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Attitudes of Early Education Teachers Towards Pedagogical Innovation

Postawy nauczycieli wczesnej edukacji wobec nowatorstwa pedagogicznego

Introduction

Civilizational changes, especially over the last two centuries, were dynamic and occurred in an unprecedented way. Their dynamics reached their apogee at the beginning of the present century, in which the issue of education of the young generation holds a special place. The search for directions of school modernization is an important aspect of interest for all reformers of modern educational systems. Their aspirations are focused primarily on the new quality of educational transformations in education. In this area, the teacher and innovative activities undertaken by them play a decisive role, aiming at preparing the young generation for life in the society of the future.

Therefore, in this paper, it was decided to ponder the issue of attitudes of teachers teaching at the first stage of education towards pedagogical innovation, and to focus on seeking answers to two basic questions: First, what attitudes

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do teachers present towards pedagogical innovation? And second, what is the state of teaching knowledge on the essence and the function of pedagogical innovation?

Answers to the above questions were sought in results of surveys conducted in the academic year 2018/2019 among 36 early education teachers, full-time employees working at schools (14) in the rural and urban environment (22) in the Opolskie Voivodeship. Only women took part in the research (100%). The teachers were very highly educated; 34 (94.4%) completed full master's studies, and 2 (5.6%) had a higher professional background (bachelor's degree). In addition to their high education level, teachers also had an extensive pedagogical experience. Most of the respondents had a professional experience of nearly 30–45 years, representing 21 (58.3%) of the total number of the respondents. 9 (25.0%) teachers with seniority of 25–30 years form the second largest group. The third group are 6 (16.7%) teachers with seniority oscillating around 12 years. They are relatively young, but already possess the necessary practical competences in their profession.

A questionnaire was used to collect the necessary diagnostic material, containing both open and closed-ended questions. Bearing in mind the emotional-evaluating component as the basic component of attitudes while constructing the questionnaire, it was modeled, to a large extent, on the Rensis Likert's attitudes scale (Mayntz, Holm and Hubner, 1965). This questionnaire, like the typical R. Likert's scale, consisted of statements (opinions, judgements), to which teachers were supposed to respond (expressing approval or disapproval) to one of the above five ways of creating a questionnaire from *I strongly agree* to *I strongly disagree*.

It should be added here that the selection of theorems was arbitrary, based on very extreme and moderate judgements appearing in polemical publications and opinions expressed by teachers in the course of conducted research on the pedagogical innovation. The surveyed teachers had to address one of the five judgements using the following continuum:

1. I strongly agree;
2. I rather agree;
3. I rather disagree;
4. I strongly disagree;
5. I neither agree or disagree

(Frankfort-Nachmias, Frankfort-Nachmias, 2001).

The aim of the research was to obtain information on such issues as: teachers' attitudes towards pedagogical innovations, their understanding of pedagogical innovations, factors stimulating and inhibiting innovative activities, respondents' expectations towards innovations and the usefulness of contemporary pedagogical literature in the professional practice.

The essence and functions of pedagogical innovations in the early childhood education

Contemporary scientific reports provide extensive evidence confirming the thesis that the key to any reflection on the essence and significance of the pedagogical innovation in school education is undoubtedly the identification of this phenomenon, its nature and identity. There is no doubt today that a modern teacher should not only be able to create and learn new things, but also understand the meaning of the activities in which they participate, that is, they must be aware of the meaning of the activities in which they are involved. Their contribution to the education process should be conscious, combined with an understanding of the significance of the initiatives undertaken, i.e., they should have a necessary level of self-knowledge on the subject.

The Polish literature contains a diverse and rich current of innovative pedagogical thought. Analyzing thoroughly the literature concerning this issue, one often encounters a specific heterogeneity of terminology used by authors of articles and dissertations. The phenomenon of terminological incoherence is not only a Polish specificity, it can also be seen in foreign literature.

The term 'pedagogical innovation' is identified with many terms that relate to the structure of the content of concepts: pedagogical innovativeness, creativity in teaching, pedagogical experiment, or pedagogical progress, but the notion of the innovation is intuitively understood both by practitioners and by theoreticians of pedagogy. It is variously defined. For example, Wincenty Okoń identifies innovation with creativity (Okoń, 1981, p. 205). He describes them as "creative activity of teachers and educators, whose aim is to improve the system of education and upbringing at school and other educational institutions. The pedagogical innovation consists mainly in introducing new goals and contents to the practice, as well as new ways of pedagogical activity and new organizational forms. The expression of newly-made innovative efforts [...] is the activity of experimental and pilot institutions (schools)" (Okoń, 1981, p. 205).

Also Roman Schulz emphasizes the value of the teacher's creative attitude, defining one of the concepts of understanding pedagogical innovation as "the teacher's developmental and innovative activity, involving the design and implementation of new solutions, enriching pedagogical culture with new experiences" (Schulz, 1990, p. 74–76).

Other authors identify innovation with the pace of assimilation of innovations. This view is expressed, inter alia, by Zofia Ratajczak (Ratajczak, 1980). Writing about innovation as a phenomenon "in which an individual acquires new ideas relatively sooner than other members of their social system" (Ratajczak, 1980, p. 28 et seq.) referring to the position of Everett Rogers, whose research on assimilation of innovations is already considered classical.

It follows from the quoted considerations that the prevailing view is the one implying that the pedagogical innovation is understood as multiple manifestations of the teacher's innovative activity.

It can therefore be said that *pedagogical innovation is an activity consisting in the implementation and dissemination of certain innovations in pedagogical practice, including the estimation of the results of these activities* (Smak, 2014, p. 79).

Continuing the reflection on pedagogical innovation, it can be said that it is a particular form of action whose main purpose is the planned practice of the change. The essence of this practice is basically determined by four elements: the subject of the change (a pioneer, an innovator), the object of the change, the change programme, and the innovation process (Schulz, 1990, p. 34).

In pedagogical innovation, *the subject of the change* (the author of the innovation) is a practising teacher. They are usually the first (and often the only one) recipient of their innovation. It also happens that the pedagogical innovation consists in assimilating changes developed by external sources (e.g., teachers or specialized institutions).

Regarding the subject of change, it is primarily the teacher's work - its goals, curriculum, methods, organization, measures of success, behaviour patterns that make up the personality, etc. When it comes to changes, designed and implemented as a part of the pedagogical innovation, these are at the first line of so-called *pedagogical innovations*, that is, modifications introduced to a direct didactic and educational activity. According to the structure of the activity within pedagogical innovations, at least three basic change strategies can be distinguished, namely the strategy of single changes, the strategy of multi-

element changes and the strategy of systemic changes referring to didactic-educational, programmatic, methodical, organizational, and evaluation issues.

To give the above meaning to the presented considerations, they will be illustrated by selected examples relating to a wide spectrum of educational phenomena – both today, and in the past. They include: the concept of universal and continuing education (Jan Amos Komensky); radical pedagogy (Henry Giroux); socializing education (Aleksander Kamiński, Aleksander Lewin); problem-group teaching (Wincenty Okoń, Konstanty Lech, Jan Zborowski et al.); the concept of multilateral education (Wincenty Okoń); individualisation of education and upbringing (Ludwik Bandura, Tadeusz Lewowicki); multimedia education as a concept of a comprehensive application of didactic resources (Wacław Strykowski); multi-level, varied teaching (Ryszard Więckowski et al.); an integral pre-school education system (Maria Cackowska); binary learning system; school without walls; the idea of deschooling society; the concept of teaching/learning innovative; methods of developing movement (Rudolf Laban, Weronika Sherborne); laboratory school (Anna and Aleksander Nalaskowscy, Wrocław's school of the future (Ryszard Łukaszewicz and others), and many more.

The selected examples referred to both “old” (enriching the achievements of pedagogical practice in the past) and the “new” (improvements concerning the current state of affairs) innovations. There are novelties in the field of pedagogical theory and practice; radical, proprietary and compromising solutions that represent high rank and secondary. Their contents include: humanization of education understood as helping the child to create themselves; overcoming of perceptual and reconstructive forms of children's activity in favour of perceptual and innovative forms; recognition of external coercion as an element activating internal coercion to obtain positive educational effects; supporting children's activity by treating the program as a proposal to develop the educational needs of children; methods of active listening to music according to Bata Strauss; the method of Alfred and Maria Kniess involving the use of creative gymnastics – with dance arrangements coupled with movement and the rhythm of music, using atypical devices; the method of dance therapy (improvised movement), dance as meditation (Gabrielle Roth *5 Rhythms*), departure from typical activities and organizational forms of the school for the assumption that the basic organizational form of education is the day of work and activity of children, etc.

One might ponder over whether at present the Polish educational system is not affected by an excess of innovation. It seems that it is a problem of incorporation of these changes, internalizing and accepting them. In general, it is a matter of responding to changes, and especially a problem arising from opposition and resistance to contemporary transformations. An example of this is the introduction of religious education to state schools (programme innovations); increased freedom expressed as the increase in teachers' professional autonomy and the extension of the scope of decision-making powers of all school units (organizational and structural innovations); or the loss of monopoly on provision of educational services (systemic innovations) by the state, etc.

Presenting the essence of pedagogical innovation, it is impossible not to mention the regulations in force. In accordance with the applicable legal regulations, a minister competent for educational and pedagogical matters specifies, by way of regulation, requirements for conducting innovative and experimental activities by schools and institutions, offering opportunities for introducing new programme, organizational and methodological solutions in the field of didactic, educational and caring activities, as well as introducing operating and organization conditions at schools and facilities different from those generally applicable (Article 22.2.6 of the Act on the education system). The act *Provisions implementing the Education Law* (article 15.29.b) repeals the above-mentioned provision.

Attitudes of early education teachers towards pedagogical innovation

The teacher is the main factor that can and should decide about the course and results of didactic and educational processes. The most significant here are the personality, knowledge, skills and competences of the teacher-educator. Knowledge and skills allow to educate the pupil's mind, provide them with knowledge, develop critical thinking, heuristic thinking, and teach them how to acquire knowledge, where all these skills are required both by the contemporary civilization and continuous scientific progress.

The teacher's attitude towards the pedagogical work reflects their relation (positive or negative) with the profession, manifesting itself as a relatively permanent type of behaviour in the course of its performance, subject to modification depending on changing working conditions and including the

sphere of views, beliefs, behaviours, and pedagogical skills. Therefore, today the importance of understanding and organizing education as the need to prepare people not only for doing something in life but also for being able to create opportunities and experience the fullness of life is emphasized. Therefore, the emphasis is not only on the need for adaptive but also for anticipatory and prospective upbringing.

From the teacher, this kind of educational strategy requires becoming aware of the fact that their work is always a creative activity, that not only their knowledge and skills have the educational and personality-forming qualities, but also – and perhaps above all – their personality and spiritual culture, especially if the teacher is to be more an inspirator, animator and guide on the way of youth education and self-education processes, rather than a communicator of message.

The work of a teacher-educator is essentially creative in nature. Every actual teaching and educational situation, even the one provided for in the school curriculum or included in the educational plan, requires invention. Thoughtlessness or a routine in problem solving are the enemy of a good teacher-educator's work. The teacher must think alternatively, using divergent thinking and heuristics, because they are a basis of pedagogical innovation.

Data on the attitudes towards pedagogical innovation of the examined teachers was obtained by analyzing the survey results using the questionnaire containing six statements, which the teachers were to address by expressing their approval or disapproval.

The results of the survey are presented below:

A. The first statement said: *Pedagogical innovation is a must*. The majority of the respondents strongly agreed (20–55.5%) or mostly agreed (10–27.8%) with this judgement. A number of respondents disagreeing with it (I rather disagree, I strongly disagree) was small (4–11.1%) while only a very small number (2–5.6%) of people had no opinion on this matter. They were teachers working in a rural environment.

B. The second statement said: *Pedagogical innovation is valuable for school practice, but teachers cannot use it*. This opinion aroused the greatest controversy among the teachers surveyed: first, because it included a positive assessment of innovation, and second, because it questioned the competence of early childhood teachers. The majority (19–52.8%) of the respondents disagreed with it (definitely or rather), a large group (14–38.8%) of teachers agreed with it (definitely or rather), and 3 (8.4%) participants did not have any

opinion on this matter. These values are classified as assessments determining the negative attitude of the surveyed teachers.

It can therefore be assumed that early childhood teachers are more critical about the level of their preparation for using pedagogical innovation.

C. The third statement said: *Scientific pedagogical publications should focus more on pedagogical innovation, considering their practical application.* This claim was approved by almost all respondents, with the answer “I strongly agree” selected by 29 (80.6%) participants. However, the remaining research group only partly agreed to it. Therefore, it should be assumed that teachers attach more importance to practical descriptions of applied innovations, because they give them the opportunity to adapt already used novelties, as well as encourage further exploration in this area.

D. The fourth statement said: *Teachers should be kept up to date on new theoretical and practical work on the implementation of innovations in school practice,* and it has been widely approved. 25 (69.4%) the respondents definitely agreed, 10 (27.8%) participants rather agreed and only one person (2.7%) from the rural environment had no opinion on this subject.

It can be concluded that survey respondents show willingness and even strive to become acquainted with current information on pedagogical innovation in education.

E. The fifth statement, *Innovation is a good initiator of the practical conduct of teachers,* also was generally approved by the respondents, as 25 (69.4%) participants definitely agreed and 10 (27.8%) teachers rather agreed. One person did not have an opinion on this subject. Therefore, it should be assumed that the surveyed teachers more often use innovative achievements of other people implementing them into professional practice. The scores varied according to the seniority, because people with lower seniority showed a higher level of acceptance of this judgement.

F. The opinion included in the sixth statement, *The theory of pedagogical innovation cannot be created without recourse to pedagogical practice,* was shared by the vast majority of the surveyed respondents. The view “I strongly agree” was expressed by 20 (55.6%) and “I rather agree” by 7 (19.4%) people. 9 (25.0%) respondents had no opinion or disagreed with the statement. Teachers’ assessments were diversified according to the local environment. The conclusion that the examined group of teachers pays more attention to checking the theoretical value of the presented work in professional practice is obvious.

Summing up the results of research on teachers' attitudes towards pedagogical innovation, teachers may agree that innovation is a necessity, but there is no unanimity in the judgement that innovation is valuable for school practice, only teachers cannot use it. Respondents believe that they should be kept up to date with new theoretical and practical work on pedagogical innovation, as well as that innovation has a significant impact on their professional activities at school. They also state that the theory of innovation cannot be detached from school practice, because only in this way can the theoretical value of the issue be checked.

A significant supplement to the above-mentioned explanations are the results of surveys on the essence and function of pedagogical innovation (teachers' expectations towards the innovative movement, as well as practical usefulness of contemporary pedagogical publications, together with factors stimulating and inhibiting innovative activity of early education teachers).

It is interesting to see how the surveyed respondents interpret the very concept of pedagogical innovation. In the answer given to the relevant question, the teachers provided quite diverse, and in some cases very extensive, definitions. Only 4 (11.1%) of the surveyed teachers did not give a satisfactory answer to the question asked. They were teachers holding a bachelor's (2) and a master's degree (2), with a seniority of between 5 and 12 years. The remaining 96 respondents (88.9%) presented the definitions more or less accurately, and thus a valuable response from the point of view of the objectives of the research. These different, diversified definitions of pedagogical innovation are presented below:

- *Pedagogical innovation is a creative activity of teachers and educators, which aims to introduce new practical solutions to schools and kindergartens* (university degree, work experience of 10 years, rural environment)
- *Innovation is the introduction of new methods to improve the quality of work* (Bachelor's degree, seniority up to 5 years, rural environment);
- *Pedagogical innovations are new things about education and teaching* (Bachelor's degree, two years of work experience, urban environment);
- *Pedagogical innovation is the application of everything new in education* (Master's degree, work experience of 3 years, urban environment);
- *Pedagogical innovation is the creative activity of teachers aiming at improving their work and achieving specific effects* (university degree, work experience of over 30 years, rural environment);

- *Pedagogical innovation means some new solutions for improving work in pre-school and school settings* (Master's degree, work experience of 12 years, urban environment);
- *Pedagogical innovation means all activities in the course of which teachers introduce new and better solutions into practice, that is pedagogical innovation, aimed at improving pedagogical work and contributing to higher effects* (university degree, participant of doctoral studies, seniority over 12 years, urban environment).

The analysis of the definitions presented above indicates that all of the above concepts contain one important feature in their semantic and substantive structure - creativity that is creativeness, or the creative character of the teacher's work. In addition, by formulating the concept of pedagogical innovation, they reflect the essence of things, paying attention to a desire to improve and upgrade didactic and educational work.

The respondents also expressed their interest in the issue of causes hindering or inhibiting innovative processes and implementing innovations in the school practice. It is known that among the factors inhibiting innovative processes (external conditions) there are many negative elements stemming from the management of education, which is evidenced by the implemented reform of the education system. Therefore, teachers' work, its quality and effectiveness will be determined mainly by intra-school factors and mechanisms. The respondents' declarations show that the most frequently indicated difficulties concern: work overload and accompanying duties, especially so-called "paperwork" (55.5%); overloaded education program (52.7%); teaching focused on the exam (third-grade test) (50.0%); the unprofitability of taking up innovative activities (47.2%); lack of understanding of innovative needs (38.8%); traditionalism (36.1%); lack of substantive care on the part of pedagogical supervisors (33.3%); improper relations prevailing in teaching teams (33.3%); lack of objective criteria for work evaluation (30.5%); lack of appropriate teaching materials and resources (22.2%), and others. In addition to the main difficulties presented, the teachers noted factors depending on personal characteristics, such as: low cognitive activity, risk avoidance, conformism, lack of self-confidence, small or negative motivation for creative work (% calculated from the total number of teachers' indications).

For this reason, we can risk a statement that teachers assess the presence of these obstacles in innovative activities very critically. It would therefore be beneficial to introduce changes on a large scale, abolishing the barriers

mentioned here, because they constitute the essence of the universality of the pedagogical progress movement. It should be noted that it is generally a passive concept, because the Polish school is pestered with the notorious reorganization of its structure, the cancellation of certain ordinances, directives and orders, and the introduction of others. The current situation of teachers is an example of this situation!!!

Furthermore, the issue of factors that trigger and stimulate the creative initiative of teachers seems to be interesting. Out of 36 respondents, the vast majority – 83.3% – pointed to material conditions (money rewards, raising wages, etc.) as a factor conducive to their innovative activities. The focus was also on improving one's own work and achieving better results - 69.4%; trying an idea that seems to be good – 63.8%; access to innovative resources and teaching materials – 55.5%; praise by the school board – 47.2%; a robust development of digitalization – 44.4%; participation in methodological conferences – 36.1%; and relieving from additional duties – 25.0% (% calculated from the total number of teachers' indications).

Comparing the above statements of the surveyed teachers regarding the factors inhibiting and stimulating the development of pedagogical innovation, a correlation between these factors can be noticed. The removal of significant obstacles creates a kind of automatic – in the respondents' opinion – fertile ground, conducive to innovative activity at the first stage of education. These observations have shed some light on the existing conditions in which innovative activities in the studied schools take place. From their statements and opinions, problems faced by teachers in terms of pedagogical innovativeness can be deduced. However, not all of them were detected and analyzed. Maybe this results from a fact that the teachers have not yet realized their role in the process of the educational change.

It should be noted that 36 surveyed teachers present different expectations towards pedagogical innovation, the main one being the increased efficiency and improved didactic and educational work – 91.6%; followed by effective practical and pedagogical solutions – 86.1%; improved didactic base at the school – 75.0%; modernization of the education program (novelty and originality) – 55.5%; preparing students for the “modern world” – 52.7%; and an efficient information system, as well as exchange of experiences while solving similar pedagogical problems – 41.6% (% calculated from the total number of teachers' indications). About half of the respondents believe in the feasibility of these expectations.

Teachers' expectations – as shown above – refer to providing them with basic forms of work tools, which – with the exception of the postulate to improve the didactic base of the school, are essential for the proper functioning of the whole education system at the first stage and do not require considerable financial outlays. Therefore, the predominant important aspect is the competence and commitment of competent institutions and organizations involved in the promotion of the pedagogical progress.

The issue of the usefulness of contemporary pedagogical literature in the professional practice of teachers is of fundamental importance to their work. The surveyed teachers assessed the practical usefulness of contemporary pedagogical literature as follows: 41.6% of respondents declared that they positively assessed the practical usefulness of pedagogical literature, while 38.9% of them rated it high and very high. Only a small group (19.5%) of the respondents evaluated it negatively.

When judging positively the practical usefulness of pedagogical literature, teachers most often justify their judgements by the fact that it greatly supports practical activities, facilitates professional work by providing practical guidelines for working with children; significantly helps to interpret new facts and pedagogical phenomena, is a source of new information and a platform for sharing experiences, as well as a tool for self-education. Among the teachers who assessed the usefulness of pedagogical literature negatively, the most frequently cited reasons were: low communication resulting from its hermetic scientific language; it is too distant from the practice, so in consequence it does not provide a reference point for the current school reality; it is too general and not very creative, and in some cases its content is obsolete. Teachers who negatively assessed the usefulness of literature, had higher education background, with a work experience of up to 5 years.

In the reflections on the usefulness of pedagogical literature, teachers' sources of information on pedagogical publications concerning the pedagogical innovativeness cannot be overlooked. Namely, 52.7% of the surveyed teachers state that they receive information about pedagogical novelties from school and pedagogical libraries; 22.2% – from online databases; 11.1% from friendly contacts, 8.4% from conferences organized by methodological improvement centers; and 5.6% from pedagogical journals.

Pointing to the source of the literature information containing methodological innovations, the teachers drew attention to a need for a quick

and more efficient transfer of information. They believe that insufficient information flow is one of the main barriers to their professional work.

Summing up, the general analysis of the results of empirical research presented in the article illustrates teachers' views on pedagogical innovation. Thus, the attitude of teachers towards pedagogical innovation is not very diverse. The majority of teachers share the view that innovation is a must. Respondents rather agree that it can significantly affect their professional activities at school.

Additionally, they believe that teachers should participate in the development of the theory on innovation and pedagogical innovation. They state that they face many difficulties in their professional activities, amongst which work overload and accompanying duties ("paperwork") and overloaded education program, teaching for the exam (third-grade test) predominate. When mentioning inhibitory factors, positive phenomena that trigger and stimulate innovative activities cannot be overlooked. These include, among others: material conditions (money rewards, raising wages); trying an idea that seems to be good; access to innovative teaching resources and materials; a robust development of digitization, etc. The issues presented here do not exhaust all areas of activities related to pedagogical innovation. The presented research results are treated selectively and aimed primarily at outlining the views of primary school I–III grade teachers on the issue of pedagogical innovation.

Abstract: The subject of the research considerations are the attitudes of early education teachers towards pedagogical innovation, being a response to the permanently changing reality and the related necessity to introduce changes to education. The conducted surveys and their analysis prove that the majority of teachers share the view that application of innovation in pedagogical practice is necessary, noticing both its impact on their professional activity and pointing to significant obstacles in the field of deployment and implementation of innovations at school.

Keywords: pedagogical innovation, teachers' attitudes; stimulants and inhibitors of innovation

Streszczenie: Przedmiotem refleksji badawczej są postawy nauczycieli wczesnej edukacji wobec nowatorstwa pedagogicznego, będące odpowiedzią na permanentnie zmieniającą się rzeczywistość i związaną z tym konieczność dokonywania zmian w edukacji. Przeprowadzone badania sondażowe oraz ich analiza dowodzą, że większość nauczycieli podziela pogląd o konieczności stosowania nowatorstwa w praktyce pedagogicznej, dostrzegając zarówno jego wpływ na ich działalność zawodową, jak i wskazując na istotne przeszkody w zakresie upowszechniania i wdrażania innowacji w szkole.

Słowa kluczowe: nowatorstwo pedagogiczne, postawy nauczycieli; czynniki pobudzające i hamujące nowatorstwo

References

- Frankfort-Nachmias, CH., Frankfort-Nachmias, D. (2001). *Metody badawcze w naukach społecznych*. Poznań: Wydawnictwo Zyski S-ka.
- Mayntz, R., Holm, K., Hubner, P. (1965). *Wprowadzenie do metod socjologii empirycznej*. Warszawa: Państwowe Wydawnictwa Naukowe.
- Okoń, W. (1981). *Słownik pedagogiczny*. Warszawa: Państwowe Wydawnictwa Naukowe.
- Ratajczak, Z. (1980). *Człowiek w sytuacji innowacyjnej*. Warszawa: Państwowe Wydawnictwa Naukowe.
- Schulz, R. (1990). Kształcenie dla innowacji pedagogicznych – geneza, sens i zastosowanie idei. *Przegląd Oświatowo-Wychowawczy*, 1, pp. 74–76.
- Smak, E. (2014). *Innowatyka w edukacji*. Opole: Wydawnictwo Nowik Sp. j.
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