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Critical Competencies among Teachers and Principals of Primary Schools from Poland and the Czech Republic

Abstract

Introduction. The article concerns research conducted among teachers and principals of primary schools in Poland and the Czech Republic as part of a project co-financed by the European Regional Development Fund and the State budget, We Cross the Borders. The Key Competencies in Teaching and Education project was implemented under the recruitment of the Praděd Microprojects Fund, Priority axis number: 11.4, priority axis name: Cooperation of institutions and communities. **Aim.** The theoretical and cognitive aim of the research was to diagnose the competencies of teachers and principals in critical thinking. The practical-implementation objective of the research was to develop practical recommendations that may be included in the education programs of future teachers and principals. **Methods.** The research used the method of a diagnostic survey and the questionnaire technique. Data analysis was performed with the use of STATISTICA software. **Results.** The research results showed differences between the behaviour of teachers and principals in such matters as contact with parents, following the headmaster's instructions, using innovative teaching methods and self-confidence in everyday work-related situations. The results show statistically significant differences in their declarations of behaviour in a particular situation. From the research, it can be concluded that principals are more interested than teachers in solving any difficult situation to resolve the conflict rather than focusing primarily on the consequences of the situation.

Keywords: *teachers, teaching, difficult situations at school, critical thinking*

Introduction

The teaching profession is one of the few professions in which the legal framework for its practice and the framework related to entitlements changes frequently. Therefore, teachers as a professional group constantly need to take care of their professional qualifications and, above all, they need to strengthen and acquire new competencies, particularly interpersonal ones.

One should be aware that this profession is not only related to the teaching of students but also to their own development (Haug & Mork, 2021; Juszczuk & Kim, 2015; Richter et al., 2021; Nordgren, 2021).

By improving their competencies, they can, for example, build positive relationships with students and develop their authority, which fosters a higher level of the social climate in the classroom and school (Petrik & Vašašová, 2022). The competencies that teachers need are closely linked to the goals of education, teaching, learning, and helping them effectively achieve their goals and desired outcomes and optimise their resources and efforts in teaching and learning (Auziņa, 2018).

Among the skills included in the various models of 21st-century competencies, four are systematically mentioned: creativity, critical thinking (CI), communication and cooperation. These are cognitive skills for which the prefrontal cortex is responsible, allowing us to adapt to a specific situation in real-time by stimulating and combining different brain functions. Creativity, critical thinking, communication, and cooperation are the least computerised skills in the short to medium term and are crucial for academic and professional performance (Lamri, 2021).

One of the competencies mentioned above is critical thinking. It is becoming a skill that sets us apart and allows us to function freely by avoiding pitfalls and distinguishing true information from fake news.

Critical competencies consist of knowledge, skills and attitudes related to reflective, constructive criticism. They enable a person to function consciously and effectively in the world around him by resisting various pressures from others, acting independently, or, above all, properly interpreting the facts based on an appropriate analysis characterised by a research attitude, as well as self-criticism in relation to one's actions and attitudes (Sliwa, 2021; Griffin et al., 2012; Khalili et al., 2003).

As postulated by G. Watson and E. Glaser, this critical thinking includes the ability to recognise existing problems and the need to generate evidence to support what is claimed to be true, and learning the nature of important conclusions, abstractions and generalisations in which the importance or precision of different

types of evidence is logically determined such as the ability to use and apply prior knowledge and attitudes (Pacheco & Herrera, 2021).

Learning to think critically, as well as creatively, which is based on inquiring into the truths and principles of the world, becomes an important element at school or even at the preschool stage (Valovičová & Sollárová, 2020). Even more so, as research shows, critical and creative thinking are not divergent but the conditions for purposeful thinking (Shubina et al., 2021).

As Jolanta Szempruch (2013) emphasises, the teacher's critical competence is important for the formation of students' critical competence, which includes, among other things, the ability to form objective opinions about reality, to express oneself freely, creatively and responsibly, and to understand the world and the relations and changes in it.

Research Methodology

The research was carried out from April to June 2021 in the Opolski, Nysa, and Prudnik districts of the Opolskie Province on the Polish side, and in the Moravian-Silesian country on the Czech side. The research was carried out as part of a project co-financed by the European Regional Development Fund and the State budget, We Cross the Borders. The Key Competencies in Teaching and Education project was implemented under the recruitment of the Praděd Microprojects Fund, Priority axis number: 11.4, priority axis name: Cooperation of institutions and communities. The "PRIGO" University in Hawirzów was a partner to the School of Management and Administration in Opole.

The theoretical and cognitive aim of the research was to diagnose the competencies of teachers and principals in critical thinking. The practical-implementation objective of the research was to develop practical recommendations that may be included in the education programs of future teachers and principals.

The article's authors were looking for an answer to the question: 'What are the differences between the levels of critical competencies of teachers and principals?'

A research hypothesis was put forward that principals would be more critical of solutions to difficult situations at school and would show a higher self-assessment of their critical competencies than teachers.

The first tool, the Questionnaire for Assessing Behaviour in the School for Teachers consisted of 23 described situations, for which three options were proposed for solving a given problem (Śliwa, 2021). The author's School Behaviour Assessment Questionnaire for Principals was the second research tool for school

principals. The questionnaire consisted of 16 described situations, to which three options for choosing a solution to a given problem were proposed each (Śliwa, 2021).

Both tools were used to investigate the following indicators:

- ability to solve educational problems;
- enhancing the social climate at school;
- self-improvement;
- critical interpretation of information transfer;
- taking up new challenges;
- encouraging a critical approach to interpreting and solving problems;
- openness to information from various sources;
- going beyond the accepted standards.

At the stage of pilot studies, the research tool for teachers and principals was evaluated by 7 competent judges. They were research and didactic employees, methodologists of teacher training institutions and the school board of education. Then, after conducting a pilot survey, the reliability coefficient of Cronbach's alpha was calculated, which was 0.67.

Two procedures were used in the pilot studies: competent judges and Cronbach's alpha coefficient was calculated.

The research was conducted using online questionnaires. Due to the epidemiological situation related to the SARS-CoV-2 pandemic, the tools used in the research were coded in Google Forms and sent to 50 randomly selected primary schools from the Opole, Prudnik, and the Nysa districts, and the city of Opole.

Data analysis was performed using the statistical program Statistica version 13, which used statistical methods related to the examination of the statistical significance of differences between the variables and a multivariate analysis was performed.

The Shapiro-Wilk test was used to assess the normality of the variable distribution. The value of the statistics was statistically significant ($N=219$, $W=0.51$, $p<0.001$), which proves the normal distribution of the variable. Therefore, the Mann-Whitney U test, which compares the sum of ranks, was used in the data analysis.

The research group consisted of 170 teachers of primary schools, grades 1-3 in Poland and grades 1-5 in the Czech Republic, of which 104 (61.2%) were from Poland and 66 (38.2%) from the Czech Republic. They were mainly women – 146 (85.6%). As far as age was concerned, 45 respondents (26.5%) were in the 26-35 age group, 47 (27.6%) in the 36-45 age group, 43 in the 46-55 age group (25.3%) and the age group of 56 and over – 35 (20.6%).

Table 1. Seniority of the teachers surveyed

Working time	Number	Accumulated Number	Percent
up to 5 years	26	26	15.3
6 up to 15 years	53	89	31.2
16 up to 25 years	28	117	16.5
25 years and more	63	170	37.0
Total	170	170	100.0

The second research group consisted of 49 principals, 22 (44.9%) from the Czech Republic and 27 (55.1%) from Poland. The majority were 46-55 (49.0%) and over 56 (30.6%).

Table 2. The age of principals surveyed

Age	Number	Accumulated Number	Percent
up to 25 years	2	2	4.1
26 up to 35 years	2	4	4.1
36 up to 45 years	6	10	12.2
46 up to 55 years	24	34	30.6
56 and more	15	49	49.0
Total	49	49	100.0

This group was represented by 33 women (37.3%) and 16 men (32.7%).

They were mainly people with a long work experience of 16 to 25 years and more than 25 years.

Table 3. Seniority of primary school principals surveyed

Working time	Number	Accumulated Number	Percent
up to 5 years	4	4	8.2
6 up to 15 years	6	10	12.2
16 up to 25 years	10	20	20.4
25 years and more	29	49	59.2
Total	49	49	100.0

The seniority of the principals is shown in Table 4.

Table 4. Seniority of primary school principals surveyed in a management position

Working time	Number	Accumulated Number	Percent
up to 5 years	11	11	22.4
6 up to 15 years	21	32	42.9
16 up to 25 years	11	43	22.4
25 years and more	6	49	12.3
Total	49	49	100

Survey Results

Only statistically significant results were described in the study. Thus, with regard to difficult situations at school, when a pupil causes behavioural difficulties and the parents do not want to cooperate with the school, claiming that it is the school's fault, the principals ($M=1.71$, $SD=1.15$) are more likely than the teachers ($M=1.93$, $SD=0.99$) to believe that they should be involved in resolving the situation ($U=3335.50$, $p=0.03$).

Principals ($M=2.32$, $SD=1.31$) were strongly more opposed than teachers ($M=3.95$, $SD=0.87$) to the student suffering the consequences of his/her behaviour at all costs in such a situation, without first investigating the reasons for such behaviour ($U=1460.50$, $p=0.03$).

Table 5. Ways of solving difficult situations at school, according to the respondents

Statement	Research group	N	Average	Standard deviation	Standard error of the average
I am waiting to see how the situation develops further without getting involved in the matter.	Teachers	170	1.9352	0.99194	0.07607
	Principal	49	1.7142	1.15470	0.16495
I try to make sure that the pupil suffers the consequences of their behaviour, whatever the cause.	Teachers	170	3.9588	0.87945	0.06745
	Principal	49	2.3265	1.31319	0.18760

In the case of a potential competition between teachers and pupils, for example, during a competition related to the preparation of Easter works, the teachers ($M=3.26$, $SD=1.32$) are rather hostile to such ideas. It is perceived differently by principals ($M=2.48$, $SD=1.20$). Executives are rather enthusiastic about such projects ($U=2796.50$, $p<0.001$). However, principals ($M=3.18$, $SD=1.09$) are aware that

teachers ($M=2.52$, $SD=1.01$) may regard such ideas with disapproval ($U=2750.50$, $p<0.001$).

Table 6. Respondents' opinions related to teachers entering into competition with students

Statement	Research group	N	Average	Standard deviation	Standard error of the average
I don't think this is a good idea and teachers should not be competing with students.	Teachers	170	3.2647	1.32586	0.10168
	Principal	49	2.4897	1.20972	0.17281
I think it's even a good idea, but I think it might meet with disapproval among teachers.	Teachers	170	2.5235	1.01051	0.08476
	Principal	49	3.1836	1.09303	0.15614

When various unfavourable actions are taken against teachers, they ($M=3.52$, $SD=1.22$), compared to principals ($M=2.55$, $SD=1.13$), are more likely to take heard information as fact and feel more aggrieved ($U=2333.00$, $p<0.001$). In addition, teachers believe that, as a professional group, they are treated worse than others ($U=3364.50$, $p=0.04$).

Table 7. Respondents' opinions on their perception of their professional position

Statement	Research group	N	Average	Standard deviation	Standard error of the average
I accept this as a fact and believe that again teachers as a professional group are being treated unfairly, I am not commenting on anything in front of the members of the board of education.	Teachers	170	3.5235	1.22693	0.09410
	Principal	49	2.5512	1.13763	0.16252
I believe that teachers, again, as a professional group, are being treated unfairly and I look forward to seeing how the situation unfolds.	Teachers	170	3.4294	0.97802	0.07501
	Principal	49	2.9591	1.25763	0.17966

With regard to teaching, principals ($M=2.14$, $SD=0.91$) were more likely than teachers ($M=2.71$, $SD=1.20$) to believe that one should not exclusively use the curriculum/performance plan suggestions offered by the publisher they use when

implementing the core curriculum ($U=3054.50$, $p<0.001$). In addition, principals ($M=2.22$, $SD=1.08$) were more likely than teachers ($M=2.74$, $SD=1.17$) to believe that students' knowledge and skills described in the core curriculum should not be considered exclusively when assessing them ($U=3148.50$, $p<0.001$). In addition, managers ($M=4.14$, $SD=1.06$) were more convinced than teachers ($M=3.64$, $SD=0.76$) that students who are authors of creations, who use them, who independently learn their value and who are well acquainted with creations that are not new and are able to use them should be valued ($U=2575.00$, $p<0.001$).

The principals ($M=3.44$, $SD=1.19$) were also in favour of teachers ($M=3.02$, $SD=1.24$) using elements of formative assessment, but after they have received appropriate training in this area ($U=3334.00$, $p=0.03$).

Table 8. Opinions of respondents related to the assessment of pupils

Statement	Research group	N	Average	Standard deviation	Standard error of the average
They exclusively used the suggested teaching/learning plans proposed by the publisher they use for the core curriculum	Teachers	170	2.7176	1.20267	0.09224
	Principal	49	2.1428	0.91287	0.13041
Only his knowledge and skills as described in the core curriculum.	Teachers	170	2.7470	1.17700	0.09027
	Principal	49	2.2244	1.08522	0.15503
Pupils are the authors of the creations, they use them, they recognise their value on their own and they are familiar with creations that are not new, they are able to use them.	Teachers	170	3.6411	0.76580	0.05873
	Principal	49	4.1428	1.06066	0.15152
They used elements of formative assessment, but after they had received appropriate training in this area.	Teachers	170	3.0294	1.24238	0.09528
	Principal	49	3.4489	1.19130	0.17018

Discussion

The research shows that educational managers are more convinced than teachers that it is important to get involved and resolve the situation in a difficult situation at school during a conflict between parents and teachers. Furthermore, they were more likely to say that, despite a pupil's bad behaviour, seeking a consequence at all costs is not appropriate.

It can be inferred from this that principals are more interested than teachers in resolving each difficult situation to resolve the conflict and not to focus primarily on the consequences of the situation.

It is the most appropriate way to proceed. Unresolved situations, in addition to punishment, may reinforce undesirable behaviour of pupils and conflicts between school staff and parents. The resolution of such situations should be linked to dialogue and the search for appropriate ways to resolve disputes. Care should be taken here not to undermine the authority of teachers on the one hand but also to respect parents' opinion when seeking solutions. Sometimes, it is a difficult task that principals have to face, and in such situations, negotiation and resolution skills can be useful for them.

The data analysis also shows teachers are less enthusiastic than principals about organising new things and taking on new challenges. It may be because, for them, it means extra work, in a situation where they have to struggle with bureaucratic activities in addition to teaching anyway. The additional burden of new tasks may create resentment in them, as principals are also aware. Seniority, the age of the respondents and the first symptoms of burnout among educators may also have an influence. As can be seen, many factors can increase or decrease motivation to take on new professional challenges.

As far as fact-checking is concerned, managers are more cautious in taking opinions on various topics. Also, respondents from this group do not feel as much as teachers, as they are treated worse than other professional groups. From the data analysis, it can be concluded that education managers are more critical in interpreting various information that appears in everyday life. In addition, they do not feel, as much as their teaching staff, that they are mistreated as a professional group, which may be related to the fact that they have consciously taken up a job in education, accepting the working conditions there. However, it should be borne in mind that the general dissatisfaction of educators with their work may hinder the school's management by their superiors and translate into the quality of education and teaching. Apparently, in both Poland and the Czech Republic, the teaching profession is not sufficiently valued and adequately and appropriately remunerated, which fosters frustration among respondents.

Moreover, the principals were more convinced than the teachers that when teaching, one should only use the syllabuses offered by the publisher and use their own suggestions.

They had a similar opinion regarding assessment, where they believed that the student's knowledge and skills beyond the core curriculum should be considered during assessment. This situation may be related to the fact that the didacticians,

in order to avoid unclear situations, prefer to have more precise and scheme-determined ways of assessment. It is safer for them and perhaps clearer for the pupils being assessed and those who observe how other pupils are assessed against them. Adopting certain assessment rules based on clear, transparent guidelines may be clearer and less controversial for teachers and students. On the other hand, principals are certainly right that students should be assessed on knowledge and skills beyond the core curriculum, but this may not be understood among other participants in the education system.

In addition, educators may fear a negative evaluation of their conduct by superiors, which will not be conducive to such an approach.

Conclusion

The research that has been presented covers only pedagogical staff from Poland and the Czech Republic. Given the cultural background, this research could extend to other countries such as Slovakia or Ukraine. In this way, it would be possible to see if there are any statistically significant differences between the shared responses of teachers from these neighbouring countries.

Furthermore, as Miriam Uhrinová and Ján Tirpák (2020) emphasise, comparative research is needed, especially research that looks at teachers and their ways of doing things at school.

The research shows differences between the answers of management and teachers. It is a rather normal situation related to the position both research groups held and the tasks they were given. Principals want their staff and the school to function at the highest possible level. On the other hand, teachers who are already overloaded with work and often already showing the first symptoms of professional burnout are not able or do not want to take on new challenges, introduce innovations in their work or change their working methods, including those related to assessment.

Therefore, it is worthwhile for both professional groups to put themselves in each other's shoes and to perceive the tasks of the school from the position of both teacher and principal. It can have a decisive impact on improving the quality of education. Cooperation, for the good of the student, can bring many benefits, which, unfortunately, can mostly only be related to increasing the level of satisfaction with one's own work and rarely to financial benefits, which can also play a big role in this group of respondents as external motivators for further work.

References

- Auziņa, A. (2018). Teacher Competences for Facing Challenges of Globalisation in Education. *Journal of Education Culture and Society*, 9(2), 24–37. DOI: 10.15503/jecs20182.24.37
- Griffin, P., McGaw, B., & Care, E. (2012). *Assessment and Teaching of 21st Century Skills*. Springer. DOI: 10.1007/978-94-007-2324-5
- Haug, B. S., & Mork, S. M. (2021). Taking 21st century skills from vision to classroom: What teachers highlight as supportive professional development in the light of new demands from educational reforms. *Teaching and Teacher Education*, 100, 1–12. <https://doi.org/10.1016/j.tate.2021.103286>
- Juszczuk, S., & Kim, Y. (2015). Social Roles and Competences of the Teacher in a Virtual Classroom in Poland and Korea 1. *The New Educational Review*, 42, 153–164.
- Khalili, H., & Hossein Zadeh, M. (2003). Investigation of reliability, validity and normality Persian version of the California Critical Thinking Skills Test; Form B (CCTST). *Journal of Medical Education*, 3(1), 29–32.
- Lamri, J. (2021). *21st century competences*. Wolters Kluwer.
- Nordgrem, K., Kristiansson, M., Liljekovist, Y., & Bergh, D. (2021). Collegial collaboration when planning and preparing lessons: A large-scale study exploring the conditions and infrastructure for teachers' professional development. *Teaching and Teacher Education*, 108, 1–11. <https://doi.org/10.1016/j.tate.2021.103513>
- Pacheco, C. S., & Herrera, C. I. (2021). A conceptual proposal and operational definitions of the cognitive processes of complex thinking. *Thinking skills and creativity*, 39, 1–10. <https://doi.org/10.1016/j.tsc.2021.100794>
- Petrík, Š., & Vašašová, Z. (2022). Relationship Between Interaction Style-Built Teacher Authority and Classroom Climate Dimensions. *The New Educational Review*, 68, 107–118. DOI: 10.15804/tner.2022.68.2.08
- Richter, E., Brunner, M., & Richter, D. (2021). Teacher educators' task perception and its relationship to professional identity and teaching practice. *Teaching and Teacher Education*, 101, 1–10. DOI: 10.1016/j.tate.2021.103303
- Shubina, I., Kwiatek, P., & Kulakli, A. (2021). The Relationships Between Critical Thinking and Creativity Among University Students in Contemporary Education: Empirical Analysis of Gender Differences. *The New Educational Review*, 65, 87–98. DOI: 10.15804/tner.2021.65.3.07
- Śliwa, S. (2021). *Critical competences of Polish and Czech educators in the light of comparative research*. Sindruk Publishing.
- Szempruch, J. (2013). *Pedeutology, Theoretical and pragmatic study*. Oficyna Wydawnicza „Impuls”.
- Uhrinová, M., & Tírpák, J. (2020). Teacher's Personality with Regard to Performance Motivation in a Professional Context. *The New Educational Review*, 59, 47–58. DOI: 10.15804/tner.2020.59.1.04

Valovičová, L., & Sollárová, E. (2020). Effects of an Empirical Cognition Development Programme on the Creative Thinking of Preschool Children. *The New Educational Review*, 60, 85–95. DOI: 10.15804/tner.2020.60.2.07

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