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# THE LEVEL OF CREATIVE THINKING AND THE SOCIOMETRIC POSITION IN A CLASS OF SCHOOL CHILDREN IN MIDDLE CHILDHOOD

## Introduction

The whole sphere of phenomena described with the term creativity lies on the border of interest of various different scientific disciplines: psychology, sociology, philosophy as well as cultural theory (Schulz, 1990). Creativity as such plays a very important role in the life of every person and this does not only concern prominent writers or painters. It is also difficult to assert one cohesive definition of the term, which is the reason behind this attempt of tracing the evolution of the term.

Up until the 17th century, the term "creativity" was reserved only for describing the activity of the gods. A person could observe nature and copy its magnificent patterns created by the gods (Andrukowicz, 2000; Dobrołowicz, 1995; Tatarkiewicz, 1976). The performing of the arts was restricted to the application of executory rules and canons. Depending on the degree to which the intellect participated in this process, art was divided into the liberal arts and common arts. Interestingly enough, the second category includes painting and sculpturing.

One of the most frequently quoted in literature methods of classifying fields of research on art is the division according to Rhodes who identified 4 components: the creative process, creative personality, environmental determinants of creativity, and the creative product (Sołowiej, 1997). Psychology of creativity, according to Strzałecki, deals with the creative process, the creative person, the psychological problems of creative people's functioning, the methods of stimulating creativity, and the social determinants of creativity and the criteria of creative solutions. Strzałecki's division is partly the same as the concept of Rhodes (Strzałecki, 2003).

Creativity, in the psychological sense, has been described as mental processes that lead to solutions, ideas, theories, artistic forms, concepts or products that are exceptional and new (Reber, 2000). A different definition is propounded by Stein who thinks that creativity is a process that gives rise to a new product, evaluated at a specific time by a group, as being well-aimed or useful (Nęcka, 1992; 2002; Pietrasiński, 1969; Stasiakiewicz, 1999). The fact that renowned scientists were involved in researching creativity and the creative person proves just how important and interesting these issues are. The already mentioned Rogers is one such outstanding researcher. Jung concentrated on the overwhelming strength of a person during the creative process. Freud, on the other hand, considered creativity to be a method of avoiding anxiety and the sublimation of a suppressed sexual drive. Both concepts highlight the dynamics of the creative process. Maslow also dealt with the issue of creative competencies. He identified its two independent dimensions: special creative competencies and the creative tendency for self-actualisation. In line with this theory, creative persons are resistant to threats and anxiety and have an integrated personality (Strzałecki, 1969, 1989). For Adler, creativity was a compensation process for the inferiority complex or a compensation of the sense of looming death and the limitations of human existence (Popek, 1988, 2003).

The difficulty in defining the concept of creativity is connected with its many manifestations. Taylor mentioned five levels of the development of creativity. Experimental creativity - spontaneous drawings of a child - appeared the earliest. Productive creativity appears later, the aim of which is to create original objects, e.g. artistic or scientific activity. The third is inventive creativity, which is manifest in new ideas and the innovative use of materials and techniques. Another level of creativity consists of perfecting and modifying things that already exist – this is referred to as innovative creativity. Finally, there is the creation of a new direction, style, namely, innovative creativity (Sołowiej, 1997).

Numerous authors have rightly noticed that the adjective "creative" not only defines mental processes but also the product of such processes and even certain conditions that create favourable conditions for this process (Dąbek, 1988; Dobrołowicz, 2002; Pietrasiński, 1969; Strzałecki, 1969, 2003).

Four fundamental approaches to creativity can be identified in contemporary literature on the subject. Firstly, it can be considered to be a product of human activity such as works of art, scientific theories, inventions, etc. In the second approach, emphasis is placed on the creative process itself. In this approach, the very act of creating is of greatest interest and this is the key to the general theory of creativity. The third approach consists of establishing the relationships between creativity and external conditions. The interest of researchers mainly concentrates on the conditions of social life and its role in liberating or suppressing the development of creativity. In the fourth approach, the attention of scientists concentrates on the creative person him/herself. This group of researchers is interested in the

characteristic of the creative person, e.g. the issue of whether creativity depends on intelligence, or whether it is, perhaps, connected with personality traits (Dąbek, 1988; Strzałecki, 1969).

According to Kubicka, creativity is comprised of four elements: action (mental and motor), the subject performing the action; the materials; and the new quality that is being created (Kubicka, 2003).

Explaining the meaning of the term social competencies is somewhat less complicated. For the requirements of this study, the definition propounded by Trzebińska (2008) was adopted according to which social competencies constitute the competencies of achieving social and individual goals while at the same time maintaining good relations with the partners to this interaction.

## Creativity and Social Competencies

There have been very few studies on the relationship between creativity and social competencies. One of them was the project of Wallach and Kogan. They studied the personality differences between pupils with varied levels of intelligence and creative competencies. It turned out that the correlation between the results of tests on creativity and intelligence was low. The authors identified four groups of children on this basis: creative and intelligent, creative and unintelligent, uncreative and intelligent and uncreative and unintelligent. The studies revealed the differences between children belonging to different groups in the scope of personality and contact with peers, among others. It turned out that creative and intelligent children were best received by their peers. They also have the courage to present their own views and often unconventional ideas. Children that are creative and not very intelligent coped the worst in the school milieu. They are capable of original thinking but they cannot support it with mental competencies. The mentioned authors suggested that these children pay a high price for their talents, both emotionally and socially, which are not paired by their intellectual and social capacities typical of intelligent persons (Nęcka, 2002).

Czerwińska-Jasiewicz conducted a study on the social relations of children that differed in terms of their level of intelligence and creativity. Particularly intelligent and not very creative children as well as particularly intelligent and particularly creative children turned out to be most popular. Results were also obtained that indicated a common tendency for teachers to assess the capacities of pupils as being lower than they are. It turned out that approx. 35.8% of particularly creative but not very intelligent children are assessed by their teachers as not being very talented (Czerwińska-Jasiewicz, 1984a). This may point to the disadvantageous situation of talented children that do not possess high intellectual capacities.

Interestingly enough, it was not only the teachers who failed to appreciate their creative pupils. Torrance conducted a study in which 2nd to 6th form children

participated. Based on the results of a creativity test, he created five-person teams which were comprised of groups of children from least-talented to most-talented. It turned out that 60% of children, determined to be exceptionally created based on the test results generated more ideas than the rest of the group. These ideas, however, went unappreciated. It was shown that a group is capable of using several strategies restricting creative activity by, for instance, criticising, ridiculing ideas, hostility or even outright aggression (Olszewska, 1986). Olszewska conducted her own research aimed at analysing the attitudes of creative individuals in relation to the group and the attitude of members of that group towards them. The respondents were pupils of the Naval Architecture School in Gdańsk. The first stage involved conducting the Guilford's Divergent Thinking Test. The pupils were divided into three groups based on the results of the test: highly creative persons, persons with low creativity and those with an average score. The second stage included determining the sociometric position of the pupils on the liking scale – a friendliness and dislike poll was used. It turned out that 64.5% of the pupils classed as being highly creative were strongly liked and only 3.3% were disliked. Therefore, the attitude of the group towards creative persons is definitely positive, which contradicts the results of Torrance's study. Persons with average creative competencies were less liked, and those with the least creative competencies were liked the least (Olszewska, 1986). It should be pointed out that the studied pupils attended an elite and very specific school. The group consisted almost exclusively of males – only one girl took part in the study.

Karwowski (2002), in his study, used the standard version of the Creative Behaviour Questionnaire KAHN and three fictional stories. The respondents had to write the names of the pupils in the class that best fit each of the stories. The stories concerned friendship, dislikes and efficiency. 30 secondary school pupils were studied. Persons with a creative attitude were considered by members of the group as being worthy of representing it on the outside and capable of settling matters that required social skills. Moreover, it turned out that conformist persons obtained lower results in the liking and efficiency category than non-conformist persons. The relationship between efficiency and the conformist/non-conformist variables turned out to be statistically significant. Karwowski reached the conclusion that even if persons possessing a creative attitude are not the most liked members of the group, they are still considered as being valuable persons that can do a lot for the group.

## The Position of the Child in School

For many children, contact with the school milieu is their first time they encounter a large social group. This is often connected with a strong emotional experience, often with anxiety, not only of the pupils themselves but also of their

parents. The child's results in learning and motivation to participate in classes often depends on how the child feels in their school milieu, how they function and how quickly they can adapt to it.

The school position of a pupil is the result of the child's relations with their peers and teachers as well as their progress in learning. If a child does not feel comfortable in the school milieu, it will be much more difficult for them to achieve very good results in learning. The relationship between the child and the teacher seems to be of particular importance. The school milieu is a place where the child comes to know the rules of functioning of a social group other than the family. The child finds out its duties and obligations towards this society and what benefits it can derive from it.

In the popular understanding, creative children are perceived by teachers as being troublesome and difficult to submit to the school discipline. Perhaps this statement is not completely unfounded. Studies reveal that children with a high level of creative competencies are more susceptible to be distracted. Kaltsounis and Higdon showed that there even exists a relationship between the results of creativity tests and the frequency in which pupils were referred for disciplinary talks to the head of school (Nęcka, 2002).

The school situation can be understood as a type of life situation, just like the family or professional situation, for instance. This is a system of the mutual relations between one person and other elements of the milieu in which they operate at a given time (Czerwińska-Jasiewicz, 1984a). The situation concept includes elements of a person's milieu along with the person themself. The objective characteristics of a given situation influence a person's behaviour.

Several indicators of a child's school situation thus understood can be identified: the attitude of the teachers and of other children towards them, the nature of the teaching process and the teacher's method of work, the child's school achievements, the child's approach to school, and the child's adaptation to the school environment (Czerwińska-Jasiewicz, 1984a & b).

A differentiation should be made between able pupils, that is, intelligent pupils, and creative children. There are two different types of competencies at the base of this division: reconstructive and constructive. Reconstructive competencies result from an ease in learning information and rapid assimilation of the teaching material. An able pupil in this sense is characterised by a high intelligence quotient and good memory. Contrary to them, creative children are characterised among others by creativity, initiative, flexibility and originality in thinking. These two types of competencies do not rule each other out. They sometimes go hand in hand which would be most advantageous to the child (Dobrołowicz, 1995). It is also possible to differentiate between children in terms of the field in which they are capable of achieving, e.g. musically, artistically or literary talented, etc.

Another way of differentiating between them, proposed by Dobrołowicz, is according to the competencies that the person reveals through their behaviour and

to their awareness in this scope. It is possible to identify creative pupils that are currently creating works in a given field who already have some achievements in that area and that are aware of their competencies and possibilities. The second group includes children with above-average creative competencies which have not yet been discovered. These are potentially creative pupils (Dobrołowicz, 1995).

Czerwińska-Jasiewicz, in the previously mentioned studies, tried to trace the social relations of children that differed in terms of the level of intelligence and creativity. Also discussed in the chapter entitled "Creativity and Social Competencies," the research of Olszewska concerned analyses of the attitudes of creative individuals towards the group and the attitude of the group members towards them.

Dobrołowicz, in his research, found a very small congruence of the creative potential of pupils as estimated by their teachers with the results obtained by the pupils in creativity tests. However, a large congruence was found between the creative potential as estimated by the teachers with the grade obtained in the subject that a given teacher was teaching (Dobrołowicz, 1995).

Past studies of Getzels and Jackson revealed that creativity tests are a better indicator of success in learning than intelligence tests (compare: Guilford, 1978; Nęcka, 2002; Strzałecki, 1969; Żuk, 1986). Contemporary research has not confirmed this; what is more, they show that intelligence tests constitute a better indicator of school achievements.

Other studies have been conducted by the already mentioned Wallach and Kogan in 1965. They described four groups of the children studied by them. One of the groups was formed by creative and intelligent children, in whose behaviour there could have been a prevalence of childish or adult behaviour, depending on the situation. Creative and not very intelligent children cognitively functioned at their best in stress-free conditions; in other cases they remained in conflict with the school milieu by which they often felt overwhelmed. Intelligent and not very creative children were very involved in achieving high grades at school and maintaining their position in class. Children that were neither very intelligent nor very creative used various defence manoeuvres helping them to maintaining their position in class, e.g. getting involved in social affairs or, on the contrary, passiveness and discouragement (quoted after: Czerwińska-Jasiewicz, 1979).

Torrance pointed out the changing approach of teachers to the pupils obtaining high results in divergent production tests. At the beginning of school education, the ideas of creatively talented pupils are considered as stupid, crazy or even untoward. In higher forms, however, teachers acknowledge creative pupils' ideas as being extraordinary (quoted after: Guilford, 1978). Research results show that creatively talented pupils submit their ideas much more frequently than the remaining pupils.

The Rosenthal effect shows just how big an influence relationships with teachers have on the creative competencies of children. Scientists studied school

children with intelligence and creativity tests, after which they made a list of top results available to teachers. The children on the list were actually randomly selected. This study was repeated after one year and it turned out that the children that were considered by their teachers to be creative actually did achieve higher results in creativity tests. The teachers most probably supported the un-stereotypical behaviour of these children more, at the same time creating additional possibilities for them to develop their creative competencies (Nęcka, 2002).

Dobrołowicz conducted a study in which 9-year-old pupils took part. The study was repeated after five years on the same sample of pupils. The eight tests of Guilford were applied ("Consequences", "Questions", "Anagrams", "Tasks", "Sketches", "Figure associations", "Improvement of something", "New applications".) It turned out that children characterised by a higher level of productivity and originality of thinking at the age of nine were characterised by a higher level of originality and productivity of thinking also at the age of 14. A low level of creativity at the age of nine led to its low level five years later. The author posited the conclusion that school does not create the optimum conditions for the development of the creative potential and capacities of the pupils (Dobrołowicz, 2001).

There is no uniform stance to be found in literature on the subject concerning the influence of the school class on creative individuals. Some studies suggest that the most creative individuals are not tolerated and put on the sidelines of society; and that the group hampers activity (Olszewska, 1986).


## The School Class as the Place of Social Interactions


School is an institution created to fulfil concrete tasks. From the point of view of this article, the assimilation of knowledge itself is not the most important factor. The school class forms a certain kind of social system in which a child has to learn to function. This system can and should support a child's development.

Pupils interact not only with their peers but also with their teachers, particularly with their form tutor. Formański (2004) claims that the symmetry of attitudes is of great importance in teacher-pupil contacts. If the teacher's conduct is perceived as being unjust, pupils react with negative emotions. The author identifies three types of relationships between the teacher and pupil or pupils. A system of mutual friendliness, being the most optimal, which is characterised by mutual kindness on both sides of the relationship. A neutral system, characterised by a neutral attitude of the teacher and pupil towards one another. The last type of system is a conflict system – marked by the hostility of both parties (Formański, 2004).

The Pygmalion effect is also worth pointing out, which consists of the pupils considered to be to talented achieving better results in learning than less able pupils, regardless of their real level of competencies and involvement. The reason for

this phenomenon most probably lies in the subconscious (or conscious) tendency of teachers to devote more attention to pupils considered as talented (Formański, 2004).

Motivation plays an immensely important role in the development of creative competencies. It is important for motivation to result from passion and not only from the need for external recognition. In the latter case, there is the risk of disillusion (Sękowski, 2003).

Sękowski (2003) considers the role of the teacher to be of great importance in supporting the creative competencies of pupils. According to him, form tutors should notice the strong sides of each child, identify the exceptionally talented individuals, foster balanced intellectual, social and emotional development, and accept the possibility of the „pupil outclassing the master." Unfortunately, many teachers do not have enough motivation, time, knowledge, and patience to implement this plan in the reality of Polish schools.

Abroad, the tendency is to no stray from motivating young pupils economically and to fund courses, specialist workshops and higher education abroad for them (Sękowski, 2003).

Unfortunately, a deficit of cognitive, particularly creative activities of pupils can often be noticeable at school because the majority of the materials require them to be memorised and there is little or no time for the children to reach certain conclusions on their own.

The creative process is rooted in the social context. The concept of creativity cannot be comprehended without becoming familiar with this context. Certain situations facilitate creative works to be produced, while others nip the idea in the very bud. The creative individual is also subjected to many social factors that impact their behaviour. Moreover, it is the way in which an individual is perceived by the milieu, particularly at a young age that can influence their further creative strivings or their abandonment thereof. One of the fundamental traits of creativity is the value which is evidently connected with social judgement. The results of research on the social functioning of creative individuals have not given rise to any unequivocal conclusions, which is why this article constitutes an attempt to present the issue of the social functioning of individuals with high creative skills in primary school.

Knowledge stemming from research can give deeper insight into the issue of competencies and creativity in children, making possible attempts at foreseeing possible difficulties and problems that a child may encounter in their school milieu.

The main purpose of the conducted study was to compare the functioning of children with a high and low level of creative competencies in the school milieu. The analysis included an evaluation of the social competencies by both teachers and peers.

## Outline of Study

The study was a between-group comparison. The study encompassed 471 state primary school pupils in Warsaw as well as from two locations in the Podlasie Voivodship: a town with a population of approx. 5,000 and a village school. The respondents were children aged from 8 to 10 years. This age group was selected due to the requirement of children having to know each other relatively well and already have had adjusted to school. The study was, therefore, conducted on first form pupils.

It was agreed with the head of the school that the test will last 45 minutes, i.e. one school period. The parents were informed of the nature of the study and were requested to consent to their child's participation. Only the children that submitted their signed parental consent forms took part in the study.

The form tutor in each class informed them of exactly which children received their parent's consent to take part in the study. The remaining children were asked to leave the class. The person conducting the test introduced themself each time and read the instructions. The purpose of reading the instructions was to unify the conditions of the test and to introduce the topic to the children. These instructions turned out to be entirely sufficient and in the majority of cases no further explanations were necessary.

The children received a sheet of paper and instructions for the drawing taken from the textbook were read out to them (Matczak, Jaworowska & Stańczak, 2000). The person conducting the test started the timer. Once a child returned their completed drawing, the person conducting the test noted down the exact time of this on the sheet of paper. The next part of the test was begun only once all the children had completed their drawings. None of the children exceeded the time limit of 15 minutes.

While the children were solving tasks, teachers were asked to answer a set of questions on a grade sheet. There were instances where the teacher had to leave the class along with the children that failed to obtain consent to participate in the study. In this situation, the grade sheet was given in at a later time, e.g. during the breaks in-between periods.

The children were informed that the study will only be used for scientific research purposes and will not have any bearing on their grades at school.

Throughout the entire test, both the children and the teachers used the names and numbers of the pupils in the register. This enabled the person checking the tests to know which pupil should be awarded points and, on the other hand, using the names and numbers form the register was in compliance with the Act on the Protection of Personal Data.

The children were very eager to start solving the test. Any fears of pupils not completing the test sheets correctly were not confirmed.

## Method of Measurement of Variables ”

The Test for Creative Thinking – Drawing Production (TCT-DP) of Urban and Jellen, version A (Matczak, Jaworowska & Stańczak, 2000) was used to measure the creative competencies of the pupils. The respondent's task was to complete the drawing the beginning of which was a rectangular frame and six graphical elements. The instructions stated that the drawing can be drawn freely, without any constraints. The pupils had 15 minutes to complete the drawing. The drawings that were made by the respondents were evaluated according to 14 criteria: continuation, supplementation, new elements, linear connections, topical connections, use of the small square outside the border, going outside the border, humour and emotions, unconventional manipulations, abstractness, figure and symbol connections, un-stereotypicality and speed. The total points awarded to each drawing constituted the raw result of the respondent. It was possible to obtain from 0 to 72 points in the test.

An instrument with sociometric properties was used to measure the social competencies in the evaluation of peers. Two sociometric criteria were used – recognition and friendship. The command was located above the task. The respondent's task was to answer four questions and mention no more than three friends from class in each answer. A child received one point for each indication by their peers. The questions concerned the friendship and esteem that the children had for each other. The number of indications testified to how a given child was perceived by its peers and therefore how they function in the social situation of the class.

An observation sheet was used to measure the teachers' evaluations. Five aspects of a child's functioning in the school milieu were taken into consideration – the questions concerned the child's activeness during lessons, their contact with their peers, the relations of friendships that other children have towards them, their intellectual competencies, as well as their behaviour in a peer group. The teacher evaluated them on a five-point scale. Points for given questions were not added up.

## Initial Analysis of Results ”

### *Evaluations of Children byTteachers* ”

It is worth noting that the teachers seldom awarded the lowest grades in all evaluated aspects. They evaluated the domination of pupils the lowest, and they gave the highest score to their contact with peers (Table 1).

Table 1. Frequency of given marks awarded to children by teachers

| EVALUATED ASPECT | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| ACTIVITY | 37 | 65 | 121 | 119 | 129 |
| CONTACT WITH PEERS | 10 | 37 | 94 | 162 | 168 |
| FRIENDSHIP | 13 | 39 | 78 | 176 | 165 |
| DOMINANCE | 65 | 96 | 102 | 123 | 85 |
| INTELLECTUAL COMPETENCIES | 40 | 59 | 106 | 129 | 137 |

*Source: Own work*

The chi-square statistics and convergence coefficient C for the evaluations of the teachers. For 16 degrees of freedom, the critical value for chi-squared on the level of $p<0.05$ amounted to 26.3 (Table 2).

Table 2. $\chi^2$ and C scoring of teachers

| EVALUATED ASPECT | INTELLECTU-AL COMPETEN-CIES | | DOMINANCE | | FRIENDSHIP | | CONTACT WITH PEERS | |
|---|---|---|---|---|---|---|---|---|
| | $\chi^2$ | C | $\chi^2$ | C | $\chi^2$ | C | $\chi^2$ | C |
| ACTIVITY | 472.23 | 0.50 | 167.88 | 0.31 | 166.48 | 0.30 | 221.35 | 0.34 |
| CONTACT WITH PEERS | 176.37 | 0.31 | 96.55 | 0.23 | 542.84 | 0.54 | | |
| FRIENDSHIP | 176.37 | 0.32 | 107.98 | 0.24 | | | | |
| DOMINANCE | 173.1 | 0.30 | | | | | | |

*Source: Own work*

It is, therefore, evident that all the analysed dependencies are statistically significant. There is a relationship between the points awarded to given aspects. The strongest relationship occurs between the scoring of friendship and peer contacts C=0.54 as well as between the score for intellectual competencies and activity C=0.50. The convergence coefficient adopted the lowest value for the scoring of peer contacts and scoring of the dominance of a pupil during lessons: C=0.23 and $\chi^2=96.55$, respectively. On the basis of the presented results it can be inferred that children characterised by high intellectual competencies are considered as being the most active during school classes. Children that are liked by their peers have good contact with them according to the evaluation of the teachers.

### *The Evaluation of Teachers and theSociometric Indicators of Social Competencies*"

Tables 3 and 4 present the distribution of scores in groups with varied sociometric positions.

Table 3. Grading awarded to children by teachers and their sociometric position ʿesteem criterion)

| ESTEEM CRITERION | GRADING OF ACTIVITY BY TEACHER | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | $\chi^2$ |
| LOW POSITION | 18 | 28 | 53 | 37 | 36 | |
| AVERAGE POSITION | 9 | 24 | 38 | 45 | 38 | 20.09* |
| HIGH POSITION | 10 | 13 | 30 | 37 | 55 | |
| ESTEEM CRITERION | CONTACT WITH PEERS EVALUATION BY TEACHER | | | | | |
| | 1 | 2 | 3 | 4 | 5 | $\chi^2$ |
| LOW POSITION | 4 | 18 | 42 | 59 | 49 | |
| AVERAGE POSITION | 3 | 11 | 33 | 52 | 55 | 13.39* |
| HIGH POSITION | 3 | 8 | 19 | 51 | 64 | |
| ESTEEM CRITERION | FRIENDSHIP EVALUATION BY TEACHER | | | | | |
| | 1 | 2 | 3 | 4 | 5 | $\chi^2$ |
| LOW POSITION | 8 | 13 | 34 | 67 | 50 | |
| AVERAGE POSITION | 2 | 14 | 28 | 60 | 50 | 14.61* |
| HIGH POSITION | 3 | 12 | 16 | 49 | 65 | |
| ESTEEM CRITERION | DOMINANCE EVALUATION BY TEACHER | | | | | |
| | 1 | 2 | 3 | 4 | 5 | $\chi^2$ |
| LOW POSITION | 27 | 44 | 34 | 43 | 24 | |
| AVERAGE POSITION | 22 | 30 | 37 | 40 | 25 | 12.01* |
| HIGH POSITION | 16 | 22 | 31 | 40 | 36 | |
| ESTEEM CRITERION | INTELLECTUAL COMPETENCIES EVALUATION BY TEACHER | | | | | |
| | 1 | 2 | 3 | 4 | 5 | $\chi^2$ |
| LOW POSITION | 18 | 28 | 47 | 45 | 34 | |
| AVERAGE POSITION | 15 | 19 | 33 | 45 | 42 | 24.60* |
| HIGH POSITION | 7 | 12 | 26 | 39 | 61 | |

*p<0.05
Source: Own work

Table 4. Scores awarded to children by teachers and their sociometric position (friendship criterion)

| FRIENDSHIP CRITERION | EVALUATION OF ACTIVITY BY TEACHER | | | | | |
|---|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** | $\chi^2$ |
| LOW POSITION | 18 | 27 | 33 | 40 | 35 | |
| AVERAGE POSITION | 10 | 24 | 52 | 42 | 47 | 12.75* |
| HIGH POSITION | 9 | 14 | 36 | 36 | 47 | |
| **FRIENDSHIP CRITERION** | CONTACT WITH PEERS EVALUATION BY TEACHER | | | | | |
| | **1** | **2** | **3** | **4** | **5** | $\chi^2$ |
| LOW POSITION | 5 | 21 | 33 | 49 | 45 | |
| AVERAGE POSITION | 2 | 11 | 39 | 65 | 58 | 20.63* |
| HIGH POSITION | 3 | 5 | 22 | 48 | 64 | |
| **FRIENDSHIP CRITERION** | FRIENDSHIP EVALUATION BY TEACHER | | | | | |
| | **1** | **2** | **3** | **4** | **5** | $\chi^2$ |
| LOW POSITION | 9 | 17 | 29 | 54 | 44 | |
| AVERAGE POSITION | 2 | 13 | 30 | 75 | 55 | 20.03* |
| HIGH POSITION | 2 | 9 | 19 | 47 | 65 | |
| **FRIENDSHIP CRITERION** | DOMINANCE EVALUATION BY TEACHER | | | | | |
| | **1** | **2** | **3** | **4** | **5** | $\chi^2$ |
| LOW POSITION | 21 | 34 | 35 | 42 | 21 | |
| AVERAGE POSITION | 21 | 40 | 37 | 43 | 34 | 6.09* |
| HIGH POSITION | 23 | 22 | 30 | 38 | 29 | |
| **FRIENDSHIP CRITERION** | INTELLECTUAL COMPETENCIES EVALUATION BY TEACHER | | | | | |
| | **1** | **2** | **3** | **4** | **5** | $\chi^2$ |
| LOW POSITION | 18 | 24 | 35 | 40 | 36 | |
| AVERAGE POSITION | 12 | 25 | 44 | 45 | 49 | 14.34* |
| HIGH POSITION | 10 | 10 | 27 | 43 | 52 | |

*p<0.05
Source: Own work

In Table 3, the relationship between peer esteem and the scoring of intellectual competencies of a child as performed by the teacher turned out to be the strongest. The weakest relationship occurs between the criterion of peer esteem and the criterion of the dominance of the child in the evaluation of the teacher.

It is notable that all the presented results are statistically significant.

The results concerning the friendship criterion have been presented in Table 4. It turned out that friendship from the side of peers is connected with the evaluation

of peer contact performed by the teachers and is almost equally as strongly connected with the friendship that a child has with their peers as evaluated by the teacher. The weakest relationship was found between the criterion of friendship and the dominance of the child as evaluated by the teacher.

Just like in the esteem criterion, all the results turned out to be statistically significant.

It is possible to surmise based on the presented results that children that have the esteem of their peers are evaluated by their teachers as being active and characterised by high intellectual competencies. Children that are liked by their peers are also liked by pupils and have a good contact with their class in the evaluation of the teachers.

### *Creative Competencies and Their Evaluation by Teachers*"

The mean standard deviation values were presented and the results of single factor analysis of variance (ANOVA) of the scores of the teachers for the three groups of respondents that were identified due to the level of their creative competencies (Table 5).

Table 5. Evaluations of various aspects of behaviour (performed by teachers) of pupils that differed in terms of the level of their creative competencies

| GRADED ASPECT | T- (N=131) | | $T_0$ (N=215) | | $T_+$ (N=124) | | F |
|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD | |
| ACTIVITY | 3.39 | 1.37 | 3.50 | 1.23 | 3.64 | 1.11 | 1.26 |
| CONTACT WITH PEERS | 3.88 | 1.04 | 4.00 | 1.05 | 3.90 | 0.98 | 0.66 |
| FRIENDSHIP | 3.87 | 1.08 | 4.03 | 1.01 | 3.85 | 1.06 | 1.54 |
| DOMINANCE | 3.09 | 1.37 | 3.16 | 1.33 | 3.18 | 1.22 | 0.16 |
| INTELLECTUAL COMPETENCIES | 3.44 | 1.29 | 3.58 | 1.24 | 3.66 | 1.26 | 1.07 |

T- – pupils with a low level of creative competencies
$T_0$ – pupils with an average level of creative competencies
$T_+$ – pupils with a high level of creative competencies
*Source: Own work*

For the purpose of verifying the validity of the difference in given pairs of groups, the NIR test of contrast was used. It revealed no differences between the tested variables.

*Creative Competencies of Pupils andTheir Sociometric position***"**

Table 6 presents the mean values, standard deviations and results of single factor analysis of variance (ANOVA) of the sociometric position of children for three groups of respondents, identified due to their level of creative competencies.

Table 6. Evaluations of various aspects of behaviour (performed by teachers) of pupils that differed in terms of the level of their creative competencies

| GRADED ASPECT | T- (N=131) | | $T_0$ (N=215) | | $T_+$ (N=124) | | F |
|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD | |
| ESTEEM | 2.48 | 2.46 | 3.00 | 2.65 | 2.60 | 2.55 | 1.97 |
| FRIENDSHIP | 2.92 | 2.45 | 3.47 | 2.78 | 3.11 | 2.96 | 1.75 |

T- – pupils with a low level of creative competencies
T0 – pupils with an average level of creative competencies
T+ – pupils with a high level of creative competencies
*Source: Own work*

For the purpose of verifying the validity of the difference in given pairs of groups, the NIR test of contrast was used. It revealed the absence of dependencies between the tested variables.

## Analysis of Results and Final Conclusions

The results of the mentioned research to date suggest that the relationship between creative competencies and sociometric position depends on the age of the children. In younger respondents (primary school pupils) it was found that if the creative competencies of the child are not accompanies by a high intelligence, it is not very popular and is negatively evaluated by their peers (Czerwińska-Jasiewicz, 1984a). Whereas, in the case of secondary school pupils, it turned out that creative competencies facilitate the acquisition of esteem (Karwowski, 2002) and friendship (Olszewska, 1986) from the side of their peers. Seeing that the studies presented in this paper concerned children from first forms of primary school, the hypothesis was posited of a negative relationship existing between the sociometric position (friendship and esteem) of the pupil and the creative competencies, The obtained results failed to confirm this expectation. A significant correlation was not obtained between sociometric choices performed based on the friendship criterion and esteem in relation to the results of measuring creative competencies. Also, a comparison of the mean sociometric indicators obtained

in the group with a low, average and high level of creative competencies did not reveal any differences between them.

An analysis was conducted that was consistent with the results of the research to date (Czerwińska-Jasiewicz, 1984a) and the views put forward in literature on the subject (Dobrołowicz, 2002). It posited that children that are characterised by a high level of creative competencies will be evaluated worse by teachers than less creative children. The obtained results failed to confirm this: there were no significant differences between the groups of pupils that differed in terms of the level of creative competencies in the scope of evaluations of activity, contact with peers, esteem and dominance performed by the teachers.

It is possible to surmise, based on the presented results, that children that have the esteem of their peers are evaluated by their teachers as being active and characterised by high intellectual competencies. Children that are liked by their peers are also liked by pupils and have a good contact with their class in the evaluation of the teachers.

A relationship was found between creative competencies and the evaluation of activity of the pupils and their intellectual competencies as evaluated by their teachers. The weakest relationship exists with dominance. This leads to the conclusion that teachers notice the intellect of children that possess creative competencies. These children do not have any inhibitions in presenting their knowledge but they are not leaders in their peer group.

It is worth pointing out that teachers were generally reluctant to give low grading in each of the five criteria.

Teachers aptly judged whether a child had good contact with their peers and whether they were liked by them. It turned out that children that were liked by their peers are evaluated by their teachers as possessing intellectual competencies. It can, therefore, be surmised that both teachers as well as other pupils perceive the potential of these children.

Children characterised by high intellectual and creative competencies are most active during their lessons. They are not ashamed to present their knowledge in front of the class.

The dominance criterion turned out to have the weakest correlation with all the remaining evaluated aspects both in terms of the evaluation performed by teachers as well as by peers. The differences in the strength of the relationship were significant. This may result from the teachers' difficulty in evaluating the dominance of the child in the group. Form teachers most probably do not pay much attention to a pupil's position in their peer group in their everyday work. It is possible, also, that dominance is manifest at a later age.

The relationship between the criterion of esteem and friendship in the evaluation of the children and the intellectual competencies is similar.

The results of research suggest that teachers are well oriented in the intellectual competencies of their subordinates as well as to whether they are liked

by their peers. The expectations that children with creative competencies are received in a worse way by their teachers and peers were not confirmed. Perhaps the difficulties connected with various intellectual functioning styles of children with creative competencies appear at a later age or perhaps no such difficulties will arise.

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