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## Reflection of Preschool-Aged Children Engaged in Creative Activity – Examples from the Author's Own Research

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*Refleksyjność dzieci w wieku przedszkolnym podczas  
aktywności twórczej – przykłady z badań własnych*

### SUMMARY

The complexity of the modern world more and more often requires competences related to wisdom thinking, including the ability of reflective thinking. Reflectivity allows us to take a closer look at the problems and phenomena we encounter, and thus to make decisions based on the analysis of own and environmental conditions as well as to identify the expected and possible effects of a given action. This promotes anticipation of threats and planning how to counteract them, therefore, the identification and development of reflective thinking are already needed in childhood. Analyses of conditions conducive to reflectivity and its development are rare in contemporary pedagogical literature, which is why the author invokes basic knowledge on the subject in this article and then gives examples of preschool-aged children's reflective thinking identified in her own research.

**Keywords:** reflective thinking; wisdom; creativity; preschool-aged child

### INTRODUCTION

Reflectivity, as a pursuit for deeper and more precise recognition of phenomena and situations in our immediate surrounding reality, tends to be underestimated nowadays. And yet, the complexity of contemporary world and the dynamics of changes

in science and technology make it necessary, in dealing with life and professional problems and decision-making, to constantly search for new information sources and different problem solutions, as well as to take into consideration various views on the subject. On the other hand, the pace of life, rich diversity and multiplicity of stimuli promote the superficiality of recognition, drawing illogical or stereotypical conclusions based on superficial notions and observations, and simplification of sensual and emotional impressions of an individual. Functioning in this way, one usually lacks time for rational cognition (promoting better knowledge of relations and cause and effect relationships between people and phenomena) on the basis of such mental processes as: analysis, synthesis, generalization, explanation, abstraction, or deduction. There is also not enough time to make informed decisions, which in unjustified way prolongs or makes it impossible to act and succeed in this activity.

### ON REFLECTIVE THINKING

In scientific literature works and research connecting reflection with practice become more and more popular. This connection was empirically investigated by Donald Schön (1983). On the basis of observation of behaviour and after interviews with representatives of different professions, he put forward the thesis that it is the reflection that decides about their success in action, in solving real and difficult problems. Schön defined reflectivity – referring to the concept of John Dewey (1938) – as an action based on the analysis and considering of an optimal number of conditions and consequences of action in the situation which requires a solution. It requires practical knowledge, ability to come to conclusions and mental openness. When describing a reflective practitioner, he connected his actions with the following attributes: having experience-based knowledge of which one is unaware, flexibility resulting from uncertainty, reflection in action and reflection on action. Reflection is closely related here with the ability to define problems, select information, draw conclusions on the relationships between observed and presumed facts, recognise assumptions, formulate hypotheses, deduct and interpret, assess the evaluation of less important and strong arguments. If reflective thinking is to be effective, it should have stages, as in the example of Graham Gibbs' model (1988). To solve a problem, first it should be described, next one needs to identify feelings and thoughts connected with the problem, analyse good and bad sides of the event and their sense, formulate conclusions and only then plan some actions leading to problem solution.

Robert J. Sternberg and his associates have deliberated on reflective thinking, also in the context of its pedagogical impacts, for many years. In the concept of “teaching for wisdom” reflective thinking is one of three components of wisdom thinking (next to dialectical and dialogical thinking), which conditions meaningful problem solving (Sternberg et al. 2009, pp. 106–110). This makes it possible to engage in well-considered

ered strategies of behaviour, analysis and monitoring of effectiveness of ideas and actions, their modification to find the best solution – taking into account individual and public good. In this concept, wisdom is connected with the ability of planning one's life, analysing the decisions made, drawing proper and useful conclusions, formulating correct judgements, and giving others useful advice. Supplementing this definition, Paul Baltes and Jacqui Smith concluded that the domain of knowledge typical to wisdom is pragmatics of human life, meaning everything that refers to life experience and controlling life (Baltes, Smith 1990), as well as effective actions in complex and ambiguous situations or in situations of information shortage.

Polish psychopedagogical concepts also connect reflectivity with wisdom. Among others, Mieczysław Gogacz (1997, pp. 13–17) defined wisdom as the expression of the ability of reflective doing of a right thing on the basis of the interaction of intellect and will, continuous recognition and analysis of cause-and-effect relationships in close environment, identification of the right causes and effects (reaching the truth) as well as identifying and comparing the good performed in the close environment. In turn, Maria Straś-Romanowska (2011), drew attention to the moral aspect included in definitions of wisdom, related to the distinction between good and evil and the practice of values. Here, the *reflective* attitude of a human to the events that take place in the world, searching for their inherent meaning and interpreting reality in the context of values seems important. Reflectivity is also associated with emancipatory competences (Czerepaniak-Walczak 2006) or the upbringing of a tolerant man who can evaluate behaviours and phenomena as well as differentiate between their shades (Dymara 2011, p. 153).

Studies on reflectivity conducted in Poland considered this phenomenon in terms of a cognitive process conducive to the analysis of logical and verbal components of the situation, active search for solutions, stronger focus on the task, and control of the effectiveness of action (e.g. Nosal 1990; Matczak 1982; Czerniawska 2002). It was also reviewed from the scientific activity perspective (Radziwiłłowicz 2004, p. 79; Guziuk-Tkacz 2011, p. 26). The ability of reflective thinking is associated with a conscious analysis of the accuracy of specific hypotheses, ideas and solutions to various problems or anticipating the consequences before performing a given activity. It also allows individuals to take a critical look at themselves, to see their own strengths and weaknesses and to verify their self-confidence and self-efficacy.

In Polish literature we may find the connection between reflectivity and training of a teacher – a reflective practitioner (e.g. Czerepaniak-Walczak 1997; Gołębnik 1998). Pedeutological literature advances an important thesis here that a reflective teacher can raise a reflective student. This may also apply to those students who are at the initial stage of their education. Iwona Czaja-Chudyba (2013) indicated the possibilities of supporting the development of critical thinking among the early school-aged children through the teacher's reflectivity and self-criticism. A teacher with such critical thinking skills is prepared to provide conditions for children's reflective reasoning,

where the criticism of a certain situation, condition or trait initiates the search for modifications, new solutions or improvement of behaviour.

Pedagogical theory and diagnostics also combined reflectivity with creativity. The concept of the identification of creative talents through the use of The Creative Behaviour Questionnaire CBQ by Stanisław Popek (2000) should be primarily recalled here. High reflectivity is one of the indicators of heuristic behaviour there, and low reflectivity – of algorithmic behaviour.

Krzysztof Szmidt (2013, p. 259) defined creative attitude as the one where reflective thinking fulfils important functions during the generation and analysis of problem-solving ideas. This attitude, except for sensitivity and openness to problems or the ability to build metaphors, also comprises reflective thinking (as basis for interrogative thinking). The constant “wondering” about situations, phenomena and events implied in it not only leads to enquiring and searching for answers but also to the willingness “to reflect on one’s own thinking and to distance oneself from it”.

In conclusion, although reflection favours the use of knowledge and experience in situations that are difficult, require adaptation or change in behaviour depending on the conclusions drawn, it also continues to be applicable when learning how to act and behave in face of such circumstances. Reflection, however, always occurs in a certain context – social or cultural, and remains subjective, i.e. results both from the interest in some phenomenon or experience and readiness to analyse its underlying causes and effects. It is also worth remembering that reflectivity causes reflectivity. Thus, it can be assumed that on the one hand, the reflective attitude of people in our surroundings promotes conditions for reflective learning, and on the other hand – the developed ability of critical analysis of events and reflective thinking during the individual’s actions are consolidated and improved.

## ON OWN RESEARCH

As a result of personal experiences and interests in creativity and task-related activity of children, in 2016, the author carried out a field research which involved 369 children and aimed at determining the symptoms of wisdom in children of senior pre-school age in task-related situations (Płóciennik 2018). Those tasks were used as a part of a dialogue with children and enabled the recognition of manifestations of wisdom in the field of reflective (also self-reflective), dialogical and dialectical thinking in many of them. They were complex in nature and required the analysis of problems presented in tasks, offering ideas to solve them as well as reflecting on the ambiguous social situations closely related to the kindergarten pupils involved in the study. Among others, they required the participants to provide practical advice for solving a given problem, openness to a multitude of versatile solutions, the ability to find similarities in the characteristics of diverse objects, or to indicate differences

between them. To adjust the tasks to the intellectual capabilities and predispositions of children in senior preschool age, some of them were situational and required supporting children's thinking process with the analysis and interpretation of selected pictures (found in various contemporary books and worksheets for children). These pictures were supposed to provoke children to reveal their ideas about social situations related to human emotions and the ability to establish their cause-and-effect relationship. The research methodology of phenomenography was employed in the analysis of children's answers to determine the quality and intensity of wisdom manifestations in task-related activities among the children who participated in the study.

The conducted research has shown the potential possibilities of preschool-aged children to analyse and evaluate the observed social situations in terms of their safety and possible threats, assessing the suitability of certain behaviour in a given situation, carrying out self-reflection. It also provided knowledge about children's creativity in the area of divergent thinking (the ability demonstrated by most of them to generate numerous solutions, also qualitatively diversified, to provide original ideas or to refine them), metaphorical and transformational thinking.

Therefore, provoking children's creativity through task-related activities enabled the induction of their reflectivity. The statements expressed by children serve as an example here and they can be analysed within the realm of the categories related to the definition of reflectivity. These statements include: knowledge rooted in experience, flexibility and openness to ambiguity, reflection in action (e.g. inference about cause-and-effect relationships, formulating hypotheses and interpretations), and reflection on action (e.g. thinking about a solution, modifying statements – self-control, valuing ideas, self-awareness).

In the examples presented below, the children were asked, firstly, to provide advice on the solution to the problem presented in the picture, and secondly, to evaluate and justify usefulness of the solutions offered (the problem involved a ball stuck in the branch of a tall tree)<sup>1</sup>:

B: Look. In the next picture children have a problem. Try to think and give the children as much advice as you can so that they can reach the ball. What should they do?

Ch 1: Take the ladder and climb it.

B: Right. What else can the children do?

Ch 1: Take a stick and throw it away.

B: Right. Sure. What other idea do you have?

Ch 1: And they could ask someone for help... someone older.

B: Of course.

Ch 1: ... (a moment of silence).

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<sup>1</sup> The examples come from six transcripts of interviews with children presented in Annexes 6–11 in the book by Elżbieta Płóciennik (2018).

B: Any other ideas?

Ch 1: Noo (shaking head in negation).

B: And now tell me, which of these ideas you think is the best? And why?

Ch 1: The best for them is the one with a stick.

B: The one with a stick ... And why do you think so?

Ch 1: Because you don't have to ask anybody. You just have to take the stick and set it well and... and throw it.

B: Right... Good... And which idea do you think is the worst?

Ch 1: The worst is the one with a trampoline... (laughs).

B: (laughing) Why?

Ch 1: (also laughing) Because you can jump and fly so far.

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B: Of course yes. See! These children have a problem. Try to think and give the children as much advice as you can so that they can reach the ball. What should they do?

Ch 2: First, they could take the ladder.

B: They could.

Ch 2: Or... jump high.

B: They could jump. What else would you advise the children?

Ch 2: Or call a cat to take (with laughter) the ball.

B: Uhm.

Ch 2: Or ask that man to reach the ball.

B: Right.

Ch 2: Or shake the tree to make it fall down.

B: Yes.

Ch 2: Or take a stick and knock it down.

B: Uhm. Anything else?

Ch 2: ...(a long moment of silence) Eee... They could... but that is probably dangerous...

B: For now you are only giving some ideas. You don't think if they are dangerous or not. What could (emphasis) the children do. They could...

Ch 2: For example they could stand on each other's shoulders and reach the ball.

B: Uhm. Anything else?

Ch 2: I don't think so... No.

B: And tell me which of these ideas, advice you have given the children, is the best? Which piece of advice is the best?

Ch 2: To ask an adult for help.

B: Why do you think that this is the best idea?

Ch 2: Well, because they are older and besides if the children climb the ladder, they could hurt themselves in some other ways.

B: I understand. So other ideas are worse because the children could hurt themselves, right?

And which of the other two ideas is the worst?

Ch 2: Climbing the ladder and... throwing a stick.

B: And which is the worst?

Ch 2: Throwing the stick.

B: Why?

Ch 2: Because it can fall on someone's head.

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B: Look now, the children in this picture have a problem. Think and give the children as much advice as you can so that they can reach the ball.

Ch 3: To climb the tree with the ladder.

B: Yes, take the ladder and climb it. What else?

Ch 3: To shake the tree.

B: Right. What else?

Ch 3: To have the adult help them remove the ball with a brush.

B: Yea. What else?

Ch 3: ... (after a moment of silence) To wait for the wind.

B: Uh huh. Super! What else?

Ch 3: ... (after a long moment of silence) To wait for the rain.

B: Why will the ball fall down then?

Ch 3: Hmm (with joy) because then... maybe... a few drops fall and the ball will be wet and fall down!

B: Uh huh. Great. Do you have any other idea? How can the children take the ball from the tree?

Ch 3: (a long moment of silence) I don't have any more ideas.

B: Which of these pieces of advice is the best? For the children!

Ch 3: Call an adult.

B: Why do you think so?

Ch 3: Because... (a moment of silence), because... because when then some adult comes... it's best when it's dad, he can come and... and with such long rakes he can sha... touch the ball.

B: Which advice you have given would be the worst, not necessarily good for the children?

Ch 3: ... (after a moment of silence) Climb the tree with the ladder.

B: Uhm. Why isn't it a good idea?

Ch 3: Because they could fall!...

Thus, we are faced here with the phenomenon when the creative activity (implementation of open tasks and provoking a greater number of ideas) facilitated the revelation and stimulation of reflective thinking among children.

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Analyses regarding the potential of children in realising tasks that require reflection on values, human emotions, good and evil in the environment, ways of coping with difficult situations and their own actions constitute a significant contribution of theoretical knowledge to the debate on the analysis and development of children's potential at this age and the organisation of conditions to stimulate the multifaceted and holistic development of a child. They can also serve as a starting point for the implementation of such activities within the educational setting.

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## STRESZCZENIE

Złożoność współczesnego świata coraz częściej wymaga kompetencji związanych z myśleniem mądrościowym, w tym zdolności do myślenia refleksyjnego. Refleksyjność pozwala przyjrzeć się bliżej i głębiej napotykanym problemom i otaczającym zjawiskom. Dzięki temu można podejmować decyzje oparte na analizie własnych i środowiskowych warunków oraz oczekiwanych i możliwych skutkach działania. Sprzyja to antycypacji zagrożeń i planowaniu przeciwdziałania im, dlatego identyfikacja i rozwijanie myślenia refleksyjnego potrzebne są już w dzieciństwie. Analizy warunków sprzyjających refleksyjności i jej rozwijaniu są rzadkie we współczesnej literaturze pedagogicznej, dlatego autorka przypomina podstawowe treści związane z refleksyjnością, a następnie podaje przykłady myślenia refleksyjnego dzieci w wieku przedszkolnym wyłonione w badaniach własnych.

**Słowa kluczowe:** myślenie refleksyjne; mądrość; twórczość; dziecko w wieku przedszkolnym