to do something differently from others, uniqueness or imagination (Aljughaiman & Mowrer-Reynolds, 2005; Andiliou & Murphy, 2010; Cheung, Tse, & Tsang, 2003; Diakidoy & Kanari, 1999; Fryer & Collings, 1991; Lee & Seo, 2006; Levenson, 2015; Liu & Lin, 2014; Maksić & Pavlović, 2011). The features of creative products considered by teachers seldom include their merit, understood as usefulness, utility and adequacy to task requirements (Andiliou & Murphy, 2010). Teachers themselves admit that creative products are the outcome of the creative process, which is usually connected with finding many solutions to a given problem (Lee & Seo, 2006; Levenson, 2015; Liu & Lin, 2014; Newton & Beverton, 2012). Teachers' beliefs about creativity usually refer to everyday creativity, which is manifested in various kinds of activities and situations connected with hobbies and free time (Maksić & Pavlović, 2011), through curiosity, imagination, asking questions and giving untypical answers.

A review of research devoted to teachers' implicit theories of creativity shows that while describing creative students, teachers focus chiefly on their cognitive functioning, personality traits, and motivation (Aljughaiman et al., 2005; Andiliou & Murphy, 2010; Chan & Chan, 1999; Gralewski & Karwowski, in press; Maksić & Pavlović, 2011; Montgomery, Bull, & Baloché, 1993; Runco, Johnson, & Bear, 1993). A detailed analysis of research results on this subject, performed by Gralewski and Karwowski (in press) indicates that, when describing creative students, teachers mention their characteristics relat-

ed to cognitive predispositions towards creativity, personality traits related to openness to experience and independence, characteristics that determine functioning in social relationships, as well as temperamental and motivational traits. Moreover, while describing creative students, teachers strongly emphasize their intelligence and characteristics connected with functioning in the school environment (Aljughaiman et al., 2005). According to Aljughaiman and colleagues (2005), teachers mistake the characteristics of creative students for those of gifted high achievers because, when asked to describe the attributes of a creative student, they give a description of a student with high intellectual and motivational predispositions towards learning. As a result, this sort of description does not include many characteristics that are important for creativity. Overestimating the role of intelligence in a creative student's description has been confirmed by research results on the correctness of teachers' recognition of students' creativity. Paradoxically, teachers' nominations of students' creativity are more closely related to their intelligence, rather than their creative abilities (Gralewski & Karwowski, 2013, in press; Pearlman, 1983; Sommer, Fink, & Neubauer, 2008; Urhahne, 2011).

Gralewski and Karwowski's study (in press) brought evidence that every third teacher in Polish high schools has the wrong idea about a creative student's characteristics, which are contrary to general knowledge about the characteristic attributes of creative people. According to this group of teachers, the creative student seems to be imitative, schematic, typical, unimaginative, following other people's solutions, unable to perceive or solve problems independently, and above all, devoid of interests and passions, prone to being influenced by other people's opinions, lacking his or her own opinion, conventional, avoiding difficulties and unwilling to accept changes (Gralewski & Karwowski, in press).

### **TEACHERS' BELIEFS ABOUT A CREATIVITY-SUPPORTIVE CLASSROOM ENVIRONMENT**

According to teachers, students' creativity may well be developed in the school environment (Aljughaiman & Mowrer-Reynolds, 2005; Andiliou & Murphy, 2010; Fleith, 2000; Kampylis et al., 2009; Maksić & Pavlović, 2011; Park, Lee, Oliver, & Cramond, 2006). In the study by Kampylis and colleagues (2009, p. 21), every second teacher in the group of tested teachers agreed with the above-mentioned opinion, claiming that "creativity is a key factor for personal and social progress." Unfortunately, there is very little to suggest that teachers are substantively prepared for this type of activity or that they are familiar with methods of stimulating creativity (Fleith, 2000). In view of the fact that teachers lack satisfactory and substantive preparation for stimulating creativity (Burnard, 2008; Eckhoff, 2011; Rubenstein, McCoach, & Siegle, 2013), very few of them feel responsible for developing students' creativity at school (Aljughaiman & Mowrer-Reynolds, 2005).

According to Aljughaiman and Mowrer-Reynolds (2005), every second teacher does not feel prepared for stimulating students' creativity. A possible reason for that is the schooling of teachers, which provides very little opportunity for learning explicit theories of creativity. Teachers are not taught how to recognize creative abilities in their students, how to prepare and take actions in order to stimulate students' creativity, or how to teach them ways of solving problems (Karwowski, Gralewski, Lebuda, & Wiśniewska, 2007). Consequently, this renders teachers unable to cope with recognizing their students' creativity (Gralewski & Karwowski, 2013), or supporting it (Newton & Breverton, 2012).

Most often, teachers maintain that factors which make it difficult to stimulate students' creativity at school are, among others, curriculum guidelines and the school climate (Aljughaiman & Mowrer-Reynolds, 2005; Andiliou & Murphy, 2010; Cheung, Tse, & Tsang, 2003; Fleith, 2000; Fryer & Collings, 1991; Park, Lee, Oliver, & Cramond, 2006; Rubenstein et al., 2013). Sometimes, it happens that teachers are overloaded with realizing the curriculum and following its guidelines. In this situation, most teachers focus on transmitting a large body of knowledge, which is an inhibitor for stimulating creativity (Beghetto & Plucker, 2006), because they lack the time and possibilities for achieving aims other than those connected with imparting knowledge. Aljughaiman and Mowrer-Reynolds (2005) explicitly claim that stimulating students' creativity is of secondary importance in comparison with the aims of university education. Moreover, it happens that, under such conditions, stimulating students' creativity is considered by teachers to be contradictory to following the main aims of education (Beghetto & Plucker, 2006).

Beghetto (2007) directly maintains that, on the one hand, teachers recognize the meaning of creativity, but on the other hand, they feel that they cannot, to a sufficient degree, devote themselves to developing it, because of different expectations from students, such as going through particular parts of the school curriculum, or preparing them for examinations. In consequence, encountering numerous limitations, teachers deal with stimulating creativity only when they have time for it (Beghetto, 2007).

From the point of view of teachers, possibilities for supporting students' creativity in different school subjects are not identical (Newton & Beverton, 2012). According to teachers, the greatest possibilities for stimulating students' creativity are offered by the arts, the least – by the sciences and mathematics. The arts give teachers an opportunity to focus upon students' needs, giving them room for independence and originality, direct experience, open-ended activity, and above all, room for manoeuvre by teachers themselves. The arts do not force them to assess students' actions. Meanwhile, subjects like the sciences or maths are based on facts, force students to take actions requiring one correct answer, as well as making them follow fixed rules of action, and engaging in algorithmic

thinking, demanding more time and mastery of skills, with rote learning and assessment pressures (Newton & Beverton, 2012). In the view of teachers, subjects of this kind offer fewer possibilities for students' practice, discussion, exchange of ideas and expression, thus offering fewer possibilities for developing their creativity.

### THE AIM OF THIS STUDY

However, so far, little is known about how teachers' beliefs about creativity shape their practical activities with students. One can only assume that teachers' implicit theories of creativity affect their creative pedagogy and classroom practices (Gralewski & Karwowski, in press; Rubinstein et al., 2013; Sak, 2004). Therefore, it was decided to explore the beliefs of teachers on the creativity of their students, and in particular: (a) the role of students' creativity and creative activity at school and (b) factors that inhibit or stimulate the support of students' creativity at school. The discoveries of this study may lead to a better understanding of conditions for the development of students' creativity at school, which is currently considered to be a key issue in the field of creativity research.

### METHOD

#### Participants

The participants in the study were 15 high school teachers. They were teachers of the key subjects taken by students at the high school final exam (in Polish: maturity exam): five teachers of maths (33.3%), five teachers of Polish (33.3%) and five teachers of foreign languages (33.3%). Each of the respondents was a university graduate with a master's degree. The average work experience ranged from 4 to 29 years, with a mean of  $M = 15.27$  and  $SD = 7.12$ . The participants worked in schools located in central Poland, both in state-owned schools (93.3%) and in private ones (6.7%). All the participants were women living in large cities with above 50 thousand residents.

#### Data Collection and Steps in the Analysis

The study had a qualitative character. During the research, 15 in-depth interviews (IDI) with the high school teachers were conducted. The interviews focused on implicit theories of creativity, given by the interviewed teachers. Additionally, the interviews were partially structured: each participant was asked the same questions concerning the aims of education for creativity at high school, the role of students' creativity at high school, and factors that inhibit the stimulation of students' creativity. The average interview was slightly over 60 minutes long ( $M = 71.33$ ,  $SD = 16.96$ ).

The data were analyzed using qualitative thematic analysis (Braun & Clarke, 2006). The aim of the implemented analysis was to identify, analyze and report dominant patterns (themes) in the teachers' statements. To gain an insight into the main themes men-



tioned in the statements of the interviewed teachers, the analysis commenced with repeated readings of the transcript of all interviews. Next, a preliminary version of the categorization key was prepared. The categories for the key, which were selected at this stage, were the main themes or their detailed subcategories, mentioned in the teachers' statements. According to an inductive approach, individual categories (themes) were selected solely on the basis of the collected empirical data. No coding scheme was applied which could be defined a priori, that is, before starting the analysis. The categorization process comprised combinations of the teachers' statements into groups (categories), according to meanings common to them all. New categories were added as the analysis proceeded, having in view both finding repetitions of certain thematic categories, and striving to recognize maximum variety in the described issues. During the coding process, continuous comparisons were made between categories being added to the code key, and to the earlier statements of the tested teachers.

In the majority of cases, particular categories described whole sentences or even fragments of the participants' statements. The coding process was conducted using the ATLAS.ti programme. It was ensured that the particular categories of the key were separate and reliable. In order to increase the objectivity of the results of the analyses in progress, each of the categories of the key was provided with a detailed definition and examples of the participants' statements, which illustrated the essence of particular codes. The frequency of occurrence was calculated for each category. In the process of counting the frequency of occurrence, a rule was adopted, according to which, no matter how many times a respondent mentioned a given theme in their statements, it was counted only once.

## RESULTS

### Major Themes

Eight themes appeared in the teachers' statements. In particular, the themes were about understanding what creativity is, the attitude of the teachers towards students' creative activity, the aims of stimulating creativity, the role and place of students' creative activity at school, actions taken by the teachers to stimulate students' creativity, as well as factors that have an inhibiting or stimulating influence on developing creativity in the school environment.

**Table 1**  
**Major Themes**

Themes	Definition
Creativity definition	Statements about how the idea of creativity is understood by the teachers. Statements about what creativity is, what traits, behaviours, or actions are associated with the idea of creativity in the school environment.
The teachers' attitude to students' creative activity	Statements about the teachers' attitude towards developing students' creativity in the school environment. This concerns both possibilities for taking this type of action in the school environment, as well as their significance in comparison with other school duties.
Aims of stimulating students' activity	Statements about aims that the teachers would like to accomplish during classes developing students' creativity, and especially, their knowledge, abilities, personal traits, attitudes, skills and behaviours.
The role of creativity at school	Statements about roles that creative activity plays in the school environment.
The place of creativity at school	Statements about the conditions, situations, and in what kind of school classes, attempts are made to develop students' creativity.
Teachers' actions intended to stimulate students' creativity	Statements about what specific actions the teachers take during regular classes with students, or during extra classes, which, in the teachers' view, serve the purpose of stimulating students' creativity.
Creativity inhibitors	Statements about factors that inhibit or even prevent the teachers from taking actions intended to stimulate students' creativity.
Creativity stimulators	Statements about factors that facilitate the stimulation of students' creativity.

### **The Idea of Creativity**

The teachers defined the idea of creativity in various ways. The predominant definition among them was an understanding related to creative potential (Runco, 2003). The teachers associate creativity with the ability to create, and novelty-oriented behaviour, rather than generating products or works of objective artistic merit, understood as Big-c creativity (Kaufman & Beghetto, 2009). They did not attach very much importance to the merit, sense or usefulness of products created by students. They associated creativity with individual generation of various kinds of ideas by students and with students' independent thinking, which is expressed through students' own judgements, opinions or views, discussions with teachers, or, as they put it, "*individual thinking or getting away from school frameworks*". According to the teachers' statements, creativity cannot be connected with imitation, schematic thinking, or passivity.

The teachers clearly stressed that creativity is connected with students' actions which depend upon their own initiative, and with realizing their ideas. It is a kind of indi-

vidual creative activity which results from students' needs or interests. In this sense, students' creativity comes to be understood as doing "*something extra*," "*doing something on one's own initiative*," or "*doing something according to one's ideas*". The aims and directions of these kinds of activities are not forced upon students by teachers. Activities of this kind go beyond current curricula, and often take place in students' free time, out of the classroom. The essence of such activities is that they are the result of students' independent realization of their ideas, and not their teachers'.

Very often, the teachers associated creativity with artistic activity. From this angle, creativity is related to various kinds of artistic activity, beginning with creative activity in the field of literature, music, visual arts or performing arts. The teachers associated students' creativity with editing school magazines or websites, singing, playing musical instruments, painting, drawing, photography, participation in school performances, making films, writing poems and short stories, or generally understood activities connected with public speaking. However, every time they mentioned creativity, the teachers only stressed the fact that students do undertake these kinds of activities, without, however, referring to descriptions or assessments of the results of such activities. Students' engagement in artistic activities, and the atmosphere surrounding them seem to be more important for the tested teachers than the product, which is the outcome of students' engagement. It is striking that they did not associate creativity with forms other than artistic activity. In the teachers' conceptions of creativity, no attempts could be found of associating students' creativity with scientific activity or inventiveness.

The interviewed high school teachers associate creativity with the teaching process. They associated students' creativity either with students' solving tasks and problems in a variety of ways, inventing alternative solutions to the same kind of task, or with various actions oriented towards understanding or consolidating revised material. In this sense, the teachers associated creativity with teaching methods, as well as with actions taken both by students and teachers, to facilitate the interpretation and understanding of classroom material by students. Such actions are associated with searching for information, discussion, confronting various standpoints, analyzing classroom material, untypical ways of presentation, explaining difficult material, inventing new techniques that facilitate learning material, or as one of the teachers put it: "*with searching for various ways of learning*". The teachers' conceptions of creativity presented in this paper are close to mini-c creativity (Kaufman & Beghetto, 2009), according to which, creativity is treated as an indispensable element of constructing personal knowledge, and understanding of the world by students, and as an essential component of the learning process.

**Table 2**  
**Key Descriptors of the Definition of Creativity**

Key descriptors	Frequency	Example
It is inventiveness, the ability to invent new and original solutions	10	<i>Creativity takes place when the student invents something different from others. He invents something new, and does not accept my suggestions. Creativity consists of creating something new and original.</i>
It is the ability to think independently, it means having one's own view or opinion on a given subject	6	<i>Creativity is independence in thinking, it is a sort of intellectual independence.</i>
It is artistic activity	8	<i>Creativity is artistic activity, it is writing poems, short stories, attempting to write books, playing musical instruments, participating in musical bands.</i>
It is realizing students' invented ideas, not their teachers'	4	<i>It is not that if I have them do something, they do it the way I expect them to do it. They are supposed to do it all by themselves, let them think about it. It is not that I am to force something on them. The students should give their ideas, and not the teacher.</i>
It is activity that results from students' initiatives	7	<i>Young people's creativity, most of all, means putting forward their own initiatives.</i>
It is students' independent activity	7	<i>Creativity takes place when students start something from scratch, from beginning to end.</i>
It is a form of creativity which goes beyond the curriculum, it is an attempt to impress the teacher	8	<i>Creativity is a sort of willingness to impress the teacher. The creative student knows that he or she is doing something more. What would his or her teacher say to that ?</i>
It is connected with teaching methods	7	<i>Creativity at school also means searching for new ways of learning. It happens that sometimes I prompt the students with something, and sometimes, they invent their own ways to remember or understand something.</i>
It means solving tasks and problems in a variety of ways, inventing alternative solutions to the same task	8	<i>During maths classes, the students generally learn schemes, but there are individuals who have untypical solutions, who try to solve a given task in a non-standard way. They achieve the same result, but in different ways than those suggested by the teacher or classmates.</i>
The opposite of creativity or its contradiction is imitation, schematic thinking and passivity	3	<i>Creativity contradiction is students' schematic thinking. It is the attitude of imitating some things without one's own suggestions for solutions.</i>

### **The Teachers' Attitudes Towards Developing Creativity**

The teachers' attitudes towards developing creativity in the school environment are not obvious. On the one hand, they maintained that students' creativity can be developed within the school environment, during almost every class without exception, but on the other hand, some of them held that developing students' creativity during science classes, such as maths, is definitely impossible. Paradoxically, even if the teachers agreed that there was a possibility for developing students' creativity in the school environment, they considered this kind of activity as less important than realizing the school curriculum, or preparing stu-

dents for high school final exams. In this sense, their statements explicitly indicate that developing creativity is possible in a situation “*when students acquire the curriculum content which is essential for external examinations,*” or “*when there is time for that*”.

Also, it is surprising that the teachers did not prefer teaching methods which make it possible to stimulate students’ creativity, while presenting and consolidating other, as they believe, more important curriculum contents. The respondents pointed out that they prefer feeding, or as they said, “*well-tried*” teaching methods, which guarantee the teachers standardization and the fast achievement of specific teaching results. Apparently, active methods of teaching are perceived as a violation of classroom discipline, which is suggested by one of the teachers: “*during creative activities, it is more difficult to discipline the students, that is the way we think about it*”. Creative activities are viewed as sheer fun, as something that does not become a high school student any longer.

It is noteworthy that the attitude towards developing students’ creativity in the school environment depends on the teachers’ attitudes and personalities. The teachers’ statements indicated that some of them have good contact with students and that they keenly undertake various kinds of extracurricular activities with them. However, there are also some teachers who have a negative attitude towards creative activities.

**Table 3**  
**Key Descriptors of the Teachers’ Attitude Towards Creativity**

Key descriptors	Frequency	Example
Students’ creativity can be developed in the school environment	7	<i>Students’ creativity can be developed in every class. It is possible to do it in every class.</i>
It is difficult to develop students’ creativity in science classes	2	<i>In maths classes, it is difficult to develop creativity. In a typical class, there is no place for creativity, and I hardly manage to do basic things with them.</i>
Developing students’ creativity is less important than realizing the curriculum, or preparing them for their high school final exams	9	<i>As the curriculum is overloaded, it is difficult to think about creativity. It is hard to do that, to undertake such actions because we have got to do the core curriculum in the first place. Secondly, we have got to prepare the students for high school final exams.</i>
The teachers prefer feeding methods of teaching to active methods which foster creative thinking	3	<i>It is quicker to give certain patterns rather than inventing them and waste time with the whole class. That is why we work in a traditional way, rather than actively or creatively.</i>
Creativity is fun	1	<i>Creativity does not fit in with high school. It is fun. I associate such activities with junior high or elementary school.</i>
The attitude towards creativity depends on teachers’ behaviour	5	<i>For stimulating students’ creativity, the teacher’s behaviour is important. But not everybody has the heart for it.</i>

### The Aims of Developing Students' Creativity

During the interviews, the teachers were asked to define the aims for the development of students' creativity. Considering the fact that under normal working conditions they face various curricular and technical limitations, the teachers were asked to imagine that their school was going to implement a special project on developing students' creativity and that they personally were to be responsible for its coordination. Therefore, they were requested to define aims that they would like to achieve within this project, on condition that those aims were to be set only by them, and could not be limited by any top-down curricular guidelines, or any organizational conditions resulting from the operation of the school.

The aims of developing students' creativity that the interviewed teachers mentioned concern mostly various kinds of personal traits they would like to develop in their students. In particular, such aims concern the development of inventiveness, independent thinking, personality traits such as openness, nonconformity, motivation for creative activity, as well as developing creative self-esteem, a sense of creative self-efficacy, and the development of an attitude towards creativity, which is expressed through creative personal identity. In principle, none of the statements concerned aims connected with transmitting knowledge about creativity, and especially about what the essence of creativity is, how the creative process develops, what the mechanisms and conditions of the creative process are, and what the main characteristics of creative products and creative people are. While the tested teachers pointed out that the study of problem-solving was part of the aims of the project for developing students' creativity, their statements on the matter were very general. Practically, they merely observed that *"the aim of such classes would be solving problems."* However, the teachers were not precise about what particular students' skills, which constitute this type of activity, they would like to develop, or which area of knowledge in the subject they should impart to their students. Instead, they clearly stressed aims connected with the sphere of students' creative activity, at the same time indicating that the aim of this kind of class should be creative activities resulting in students' developing the ability to realize their ideas in full, as well as artistic activities oriented towards developing students' interests and artistic talents.

The vision of the teachers' considerations about students' creative education is included in the paradigm of generally understood education that promotes development. Aims formulated by them are, therefore, related to developing creative potential and different kinds of personal characteristics that are significant for creativity. The development of these characteristics is expected to take place as a result of students' active and conscious creative activities. In this respect, one of the aims is to develop students' creative

thinking, understood by teachers as “*creative potential*,” “*creative predispositions*,” “*inventiveness*,” “*the ability to perceive new points of view*,” “*independent thinking*,” “*the ability to go beyond schemes*,” or “*imagination*”. It is characteristic that while formulating the aims of education for creativity, teachers do not make references to particular types of creative abilities (Guilford, 1967), but use the general idea of creative potential or creative predispositions and merely try to define their selected functions. As opposed to the cognitive components of creativity, the aims concerning personality traits that teachers would like to develop in their students are very precise. They concern the development of openness, nonconformity, and motivation for creative activities. In this respect, the teachers would like students to be characterized by cognitive curiosity, openness to other people’s different views and ideas, the ability for discussion without excluding the arguments of the opposite party, the ability to express their own opinions, which they could defend if necessary, as well as the willingness to undertake creative activities, and put forward their own initiatives concerning the realization of various kinds of ideas.

The teachers formulated the aims of learning and consolidating students’ beliefs in their own creative potential very clearly. Very often, they referred to aims connected with creative self-esteem and students’ creative self-efficacy (Karwowski, 2012, 2015; Karwowski & Lebuda, 2015; Karwowski, Lebuda, Wisniewska, & Gralewski, 2013). Undoubtedly, their statements indicate that in the course of various kinds of creative actions, they would like their students to have the possibility of acquiring their own creative abilities, so that they could draw upon this knowledge to construct pictures of their own personalities. This group of aims, according to Bandura’s (1997) socio-cognitive theory, makes reference to the fostering of a sense of students’ creative self-efficacy, that is, their beliefs that they are able to cope with situations requiring creativity and that they are able to be successful in this field. This group of aims is complete with a need for fostering students’ creative personal identity (Karwowski, 2012, 2015). Additionally, to reinforce students’ sense of belief in their creative potential, the teachers also formulated aims connected with breaking barriers that inhibit students’ creative expression. In particular, they formulated aims connected with overcoming “*students’ shyness about saying something in public*” or “*expressing their own opinions*,” and “*disbelief in themselves*.” In accordance with the assumptions of the conception of creative self-efficacy (Karwowski & Barbot, 2016), the teachers indicated that a lack of students’ beliefs in their own creative potential is a great inhibitor on the way to students’ individual creative activities. Students with a low level of their sense of creative self-efficacy avoid creative activities, especially those actions related to social exposure. Characteristically, among the aims related to breaking

barriers which inhibit creativity, there appear no aims concerning mental blocks, related to inertia, inflexibility of thinking (Perkins, 1981) or functional fixation (Nęcka, 1999).

Finally, it must be stressed that the teachers also formulated aims which should be regarded as unrelated to developing students' creativity, or at best, secondary from that point of view. They are mainly connected with broadening students' knowledge as a result of creative activity, as well as with developing skills such as good manners, self-presentation, communication or cooperation within the group.

**Table 4**  
**Key Descriptors of the Aims of Developing Students' Creativity**

Key descriptors	Frequency	Example
Developing creative thinking	12	<i>The aim has to be developing creative predispositions or creative thinking. The point is that the students should not follow those schemes, frameworks, or specific learned definitions.</i>
Developing creative personality traits - openness and nonconformity	7	<i>The aim would be to develop a kind of openness to the world and other people's ideas. But also, it would be that the student should have his own opinion, rather than following others.</i>
Developing motivation for creative activities	7	<i>It is about arousing motivation in them, the willingness to act creatively, no matter the domain, to do anything.</i>
Creative self-esteem, learning one's creative potential and fostering a sense of creative self-efficacy	7	<i>The final aim of this type of class would be to change the students' consciousness about their creative potential, so that they could see for themselves what they are up to, so that they could be certain of their creative potential, and believe in their abilities to act creatively, that they have the opportunity for being successful in that domain, and that they come out well against others.</i>
Breaking barriers	5	<i>The aim should be to break one's own barriers or weaknesses. For example, the barrier of shyness about public speaking, or expressing one's opinions in public because this is something that really inhibits creativity.</i>
Developing a creative, personal identity	2	<i>The aim of such a class should be arousing the need for creation, the belief that creative life is worthwhile, that it pays off, and that it may bring pleasure.</i>
The study of problem-solving	6	<i>The aim of such a class would be to solve problems. If I have a problem, what should I do to solve it?</i>
Creative activity - fostering the ability to realize one's own ideas in full	5	<i>The aim of such a class would be a kind of creativity in practice, so that the students would get to know how to combine their personal aims with the aims of the whole group, how to put their ideas and my classmates' ideas into practice.</i>
Artistic activity, developing interests and artistic talents	6	<i>The aim would be to create works of art, all kinds of them. We have got musicians, visual artists, poets, so the aim is to create an artistic product like that. This has to do with developing artistic interests.</i>
Aims unrelated to creativity - broadening knowledge	8	<i>The aim of such a class would be to gain specific knowledge, which is not regular school knowledge, and has nothing to do with the core curriculum. During such classes, the students can be taught good manners, cooperation within the group, or self-presentation.</i>



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## The Role of Creativity at School

Creative activity is used by the teachers mainly for broadening students' knowledge and developing their abilities, rather than for developing their individual characteristics. The teachers' statements show that all kinds of forms of students' creative activity are related to teaching methods, and that they play an important role at various stages of the teaching process, starting with making contact between the teacher and his or her students easier, shaping the teacher-student relationship through illustrating difficult curriculum content, and ending with consolidating knowledge through taking advantage of it in practice. From the teachers' point of view, creative activity with young people plays a significant role in making it easier for students to understand, remember and consolidate classroom material. Creative activity is often associated with a specific action during which students have to take advantage of knowledge transmitted to them by the teachers in order to achieve their previously set aim. Moreover, all kinds of forms of creative activity are taken advantage of by the teachers for "*stimulating students' attention*" when they are bored, or "*making them interested in the content being taught*". Generally, creative activity is seen as a way of making lessons attractive.

Apart from making it easier for students to acquire knowledge, creative activity aims at developing their abilities and broadening their knowledge. This is particularly true of the ability for cooperation within the group, presenting their own views and opinions, discussion or presenting arguments. Interestingly enough, the teachers take advantage of students' creativity to search for alternative solutions to the same task or problem. Maths teachers in particular, pointed out this type of activity because they are more concerned with teaching students how to find alternative ways of solving a given task, rather than stimulating their inventiveness or creative abilities. In the teachers' view, creative activities represent an opportunity for broadening students' knowledge. To achieve the aims of creative activity set earlier, students have to independently access information which can be learned as part of the school curriculum.

In accordance with the previously discussed aims of developing students' creativity, creative activities undertaken on the school premises are there to reinforce the students' sense of self-esteem, including their sense of creative self-efficacy. The teachers very distinctly formulated the thesis, that through various kinds of creative actions, students establish precious interpersonal relationships with other students, founded on a sense of trust and approval. They develop self-confidence, thanks to which they open up and more actively participate in lessons, which finally results in getting better school grades.

Finally, it is noteworthy that creative activity represents a form of “*cutting school out for students*”. Thanks to this type of activity, students, at least to a very limited extent, can decide about what is going on in their school.

**Table 5**  
**Key Descriptors of Aims Concerning the Role of Creativity at School**

Key descriptors	Frequency	Example
Facilitates contact with young people	3	<i>Creativity improves my relationships with the students, facilitates contact with them.</i>
Facilitates illustration, the introduction of difficult curriculum content	4	<i>Sometimes, as we discuss some grammatical issues, we search for ways to find the easiest illustration of the matter. We search for a method that would make it easy to remember, so that it could be quickly brought to mind, and help later in life.</i>
Knowledge consolidation through taking advantage of it in practice	2	<i>Creative activity gives students the possibility for taking advantage of classroom knowledge in practice. Then, the students understand and remember that material much better.</i>
Making lessons attractive	4	<i>Creative activity in class comes in useful, especially when the students are tired, in order to stimulate them, to turn their attention away, to make them interested. Thanks to creativity, the lesson is not boring.</i>
Developing skills of public speaking, discussion, expressing one's opinion	4	<i>Creativity gives them a possibility of expressing their opinions, it is an opportunity for speaking in public.</i>
Developing interpersonal skills	2	<i>Creative activities give students an opportunity for learning cooperation within the group, for establishing interpersonal relationships.</i>
Finding alternative solutions to a task or problem.	4	<i>I encourage the students to search for alternative solutions to the same task. Then, they learn how to achieve their aims in various ways. They can each choose a way which suits them best, or invent a new one.</i>
Broadening students' knowledge	9	<i>Thanks to creative activities, the students broaden their knowledge and gain new skills. To do a project, they have got to search for and get certain information all by themselves. Then, they learn a lot.</i>
Developing students' self-esteem and creative self-efficacy	6	<i>Creative activities make the student become more self-confident, appreciated, and if he has got a high sense of self-esteem, he functions much better in the classroom.</i>
Offers students an opportunity to realize their own ideas, and to develop their interests	5	<i>These are activities connected with developing students' interests, which are related to all sorts of projects, and enable students to put their ideas into practice. It is a sort of cutting school out for students.</i>

### The Place of Creativity at School

The teachers' statements indicate that students' creative activities assume different forms of arrangement. Most often, such activities take place during extra classes intended for selected students, while implementing various kinds of educational projects, or while or-

ganizing school events. Even so, students' creative activities also occur during the course of regular lessons.

Even though the teachers pointed out that developing students' creativity can take place during regular lessons, it seems that, in large measure, this depends on the character of the kind of class. In their view, developing creativity during regular lessons demands that the teacher, who is covering the compulsory curriculum content, should take advantage of such teaching methods and forms of students' work that, alongside teaching the compulsory curriculum content, will also allow him or her to stimulate students' creativity. Then, activities whose aim is to stimulate creativity, result as it were, from the course of a lesson, the interaction between the teacher and the students, or from problems that the students come across during the lesson. This view is compatible with the previously presented conclusions about the role of creativity at school. It turns out, however, that the teachers very often take advantage of creative activity to make it easier for students to acquire the curriculum content being taught. One of the teachers distinctly indicated that sometimes, mistakes made by students lead to creativity: *"their mistakes make me try to explain to them how to get rid of them, which unleashes a whole chain of events when we are trying to solve that problem together, and at the same time, we learn how to be creative."* Some of the teachers' statements prove that developing students' creativity is not possible in every lesson. Consequently, it is not part of everyday school life. Some of the teachers openly admitted that supporting students' creativity requires specific conditions and opportunities, which is why, lessons during which students can develop their creativity are very rare. Still other teachers said that developing students' creativity is possible during, as they put it, *"loose classes"*. By loose classes, they meant humanities, vocational subjects or those connected with art.

Apart from regular classes, students' creativity is developed in the course of extra classes, or all kinds of extracurricular activities dedicated to selected students. Such activities are connected either with implementing different kinds of educational projects intended for developing students' interests, or they are connected with organizing school events, like exhibitions, celebrations or happenings. One of the teachers remarked that *"creativity is always at a premium when it is necessary to prepare a happening for the school, some celebration, or to show, or present something"*. Paradoxically, even though this type of activity concerns the whole school community, only a narrow group of students get engaged in preparations for school events. In turn, projects meant for developing students' interests depend either on students' initiative, or are related to particular subjects in the curriculum. These kinds of activities are usually educational projects which

are very often related to social life, such as editing a school magazine or website, or organizing students' free time, etc.

Characteristically, a lot of teachers indicated that supporting students' creativity always occurs where artistic activity takes place. In a way, artistic activity permeates each of the previously mentioned forms of supporting students' creativity, beginning with regular classes, through extra classes, to organizing school events and celebrations.

**Table 6**  
**Key Descriptors of Aims Concerning the Place of Creativity at School**

Key descriptors	Frequency	Example
A typical lesson - creative activity related to the curriculum content taught in class	6	<i>In my case, creative activities happen nearly in every lesson. I have a general outline of the lesson in mind, but of course, a lesson proceeds slightly differently with each class. So, whenever the opportunity arises for using the students' creativity, I do it straight away.</i>
It is not a typical lesson	4	<i>It is not a typical lesson. Unfortunately, it does not happen every day. A creative lesson is something rather uncommon. We usually work traditionally in class.</i>
Loose lesson	5	<i>It is easiest to develop students' creativity during loose classes, Polish or culture lessons. Very often, young people prepare such lessons themselves. They feel more relaxed then.</i>
Extra classes for selected students	4	<i>In my lessons, I develop the students' creativity during extra classes. Selected students attend, rather than whole classes. Then, they feel able and motivated because with the whole class, we do the core curriculum.</i>
Extracurricular activities, educational projects connected with developing students' interests, and social school life	12	<i>Creativity at school is, above all, extracurricular activity. These are different kinds of educational projects. Students say what they would like to do within those projects, and then they realize them. These are different things: performances, school magazines, playing musical instruments, discussion groups, but they are not activities connected with lessons.</i>
Exceptional occasions, organizing school events	11	<i>Above all, creativity at school means organizing different kinds of events: an exhibition, a performance, a celebration, the beginning or the end of a school year.</i>
Artistic activity	11	<i>Creativity at school very often means theatrical activity. It is activity through art. Surely art and language are two such domains where creativity can be expressed best.</i>

### The Teachers' Activities

The previously mentioned activities that teachers undertake to support students' creativity constitute a complex project of supporting students' creativity. In the first place, the teachers try to show their students that the school is a suitable place for creative activities. A particularly important group of activities consists of creating opportunities for students to act creatively. There are two types of activities of this kind. The first is connected with giving students' open-ended problem or tasks. These kinds of tasks stimulate students'

creative potential at the time when they are engaged in studying material related to the curriculum. Such tasks are related to encouraging students to search for alternative solutions to the same task or problem. The other type of activities are connected with enabling students to participate in different kinds of educational projects related to developing students' interests, organizing school events, or artistic activities during extracurricular classes. In the teachers' view, creating opportunities for creative activity is a necessary condition for developing students' creativity.

In the course of creative activities, students have the opportunity to develop abilities and personal characteristics that are suitable for creativity. Therefore, further actions undertaken by the teachers are oriented towards motivating students to undertake creative activities, arousing their curiosity, encouraging them to think independently, as well as stimulating their inventiveness. At this stage, an important part is played by activities related to encouraging students to express their own opinions, to generating solutions to given tasks and problems, and also to making attempts to create their own artistic work.

Another group of the teachers' actions are connected with their reactions to students' attempts to undertake creative activities. The teachers very clearly emphasized activities related to listening to students' ideas. This has to do with encouraging them to invent their own ideas or task solutions. More importantly, the teachers underlined the fact that they do not try to assess or criticize students' ideas, but undertake actions related to appreciating their creative activities. These kinds of actions assume two forms: either as a reward in the form of a school mark, or in the form of a public commendation or appreciation on the part of the teacher.

Activities connected with encouraging students to undertake creative activities as well as ones connected with appreciating their engagement in this field serve the purpose of developing their beliefs in their creative potential, and developing a sense of their creative self-efficacy. Such activities are intended to make the students realize that they are able to solve more or less complicated problems by themselves, and that their ideas are not worse than those of other students. This is connected with encouraging students to act creatively so that they can manage this type of activity. In their statements, the justified view can be found, that students who believe in their creative potential will undertake creative activities in the future, through which they will stimulate their creative potential.

**Table 7**  
**Key Descriptors of the Aims of the Teachers' Activities Intended**  
**to Support Students' Creativity at School**

Key descriptors	Frequency	Example
Showing that the school is a suitable place for students' creativity	2	<i>Here, it is also important that the students should be shown that they have an open door for creative activities at school, that the school does not close its gates in front of them.</i>
Offering an opportunity for creative activity, giving an open problem or tasks	11	<i>I give the students open tasks, which can be solved in at least several ways.</i>
Stimulating motivation for creative activity	8	<i>I encourage the students to try writing their own poems. I have got students who are very sensitive to beauty. And I talk to them. Will you write something on your own? Try! Show me you can.</i>
Arousing curiosity	5	<i>The students should be encouraged to take an interest in various things, to search, or to read. Then they will be creative.</i>
Encouraging students to use independent thinking	5	<i>I like it when the students put forward their hypotheses, even if they are wrong. Such situations develop their thinking. The students will not be creative if they only follow the instructions of the teacher. They have got to think on their own, and to modify what we suggest.</i>
Stimulating students' inventiveness	4	<i>I teach the students how to think or invent new solutions. I encourage them to find an unusual use for a given thing.</i>
Counteracting criticism	1	<i>Sometimes, it happens that the students reject other people's ideas straight away. They burst out laughing immediately. But this is what our role is all about: to bring it out and prevent such action.</i>
Listening to students' ideas	5	<i>Cooperating with the students, I ask them questions about what they want to do, and what ideas they have. But I do not reject their ideas.</i>
Appreciating students' creativity through grades and commendations	9	<i>The point is to appreciate the students for inventing something new. Sometimes, it is a trifle, but at this stage, it is important for them that when they have invented something, it is appreciated.</i>
Supporting students' initiatives	2	<i>When the students have an idea, I try to help them put it into practice.</i>
Developing students' belief in their creative potential	7	<i>Sometimes, they must be forced into action, because when they take action, they will have a chance to see that they have been creative. They get the opportunity to believe that they also are able to invent something original.</i>

### **Creativity Inhibitors**

The teachers enumerated a number of factors which, in their view, inhibit or even fail to stimulate students' creativity at school. Above all, these factors concern various kinds of teachers' beliefs and the attitudes of students themselves. In the teachers' view, developing students' creativity does not belong to the major teaching and educational aims at high school level. The teachers' main focus was on passing on subsequent portions of

material to students, according to the existing curriculum, whereas developing such dispositions as creativity was treated by them as a luxury that they can afford only when there is time. Developing students' creativity is, in their opinion, secondary to that of a school accomplishing its didactic aim - the reproduction of the curriculum content and the preparation of students for the high school final exam. This is illustrated by one of the statements: *"Let a student create, but first, let him do what he is expected to do at school. In the first place, we have got to cover the core curriculum content."* Concentration on teaching the core curriculum is connected with the teachers' attaching a lot of importance to preparing students for the final exam, which is considered by them as one of their main duties. The interviewed teachers explicitly claimed that the measure of educational effectiveness at high school is the grade (GPA) that the student achieves in the maturity examination, which as it turns out, does not require creativity from him or her. One of the teachers provided a good illustration of this: *"I am evaluated on the basis of my preparation of the student for the high school final exam. Because of that, I have to focus on maths, and I feel excused in relation to failing to develop creativity in my subject."* Paradoxically, contrary to social or economic expectations, instead of promoting creative, inventive or innovative people, the teachers provide instruction on how to be schematic in order to achieve a so-called good start in adult life, in the form of a pass in the maturity examination. One of the teachers remarked: *"High school with a test-based maturity exam is very restrictive. It does not develop creativity or the willingness to create, but teaches students how to be schematic, and prepares them only for the key to the examination."*

Overloaded curricula are another inhibitor connected with developing students' creativity. The teachers complained that they do not have enough time for realizing the curriculum content. Consequently, they claimed that they do not have time for stimulating students' creativity, either. This is well illustrated by one of the teachers' statements: *"In my lessons, I could develop the students' creativity, but I am short of time"*. Apparently, the anti-creativity opinions of the teachers also seem to be a distinct problem. Some of the teachers said that students' creative activities are a kind of fun activity, for which there is no place at high school. In their view, the lesson should be for studying and realizing specific curriculum content, rather than stimulating creativity. These types of teachers believe that *"a lesson is a time for learning, not for fun"*. On the other hand, some teachers treated creative activities very seriously. They thought that a broad range of knowledge and a high intellectual level are indispensable conditions for creativity. The teachers with such beliefs maintained that they did not make any attempts to stimulate creativity, because their students were not able to take creative actions, owing to inadequate knowledge

or low levels of intellectual ability. One of the teachers put it very bluntly: *"If the students are intellectually weak, how can they be taught how to be creative? It is not for them. They can hardly manage to learn schemes"*.

Another factor which inhibits the development of students' creativity is the teachers' attachment to traditional methods of teaching, which restrict taking creative action in class. The teachers prefer feeding methods of teaching, which give them control over the teaching process. However, they avoid active or problem methods, which are based on the students' individual experiences. Feeding methods provide teachers with the assurance that specific information has been imparted to the student, and they do not appear to hold much belief in active methods, during which the student finds particular facts on his or her own. Then, he or she gives them meaning, and includes them in the existing structures of his or her knowledge. In such cases, the teachers claim that students do not draw the correct conclusions. Consequently, they are not sure of what they have learned in class. The teachers do not like using these types of teaching methods because, in their view, they are time-consuming, may pose a threat to keeping order and discipline in the classroom or, as they put it, *"bring about chaos in class"*. Moreover, it turns out that the teachers do not like changing well-tried methods and ways of teaching. They have a fear of experimentation, which was indicated by one of the teachers: *"I do not think it is the core curriculum that inhibits any creativity(...) Rather that, other teachers and I have a fear of sometimes trying something different with the students, working with them in another way."*

Other inhibitors include the inadequate preparation of the teachers for stimulating students' creativity, their attitude towards this type of activity, as well as an excessively high workload. Some of the teachers admitted that they do not feel fully prepared for stimulating creativity in their students. They emphasized the need for schooling in this field. In their view, not every teacher possesses traits that predispose him or her to creative work with students. They pointed out that a teacher who attempts to stimulate students' creativity should, above all, be creative himself/herself. Moreover, he or she should be open to students' ideas, enable them to act freely, treat them like partners, and be able to admit making a mistake, or having inadequate knowledge. However, it turns out that, in striving for control over the teaching process, many of the teachers act directly, trying to control students' actions at all costs, and limiting their freedom of thinking. Consequently, such actions have the opposite effect, contrary to the intended aim. One of the teachers described this process in the following way: *"If we force our suggestions for activity on the students, it does not work. Believing that the students will do something interesting because they are told to, because they are afraid of us, leads us nowhere. They*



*must feel freedom, feel they can make decisions, and that we approve of their ideas. Otherwise, they will be unwilling to do anything".* Additionally, the teachers point out that in their job, they are overburdened with numerous personal and professional duties.

The next group of inhibitors are related to the attitudes and behaviours of the students themselves. Teachers observe a variety of behaviours in their students, which they think, inhibit the stimulation of their creativity. They draw attention to the excessive criticism of classmates who undertake creative activities. It turns out that students very often ridicule their classmates' suggestions. As a consequence, students feel embarrassed about presenting the results of their creative activities in front of the class, are unwilling to undertake this type of activity, or intentionally avoid situations in which they would have to express their opinions, or present their suggestions. In addition, students are afraid of having their own opinions, they are afraid of incomprehension on the part of their teachers. On the basis of the teachers' statements, it can be maintained that students are afraid of the fact that their suggestions connected with creative activity at school may have a negative effect on their school grades. Therefore, they avoid situations in which they are not sure of the correct solution, or situations which could, at the same time, bring out their ignorance or incompetence. As a result, they avoid creative activities, and instead, they expect ready-made suggestions and schemes from their teachers.

The teachers observe that school grades play a negative role in stimulating students' creative activity. They are well aware of the fact that evaluating all forms of students' activities will result in the weakening of their internal motivation to undertake creative activities. Moreover, the teachers noticed that low levels of motivation for this type of activity, may result from the low self-esteem of students, who avoid those domains in which they may fail. Finally, it is noteworthy that the teachers pay attention to the fact that high school students are overloaded with numerous school duties.

**Table 8**  
**Key Descriptors of Creativity Inhibitors**

Key descriptors	Frequency	Example
The teachers' beliefs that the realization of the curriculum is more important than creativity	12	<i>We are always in a hurry to follow the curriculum. It is so hard to develop students' creativity when I have three hours for my subject per week, and in every lesson, I introduce new material. Under such conditions, it is not easy to deal with creativity.</i>
The teachers' focus on preparing students for the high school final exam	11	<i>In my subject, I have got to do the curriculum. If I do not do it, students' creativity will come to nothing because they will fail the final exam. Simply, I have to prepare the students for the exam.</i>
The overloaded curriculum and lack of time	14	<i>When the curriculum is overloaded, it is hard to think about creativity.</i>
Anti-creativity beliefs of the teachers	8	<i>A lesson is a time for learning, not for fun.</i>
Reliance on traditional, feeding methods of teaching	8	<i>During creative activities, the students do not draw the conclusions that I expect them to. I do not know if they learn anything in this way.</i>
The inadequate preparation of the teachers	3	<i>The teachers do not know how to develop students' creativity. That is where we should begin.</i>
The teachers' attitudes	9	<i>In this kind of activity, the teacher's attitude is very important.</i>
The teachers are overloaded with paperwork	8	<i>Red tape and paperwork. It is horrible that instead of talking to a student after classes, I have to fill in papers.</i>
The anti-creativity attitude of students - criticizing and ridiculing creativity	3	<i>It happens that students ridicule the ideas of their classmates. Then, if the author of the idea is not self-confident, he will not speak in front of the class again, because he will be afraid of negative reactions.</i>
The anti-creativity attitude of students - embarrassment and a fear of ridicule	7	<i>There are a lot of students with creative potential, but they are hesitant about revealing it in front of the class. They are afraid of negative reactions and ridicule.</i>
The anti-creativity attitude of students - schematic thinking	2	<i>The students expect schemes. They prefer to be handed everything on a plate. Instead of inventing something on their own, they prefer to copy their classmates' ideas, or wait for what the teacher will say.</i>
The anti-creativity attitude of students - unwillingness to take creative action	6	<i>There are students who are passive, unwilling to do any activity at all, including creative activities.</i>
Students' overload	5	<i>High school is difficult. The students have a lot of lessons. They are very much overloaded with work.</i>

### **Creativity Stimulators**

The teachers hardly mentioned factors which, in their view, make it easier for them to stimulate students' creativity. In large measure, they concerned psychosocial factors and the personal characteristics of both the teachers and their students, rather than organizational conditions. As far as psychosocial factors are concerned, the teachers drew attention to the fact that classes intended for stimulating creative activity are accompanied by a more relaxed atmosphere and good contact between the teacher and the student.

These factors give students a sense of security and enable them to express their opinions more freely. Moreover, these factors eliminate potential communication problems between the teacher and his or her students, which makes it easier for them to break the fear of presenting their ideas in public and students are not afraid of potentially negative reactions on the part of their teachers. The essence of the relationship between the teacher and the student is mutual understanding and respect. This is also connected with giving students freedom to express their own opinions or ideas and accepting the fact that during such activities the very process of finding solutions is more important than the ultimate merit or value of this type of activity.

The teacher's own creativity is also a significant factor. The teachers drew attention to the fact that they themselves must be inventive and engaged in various kinds of creative activity in order to encourage students' interest in creativity, and to stimulate their creative abilities. Equally important is the students' willingness to develop themselves. In the teachers' view, in order to make it possible to stimulate students' creativity, teachers must also be willing to develop and improve themselves.

Finally, organizational arrangements which foster creative activities must be mentioned. They are related to time comfort in the form of two lessons in a row with the same class. According to the teachers, such an arrangement enables them to both realize particular parts of the curriculum and to stimulate creativity.

**Table 9**  
**Key Descriptors of Creativity Stimulators**

Key descriptors	Frequency	Example
A climate for creativity in the form of a relaxed atmosphere in class	6	<i>Meetings with creative young people are, kind of, more relaxed. They must feel free to start taking creative action.</i>
Good contact between the teacher and students	7	<i>In order to share their real ideas and thoughts with us, they must have good contact with us.</i>
The teachers' creativity	5	<i>Here, the teacher's creativity is necessary. It is easier for me to work in this way, because I am inventive myself. I do not give up when I have to solve a problem. I am not schematic.</i>
The need for development on the part of students	5	<i>Stimulating a student's creativity requires his own willingness to develop. The student must want to improve and develop himself.</i>
Time comfort	3	<i>It is best when I have two lessons in a row, because there is more time. Then, in one lesson, I can do something, and in the other one, we can all engage in speculation.</i>

## **DISCUSSION**

The presented study served the purpose of getting to know the beliefs of a selected group of teachers about creativity and possibilities for its support in the school environment. Specifically, it concerned gaining a better understanding of teachers' beliefs about the essence of creativity, its place and role at school, as well as factors that inhibit or support the stimulation of students' creativity in the school environment. Therefore, it was decided to conduct a series of in-depth interviews with teachers of key subjects taught at high school level. On the one hand, the applied method made it possible to learn details of the teachers' beliefs about creativity and ways of supporting it in the school environment. On the other hand, however, because of the method used for sample selection and the small size of the sample, the method does not allow the findings concerning teachers' beliefs to be generalized to the whole population of high school teachers in Poland. Nevertheless, the conclusions of the present research provide a somewhat coherent picture, whose selected aspects have been discussed by researchers of creativity many times before.

### **THE TEACHERS' KNOWLEDGE ABOUT CREATIVITY**

Contrary to earlier reports (Aljughaiman & Mowrer-Reynolds, 2005; Andilou & Murphy, 2010), the interviewed teachers' beliefs about the essence of creativity are mainly compatible with professional theories presented by experts. Above all, they concern the understanding of students' creativity as creative potential (Barbot, Besançon, & Lubart, 2015; Runco, 2003) and everyday creativity (Richards, 2007). In this sense, the teachers associate creativity mostly with the ability for individual and independent thinking, with inventing new and original solutions to different kinds of tasks and problems, as well as with creative activity oriented towards everyday innovation.

Teachers' beliefs about creativity do not focus so much on the effects of students' creative activities, as on the creative process itself, and students' engagement in creative activities. The teachers have an understanding that creativity is more closely related to personal aspects than creating works of objective, artistic merit (Maksic & Pavlović, 2011). None of the interviewed teachers formulated definitions of creativity perceived in terms of the objective criteria for understanding creativity (Amabile, 1996; Cropley, 1999; Runco, 2009). Consequently, they did not expect their students to concentrate on activities that are supposed to result in creating products considered by society as creative. For the teachers, their students' engagement in creative activities, attempts at independent thinking, taking independent action, as well as the atmosphere accompanying this type of work are more important than the product, which is the ultimate outcome of creative activity. Even when students' creative activity results in creating particular products,

they are perceived by the teachers mostly through their novelty, originality, or even non-schematism. Among the criteria used for the evaluation of the results of students' creative activities, none concerned their sense, usefulness, aesthetic value, or authenticity (Kharkhurin, 2014).

It should be stressed that students' creativity is much desired by teachers to increase the efficacy of the teaching process. They associate creativity with teaching methods, and with both students' and teachers' actions in making it easier for students to interpret, understand and remember the curriculum content transmitted to them during regular classes. These types of activities consist of the immediate use of different kinds of questions, techniques and tricks which are expected to boost students' concentration and motivation to learn, and in extreme cases, to make it easier for them to understand especially difficult content. In this sense, the teachers' beliefs about creativity are identical to Kaufman and Beghetto's (2009) conception, according to which creativity is treated as an indispensable element of constructing personal knowledge and understanding the world. Therefore, it is treated as a significant component of the learning process.

### **THE CREATIVITY GAP**

Between the verbal, theoretical support expressed by teachers with respect to students' creativity at school, and in classroom practice, there is a creativity gap (Cropley, 2010; Makel, 2009). On the one hand, teachers point out the important developmental and educational functions of students' creative activities, while on the other hand, students' creativity is for them of somewhat secondary importance (Aljughaiman & Mowrer-Reynolds, 2005). That is to say, the implementation of the curriculum, the transmission of a large body of knowledge and preparations for external exams have priority over the development of students' creativity (Beghetto & Plucker, 2006). In this respect, school-based pedagogy is focused on reproducing knowledge. This is because the high school curriculum is overloaded. Worse still, it does not define the aims for developing creativity in students precisely enough. As a result, the paradox is that, contrary to social and economic expectations (Barbot, Besançon, & Lubart, 2015), teachers intentionally make attempts to develop students' creativity only when they have time (Beghetto, 2007), that is, only after they have gone through the curriculum requirements, which are, in their opinion, more important in terms of preparing students for external examinations. The data collected suggest that, contrary to popular belief, an inhibitor to stimulating students' creativity is not teachers' inadequate knowledge or skills (Fleith, 2000). The main factors that inhibit the development of students' creativity are imprecisely formulated expectations from teachers, included in the core curriculum. The regulations of the core curriculum do not

specify creativity as one of the key competences to be developed at this level of education. Another factor is teachers' lack of time for this type of activity because of the overloaded curriculum. Therefore, teachers have to choose the lesser evil. Trying to avoid disrupting their students' education, above all, they make an effort to prepare them for external examinations as best they can. This is because passing these examinations gives the student a ticket to the subsequent stages of education. Therefore, teachers concentrate on imparting as much knowledge as possible, rather than focusing on the development of students' creativity, or supporting their creative activities. They deal with these requirements only when they have time. Consequently, students' creativity is not seen as a major priority during regular lessons. Most often, creative activities occur only during the course of additional and extracurricular classes, or during educational projects initiated by students themselves in their free time.

The dominance of verbal methods of teaching, used by teachers, do not foster the development of students' creativity, either. In terms of the argument that other educational aims have priority over developing creativity, it may be expected that teachers will make an effort to develop students' creativity, while realizing other educational aims. Given this situation, developing students' creativity would not constitute an aim in itself, and it would take place while discussing and consolidating non-creative content and skills, defined in the core curriculum. Thus, developing students' creative activities would not depend so much on content, as it would on teaching methods. However, it turns out that, above all, teachers prefer feeding methods of teaching, which guarantee them standardization, and the fast achievement of specific teaching results. Beghetto and Plucker (2006) note that the teaching methods used by teachers are excessively oriented towards the replication of predetermined behaviours and knowledge, which leads to transmitting specific algorithms and prepackaged knowledge to students. The methods used by teachers cause students to get acquainted with the "correct" understanding of particular fragments of knowledge somewhat passively. In the future, they will be able to take advantage of such fragments of knowledge fluently and correctly in situations similar to those that they experienced in class. These methods make it possible to transmit to students large portions of material, the learning of which can be easily evaluated by means of standardized methods. However, taking advantage of this kind of method leaves no room for developing students' curiosity and imagination, and as a result, inhibits, or even prevents the development of creativity. Creativity researchers report that supporting students' creativity is fostered by teaching methods that focus on students' activity and experience (Fasko, 2000-2001). Meanwhile, the statements of the tested teachers indicate that they

use problem methods or methods based upon students' activity and experience relatively rarely. This results from the teachers' beliefs that using these kinds of methods is more time-consuming, and that conclusions drawn by students are not always "correct."

Also, the teachers' attitude towards developing students' creativity is not obvious. On the one hand, they claim that students' creativity can be developed in the school environment, but on the other hand, they hold that this is possible only during particular classes, and furthermore, not in every subject. Moreover, this kind of activity is not part of everyday school life. The teachers' attitude to creativity finds expression as a peculiar dichotomy which assumes that the teachers either focus on teaching and school results, or developing their students' creativity, thus wasting time teaching. In the teachers' view, students' creativity may well be developed during so-called "loose" classes, namely, humanities, vocational and artistic classes. According to the teachers, far fewer possibilities of this kind can be found during sciences classes, and especially in maths lessons. This does not, however, result from the specificity of such subjects, but from the teachers' attempts to devote as much time as possible to revising and consolidating material for the maturity examination. On the one hand, the reason for this is that the teachers fear that students' interpretations which may be too imaginative in the exam may go beyond the strict demands of the answer key. On the other hand, the reason is also that the teachers have a peculiar distrust in the potential of students. In their opinion, students have problems with comprehension and learning schematic solutions to typical school tasks. Therefore, they repeatedly find it pointless to try to encourage students to undertake more creative scientific activities. Only a few of the teachers maintain that, under the guidance of a teacher, students can both individually and collectively look for alternative solutions to given tasks and problems. Then, as students learn the required curriculum contents, they are able to simultaneously develop their creativity.

### **STUDENTS' CREATIVITY AS ARTISTIC ACTIVITY**

The teachers very distinctly associated students' creativity with artistic activity. In particular, this refers to the performing arts, visual and musical, rather than writing. This type of activity primarily takes place during additional or extracurricular classes, but also to some extent during regular lessons. Most often, it results either from the students' initiative, or is connected with celebrating school events. Artistic creative activity is very strongly related to the social life of the students and the school. For students, artistic creative activity provides a kind of refuge. Thanks to their artistic initiatives, they make an effort, in their own way, to act according to their own ideas and principles. Surprisingly, teachers do not attempt to associate students' creativity with other domains of creativity, such as scientific creativity or inventiveness.

It is characteristic that the teachers do not attach much importance to these types of activities among their students. Work created as a result of artistic activity is not evaluated in terms of its artistic merit. This may signify that students do not receive feedback about how they could develop their creative skills in the future. For the teachers, participation in this type of activity is more important than any products that their students create. Moreover, it is more important for the teachers that their students make attempts to think and act independently. Students' independent thinking and action do not exactly foster development of students' creative skills or specific abilities in particular domains of artistic creativity, but rather they play social or developmental roles. Teachers tend to take advantage of their students' interests, abilities and artistic skills to realize all kinds of educational projects, rather than trying to develop students' artistic creativity in a professional way.

### **The Role of Students' Creativity**

The teachers are aware that students' creative activities play a very important social and developmental role at school. They see this as related, above all, to the development of students' creative self-efficacy (Karwowski, 2012, 2015). The teachers observe that, as a result of engaging in artistic activities, students develop faith in their creative potential, make new acquaintances, function well in their peer group, develop self-confidence, and reduce the distance between themselves and their teachers. In consequence, this allows them to participate in school lessons more actively. Thanks to their creative activity, students are more willing to speak in public, and they are less afraid of receiving any negative reactions to their ideas and suggestions on the part of their classmates and teachers; such activity may even bring them better school results. The above-mentioned mechanism is compatible with the assumptions of the theory of creative self-efficacy, according to which, it plays a mediating role between creative potential and its realization (Karwowski & Barbot, 2016).

## **CONCLUSION**

Polish high school teachers experience very strong social pressure both from the educational authorities and their students' parents. In practice, this situation causes teachers to pay too little attention to developing students' creativity, although, in theory, they declare support for doing so. In an attempt to prepare their students for the next stage of their education as best they can, they focus on imparting to them as many facts and pieces of information as possible. Acting in good faith, teachers take advantage of well-tried and effective methods of teaching which, in their view, are supposed to ensure that their students pass the high school final exam with high grades. Concentrating on the final exam results of their students, they often intentionally relinquish attempts to develop creativity.



Relying on the teacher-centred perspective of learning, teachers set their minds to the most effective ways of transmitting prepared solutions and operational algorithms, thus squandering their chances of developing independent thinking and creativity in their students. Meanwhile, as Beghetto and Plucker (2006) rightly point out, the development of creativity demands a kind of balance between the pursuit of efficient methods whose aim is to direct students to the best solution, and opportunities that students have to undertake creative thinking and activity. As a result, students will have an opportunity to understand the essence of problems being solved, as well as to test problem-solving strategies, and consequently, also to develop personal meaningful understanding and knowledge. However, it seems that this equilibrium between teaching oriented towards students' knowledge acquisition, and teaching oriented towards their understanding and creativity, will only be possible when officially approved school curricula necessitate both types of teaching, as a matter of course. Therefore, such actions require adequate preparation on the part of teachers, but above all, they require appropriate plans and decisions from the educational authorities.

In conclusion, it is clear that the creative activity of students in the school environment is not taking place in a vacuum. We must be aware that the effectiveness of the development of the creative potential of students in the school environment, in the first place, depends on the adopted guidelines relating to objectives and methods for the organization of education. Second, it depends on teachers, and in particular, on their beliefs about the place and the role of developing students' creativity and requires substantive preparation of teachers for this type of work.

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**Corresponding author at:** Jacek Gralewski, Creative Education Lab., The Maria Grzegorzewska University, Szczesliwicka St., 40, 02-353 Warsaw, Poland.

E-mail: [jacekgralewski@o2.pl](mailto:jacekgralewski@o2.pl)

