





## Teachers' Professional Attitudes towards Inclusive Education

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### Abstract

In the study, an overview of the current situation in the field of inclusive education in Slovakia is presented. Since teachers' attitudes towards inclusive education are among the key determinants of the success or failure of SEN students' inclusion in mainstream schools, the main objective of the study was to investigate them in the context of implementing the new Strategy for Inclusive Education in Slovakia. In this quantitative study, Mahat [1] "The Multidimensional Attitudes Toward Inclusive Education Scale (MATIES)" was used and three components of teachers' attitudes – cognitive, affective, and behavioral – were examined by means of univariate, bivariate, and multivariate methods of statistical analysis. As the aging of the teaching population is an issue in Slovakia, age-related peculiarities were focused on in the study. The findings revealed statistically significant differences in the affective and behavioral components between the two examined age-groups of teachers. Since no extensive study has been focused on teachers' attitudes towards replacing school integration by school inclusion in Slovakia, the proposed study aims to fill the gap and provide unique data useful in the process of changing traditional schools into inclusive ones. The obtained results also point to the importance of considering teachers' attitudes towards any changes to be introduced.

### Keywords:

Inclusion;  
Inclusive Education;  
Teachers;  
Teachers' Professional Attitudes.

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## 1- Introduction

Recently, an increase in the number of students requiring special educational provision was observed in schools, which can be explained by available WHO [2] and OECD [3] data showing a growing share of individuals with special educational or additional needs in society. As a consequence, one of the current worldwide trends in education is creating inclusive school environments, where students with special educational needs are provided with an opportunity to study in mainstream schools at each level of education. Moreover, ensuring inclusive education where no one is left behind is among the targets of Sustainable Development Goal 4 in the 2030 Agenda for Sustainable Development. Within the framework of the 2030 Agenda implementation, Slovakia has formulated six national priorities, among which "Education for a life in dignity" is ranked first. In line with the "One World" principle, the Slovak Government has made a commitment to apply an inclusive approach and to ensure equal opportunities for all learners.

Even though there have been several initiatives in the field in Slovakia – including on the governmental level, e.g., Modern and Successful Slovakia [4] or the prepared Strategy for Inclusive Education – and the idea of transforming traditional schools into inclusive ones has been supported by both the professional and lay public for several years, the notion of inclusive education was implemented into Slovak school legislation as late as January 2022. Previously, school integration was applied, which is characterized by Ainscow [5] as making only certain additional arrangements for

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individual SEN students instead of restructuring the educational environment. Cline and Fredricson [6] described integration as a process of assimilation or fitting students into the school environment and put it in contrast with school inclusion, which they characterized as a process of accommodation, within which a school radically changes or modifies its work and adapts to its students' needs to an extent, allowing their acceptance. Daniels and Garner [7] point out that making a shift from integration to inclusion does not only mean a change in the applied terminology as a result of an attempt "to be politically correct", but a significant change of perspective. It means a shift from a deficient model based on the premise that all difficulties and problems originate in students to a social model, which says that barriers to learning are embedded in schools and the prevailing attitudes in society. In 2019, there were approximately 36.000 integrated SEN children, pupils, and students in public kindergartens, primary, and secondary schools in Slovakia [8].

In compliance with Bertrand [9], inclusive education can be categorized as a humanist trend in education. It is based on the following two premises defined in the Salamanca Statement [10]; 1. schools should satisfy the needs of all children regardless of their physical, intellectual, emotional, language or other peculiarities; 2. inclusive education in mainstream schools is the most efficient tool for creating an inclusive society. Inclusive schools function as open and accessible institutions with collaborating teachers sharing a common vision – to create such a learning environment for both intact students and students with special educational needs that will promote their well-being. In inclusive schools, no form of discrimination is tolerated [11]. Educational inclusion or inclusive education can be considered an innovative educational model, within which the highest possible number of students with special educational needs are provided with an opportunity to study in mainstream schools together with their intact peers, but creating inclusive schools is not a new initiative. In 1991, Dyson [12], and later also Warnock [13], criticized the concept of uniform mainstream curricula for all and called for developing additional learning resources for SEN students and curricular reforms. It is important to accentuate that the philosophy of inclusive education is based on the premise that social and educational inclusion of students with special educational needs in mainstream schools is beneficial for both SEN and intact students, which has been proven by several extensive research studies – e.g. in the USA, Kalambouka et al. [14] carried out a meta-analysis of 26 research studies and compared the efficiency of inclusive education in performance criteria. On the other hand, it must be noted that the philosophy of inclusive education is not strictly against the existence of special schools, but placing students in them – following precise diagnostics – should be an exception, not the everyday practice [15].

According to Poliach [16] attitudes are among the components of personal ideologies of self and the world consisting of beliefs (with prevailing rationality), personal values (with prevailing emotionality), and attitudes (these contain complex structures grouped around individuals' beliefs and their personal values). It can be declared that attitudes have a significant impact on the development of individuals' value orientation. Zacharová [17] considers individuals' attitudes among the causes of human behaviour and actions (alongside with motives and motivation, personality traits, needs, and interests). Attitudes can be characterized as individuals' preparedness to react to a motivationally significant stimulus in a certain way. They consist of rational, emotional, as well as irrational components and the presence of the last two components causes that attitudes cannot be explained. Attitudes are usually defined as a relatively stable tendency to react to certain problems in a typical way, which also means a relatively stable system of positive or negative characteristics assigned to certain objects, phenomena, situations, persons, etc. They form an integral part of individuals' characteristics and knowing them helps predict their behaviour in various situations to a certain extent. On the other hand, this relative stability often represents a barrier to the application of a critical approach or carrying out objective assessment and can have a negative impact on teachers' everyday educational work.

Zacharová [17] also claims that attitudes are not innate, they develop under the influence of life events, repeated reactions, impressions, emotions, behaviour, dramatic or traumatic experiences, but also significant others, social groups, etc., and so they can even be shaped intentionally [18]. In the context of schools, teachers' attitudes have a significant impact on students' achievement, healthy development and well-being. They also have a big role to play in creating inclusive school environments, in the educational process, and in teachers' interaction with students. Also Boyle, Anderson, and Allen [19] accentuate that teachers' values, as well as their attitudes and understanding the concept of school inclusion are pivotal to how school inclusion is manifested within classrooms, and across the entire school.

### ***1-1- Research in the Field of Inclusive Education in Slovakia***

Recently, inclusive education in the Slovak educational context has been dealt with by several experts, e.g. Barnová [20] paid attention to the issues of inclusive education, its background and goals; Krásna [21] focused on the legislative basis for inclusive education and also formulated its goals; Čepelová [22, 23] investigated into the issues of inclusive education from the aspect of social psychology and vocational school teachers' attitudes towards inclusive education, Rozvadský Gugová [24] presented a neurodidactic approach to working with SEN students; Čepelová and Hasajová [25] focused on the field of inclusive school management taking into account the psychoeducational dimension of secondary school students' inclusion; Hai et al. [26] described the link between special pedagogy and inclusive education; Gabrhelová and Čepelová [27], as well as Krásna and Barnová [28], pointed to inclusive education as a priority in the

European Union; Geršicová and Lajčín [29] compared school inclusion and school integration; Lajčín et al. [30] placed inclusive education in the context of school pedagogy; and Geršicová and Porubčanová [31] dealt with the peculiarities of inclusive education in vocational schools in Slovakia. The issues of inclusive school management and inclusive classroom management were elaborated by Lajčín [32] and Gabrhelová and Lajčín [33]. Despite the fact that a growing number of research projects focusing on the field of inclusive education in Slovakia can be observed, there are still certain gaps – including the field of teachers’ attitudes that need to be filled and further research is needed.

### ***1-2- Research on Teachers’ Attitudes towards Inclusive Education in Slovakia and Other Countries***

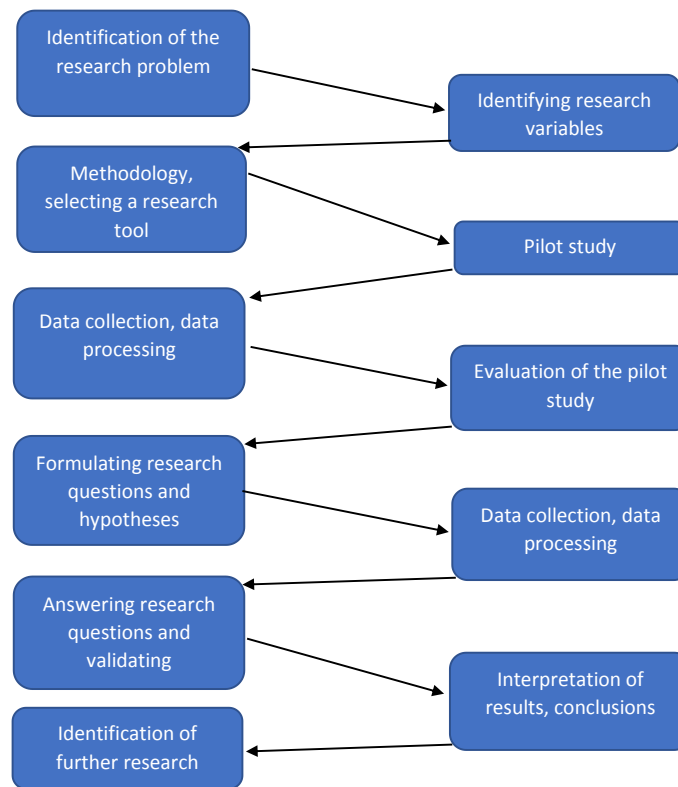
It can be assumed that the quality of the educational process, as well as students’ performance or satisfaction, are strongly influenced by a range of factors, e.g. by teachers’ personalities, competencies, skills, but also opinions and attitudes. Recognizing these opinions and attitudes is the basic precondition for suggesting practices for inclusive education and working with SEN students in schools. Schulze et al. [34] claim that alongside developing inclusive school systems, research on the attitudes of various groups of people towards it has emerged. In their research, they found strong correlations between attitudes towards inclusive school systems and the explicitly expressed attitudes towards the health condition of the disadvantaged. They point out that teachers have a crucial role to play in the education of SEN students. Völlinger and Supanc [35] accentuate that recent research has focused on cooperative learning as a potentially efficient means for promoting inclusive students’ academic and social development.

Stakašienė [36] carried out a qualitative study on music teachers’ attitudes towards inclusive education and the results show that there is an association between the age of respondents and their attitudes – older participating teachers not only were more sceptic than their younger colleagues as for the application of the idea of inclusive education, but they were also trying to avoid collaboration with their colleagues and sharing examples of good practice. According to Van Steen and Wilson [37], the success of inclusive education depends on class teachers’ efforts to adapt the existing conditions to the special educational needs of students in the classroom. Their findings also show that teachers in general have positive attitudes towards the inclusion of students with health disadvantages in mainstream schools and these are not influenced by cultural and demographic factors. Opoku et al. [38] examined attitudes and self-efficacy as significant predictors of secondary school teachers’ willingness to implement inclusive education in Ghana and the results revealed statistically significant associations. In the Irish environment, research results showed that teachers’ attitudes towards the construct of inclusion were different from the educational practice, which was closer to integration than inclusion [39]. It is interesting that there was no association between subjective norms and attitudes towards inclusive education. Raguindin et al. [40] were interested in the inclusive procedures that teachers apply in South-East Asia and they noted that more than two decades following the adoption of the Salamanca Statement, discrimination and marginalization were still present in education.

Any process of transformation is demanding, and the process of changing traditional schools into inclusive ones represents a challenge for all stakeholders – including schools, teachers, pupils/students, pupils’/students’ parents, as well as the government. Experience shows that teachers’ attitudes towards changes or innovations are among the decisive factors from the aspect of their success or failure. The same applies to inclusive education and available research results [37, 41, 42] confirm that the success of the implementation of inclusive education is determined by teachers’ readiness to educate diverse groups of students and their willingness to apply an inclusive approach in their educational work. Therefore, it is important to gather research data providing experts with a picture of the current situation and other relevant information that could help them make responsible decisions and take efficient measures. Therefore, in this study, we attempted to explore the attitudes of Slovak teachers towards inclusive education in the cognitive, behavioural, and affective components.

## **2- Methods**

It is generally accepted that teachers’ professional attitudes contribute to the efficiency of changes in schools. Vašat [43] claims that in the case of exclusion as such, not the “otherness” of the excluded groups is decisive, but the fact that the concept of “otherness” exists in the majority group. Therefore, knowledge about the attitudes of all stakeholders (teachers, parents, SEN students, intact students, school managers, school founders, etc.) towards inclusive education in the process of the implementation of the concept of educational inclusion into the Slovak school system is necessary. The aim of the research study presented below was to contribute to this knowledge and to gather complex data about teachers’ attitudes towards inclusive education. In the paper, the partial results of the conducted research on the associations between teachers’ age peculiarities and their attitudes towards inclusive education are presented. The research hypotheses presumed statistically significant differences between the two investigated age categories of teachers (47 years old or younger; 48 years old or older) in the cognitive, affective, and behavioural components of their attitudes. Figure 1, shows the flowchart of the research methodology through which the objectives of this study were achieved.



**Figure 1. Flowchart of the research methodology**

### 2-1- Research Tools

For the purposes of the research, Mahat's [1] standardized MATIES questionnaire (The Multidimensional Attitudes toward Inclusive Education Scale) adapted to the conditions of the Slovak educational environment [44] was used. It consists of 18 items with 6-point Likert scales ranging from 1 – completely agree to 6 – completely disagree. The questionnaire items saturate three components – cognitive, affective, and behavioural – based on the three-factor theoretical model of attitudes by Fazio and Olson [45]. The scale includes 18 inclusion indicators and each component is addressed by six items in the questionnaire. Traditional item analysis was used to calculate the psychometric characteristics of the scores for each component. Within the research, univariate, bivariate, and multivariate methods were used.

### 2-2- Research Sample

The research sample consisted of 257 teachers in Slovakia, amongst whom 156 (60.7%) were female teachers and 101 (39.3%) were male teachers. The research sample was dichotomized based on the age of respondents and two categories were created – younger teachers aged between 27 and 47 years – 125 (48.6%) respondents, and older teachers aged between 48 and 72 years – 132 (51.4%) respondents. From the aspect of the length of the respondents' teaching practice, the research sample can be divided into two groups as well – 129 (50.2%) respondents with teaching practice ranging from 3 months to 18 years and 128 (49.8%) respondents had teaching practice ranging from 19 to 43 years.

## 3- Results and Discussion

### 3-1- Cognitive Component

In one of the hypotheses, it was presumed that in the cognitive component, there are statistically significant differences between older (aged between 48 and 72 years) and younger (aged between 23 and 47 years) teachers in the field of their attitudes towards inclusive education. More positive responses were expected in the group of younger respondents as generally, younger people are considered more progressive and open to new things. In the cognitive component, no statistically significant differences were found (see Tables 1 and 2) and so, the hypothesis was rejected.

**Table 1. Scores for the cognitive component – age groups**

Age groups	Group average	Standard deviation	Column A (t)	Column B (T)
23-47 years	19.60	3.483	19.29	125
48-72 years	20.11	3.662	20.42	132
Total	19.86	3.578	19.92	257

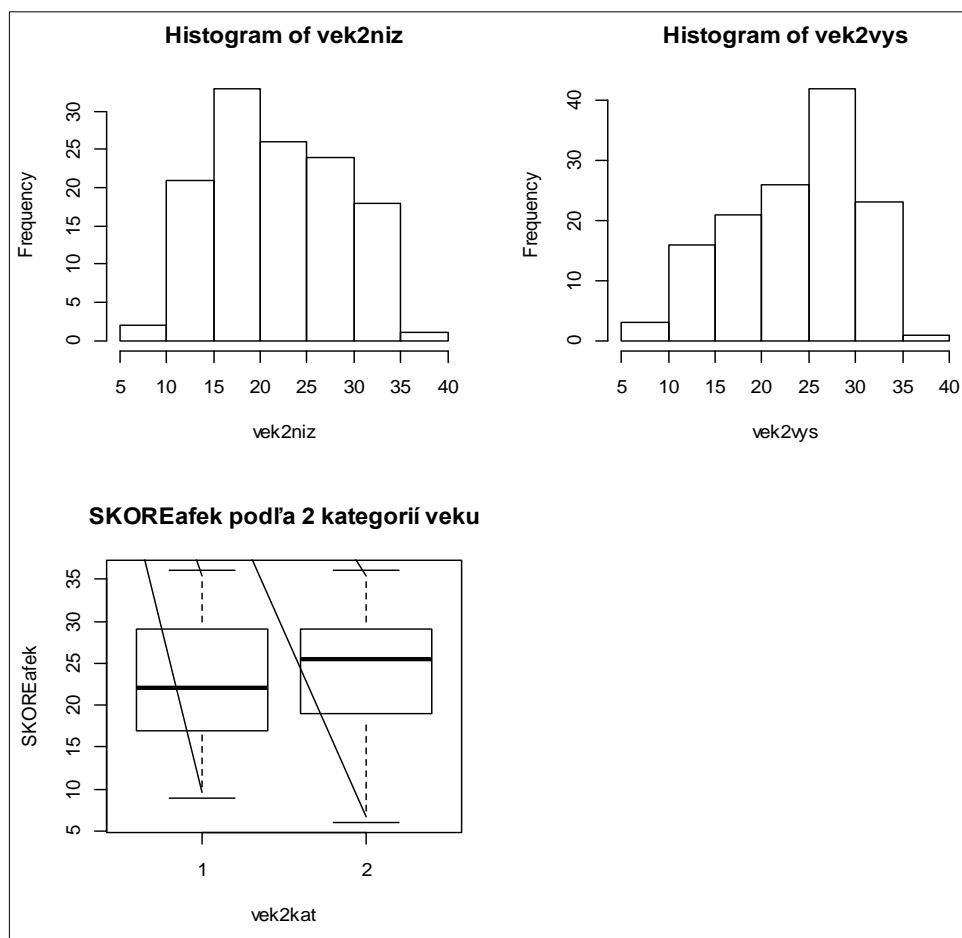
**Table 2. t-Test – Scores for the cognitive component of the respondents' attitudes towards inclusive education – age groups**

Age		Levene's test for equality of variances		t-test for equality of means		
		F	Sig.	t	Df	Sig. (2-tailed)
Scores for the Cognitive component	Equal variances assumed	0.71	0.790	-0.799	255	0.425
Total	Equal variances not assumed			-0.799	254.270	0.425

The obtained findings show that in the research sample, the age factor – in relation to the obtained results in the cognitive component – has no significant impact on the declared attitudes towards inclusive education in teachers. Teachers participating in our research – regardless of their age – believe that inclusive schools enable every student's progress and the inclusion of SEN students in mainstream schools can promote socially acceptable behaviour in every student in the classroom. The respondents also agree that if the curriculum is adapted to every student's needs; all students can meet the school's requirements. On the other hand, it is surprising that, in their opinion, students with special educational needs – in the case of more severe needs – should be educated in special schools as educational inclusion is expensive for schools and they also believe that it can prevent SEN students' rejection by intact students in mainstream schools, which could represent a negative experience for them. This finding matches the results of a research synthesis presented by Arvadimis and Norwich [46]. They found out that teachers, although being positive towards the idea of inclusive education, do not share a 'total inclusion' approach and believe that students should be placed in schools based upon the nature of their disabilities.

### 3-2-Affective Component

The next hypothesis presumed statistically significant differences in the affective component of teachers' attitudes towards inclusive education between the groups of older and younger respondents. Again, more openness to innovations was expected in the younger group of respondents. The scores for the affective component were calculated by summarizing the responses in the six related questionnaire items. Following exploratory data analysis – including graphical analysis of normality and four tests of normality – it was found out that the scores for the affective component were not normally distributed. The asymmetric distribution of the dependent variable frequency was also tested on two independent selections (see Figure 2).

**Figure 2. Frequency distribution of the scores for the affective component – age groups**

The histograms (Figure 2) show oppositely skewed distributions of the selections. In this boxplot, an asymmetric distribution of means can be observed.

In the hypothesis, the existence of statistically significant differences between the group of older teachers (48 years old or older) and younger teachers (47 years old or younger) in their group means was presumed with more positive attitudes in the group of younger respondents. A two-tailed test at the significance level  $\alpha=0.05$  was performed (see Table 3).

**Table 3. Scores for the affective component of the attitudes towards inclusive education – age groups**

Age groups	Group mean	Standard deviation	Group Median	N
23-47 years	22.39	6.884	21.64	125
48-72 years	24.26	6.755	25.50	132
Total	23.35	6.868	23.80	257

The difference between group means is 1.87 and between group medians it is 3.86. Higher values in the affective component were achieved by the group of older respondents (aged between 48 and 72 years).

The P-value for the Wilcoxon rank sum test is  $p=0.0255$  and it is lower than the significance level ( $\alpha=0.05$ ). Wilcoxon's robust t-test showed an even lower value ( $p=0.0067$ ), as well as the Brunner-Munzel rank-order test ( $p=0.0257$ ). As the p-values are lower than the significance level in all three tests, the null hypothesis can be rejected and the alternative hypothesis can be confirmed. The differences in the scores in the affective component between the two groups of respondents are statistically significant and the values of group mean and group median are higher in the age group of 48 years old or older teachers.

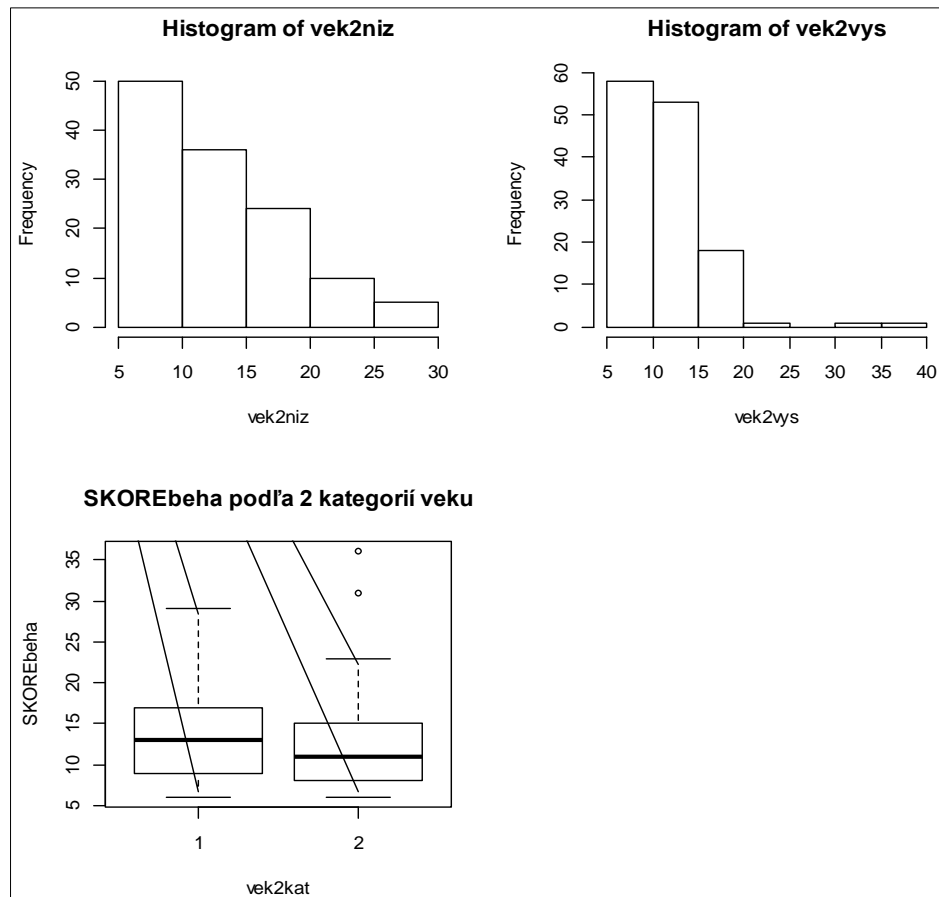
The results show that the group of older teachers have doubts and are more frustrated as for communicating with SEN students. They feel significantly more helpless in situations when SEN students cannot keep up with their intact peers compared with their younger colleagues and they are also significantly more worried about situations when it is necessary to adapt the educational content to the individual needs of every student in the classroom. Older teachers showed statistically significantly higher dissatisfaction with including SEN students in mainstream schools, especially in cases when the type and severity of their needs is not considered. These findings match the results of other research, e.g. Krásna and Čepelová [47] found out that older teachers prefer placing SEN students in special schools; younger teachers and less experienced teachers showed to be more supportive to the idea of placing SEN students in mainstream classrooms in the research studies by Clough, Clough, and Lindsay [48], Forlin [49], Leyser et al. [50]; and also Vaz et al. [51] revealed more negative attitudes towards inclusion in older or more experienced teachers compared with their younger colleagues.

The above findings can be explained by several possible causes. One of them is that more experienced or older teachers have already developed certain routines and every change, extra work or new requirements placed on them can be associated with anxiety and it can be perceived as an adversity. The link between teachers' expectations related to extra work and their attitudes towards inclusive education was examined in Saloviita [52] and the findings showed that in Finland, teachers with the highest expectations of extra work held the most negative attitudes towards inclusion. People naturally try to avoid situations which could disrupt their harmony, suppress dissenting information, rationalize them, and apply a range of coping strategies – including defensive behaviour – which can be reflected in their attitudes towards inclusive education as well.

### **3-3- Behavioural Component**

Statistically significant differences in the behavioural component of teachers' attitudes towards inclusive education between the groups of older and younger respondents were presumed in one of the hypotheses.

The scores for the behavioural component were calculated by summarizing the responses in the six related questionnaire items. Following exploratory data analysis including graphical analysis of normality and four tests of normality, it was found out that the scores for the behavioural component were not normally distributed. The asymmetric distribution of the dependent variable frequency was also tested on two independent selections (see Figure 3)



**Figure 3.** Frequency distribution of the scores for the behavioural component – age groups

The histograms (Figure 3) show that the distributions for the age group of younger teachers, as well as for the group of older teachers, are significantly skewed. An asymmetric distribution of means can be observed and also outliers can be seen in this boxplot.

In the hypothesis, the existence of statistically significant differences between the group of older teachers (48 years old or older) and younger teachers (47 years old or younger) in their group means were presumed. A two-tailed test at the significance level  $\alpha=0.05$  was performed (Table 4).

**Table 4.** Scores for the behavioural component of the attitudes towards inclusive education – age groups

Age groups	Group mean	Standard deviation	Group median	N
23-47 years	13.35	5.766	12.75	125
48-72 years	11.70	4.705	11.14	132
Total	12.50	5.303	11.81	257

The difference between group means is 1.66 and between group medians, it is a close value – 1.61. Higher values in the behavioural component were achieved by the group of the younger respondents (aged between 23 and 47 years).

The P-value for the Wilcoxon rank sum test is  $p=0.02$  and it is lower than the significance level ( $\alpha=0.05$ ). Wilcoxon's robust t-test showed a very close value ( $p=0.03$ ), as well as the Brunner-Munzel rank-order test ( $p=0.02$ ). As the p-values are lower than the significance level in all three tests, the null hypothesis can be rejected and the alternative hypothesis can be confirmed. The differences in the scores in the behavioural component between the two groups of respondents are statistically significant and the values of group mean and group median are higher in the age group of 47 years old or younger teachers.

The findings show that, in the group of younger respondents (47 years old or younger), the attitudes towards adapting the classroom environment to the needs of SEN students are statistically significantly more negative than in the group of older respondents, and the same applies to the attitudes related to teachers' willingness to adapt the ways of communication and the applied procedures to the needs of SEN students. In the behavioural component, statistically significantly less positive attitudes of younger respondents (47 years old or younger) towards modifying students' performance assessment and curricula to make the educational inclusion of SEN students easier and to meet the needs

of all students regardless of their diversity were observed. On the other hand, in the group of younger respondents (47 years old or younger), statistically significantly less negative attitudes towards the participation of SEN students in all social classroom activities were revealed and they showed more willingness to physically help students with any kind of health disadvantage during the educational process. Based on the above findings, it can be assumed that there is a conflict between younger teachers' beliefs and their actions.

There are several possible explanations for such a situation, e.g. in general, younger teachers have a shorter teaching practice, i.e. they are less experienced in the field of working with SEN students. Also, every new job-related "duty" or requirement could be perceived as another factor increasing their workload and, thus, their stress levels, too. A certain degree of unawareness as to the basic functioning methods and procedures to be applied in the educational work with SEN students can be considered among the causes leading to more negative attitudes in the behavioural component of the occurrence. In the case of older teachers, more teaching experience can be considered a stabilizing factor. There is also an increased probability of having some kind of teaching experience with SEN students, as well as having opportunities to try out and adopt some functional methods and procedures for working with them, which could explain the observed more positive attitudes in the group of older teachers (48 years old and older). If we compare the presented research findings with the results by Boyle et al. [53], which showed that novice teachers in Scotland were enthusiastic and became more negative about inclusion after the first year of teaching when they faced the educational reality, it suggests that they are better prepared in theory and more confident about working in diverse classroom environments than Slovak novice teachers. This topic, as developed, opens up further opportunities for qualitative research.

#### 4- Summary and Conclusion

Since attitudes towards inclusive education can affect the perception of SEN students as if being able to be educated in mainstream classrooms [19], from the aspect of school inclusion's successful implementation into the Slovak educational system it is necessary to possess sufficient information about them. The presented research findings show that there are statistically significant differences between the two observed age-groups of teachers in their attitudes towards inclusive education in affective and behavioral components. In the cognitive component, no statistically significant differences were found, but as the findings indicate, teachers believe that if the curriculum is adapted to every students' needs, all students can meet the school's requirements. On the other hand, in their opinion, students with more severe special educational needs should be educated in special schools based on the nature of their disability, which is in line with the findings by Avramidis and Norwich [46]. Slovak teachers find educational inclusion expensive for schools, and they also believe that placing SEN students in special schools can prevent their rejection by intact students in mainstream schools.

The findings in the next two components revealed that older or more experienced teachers feel less prepared for working with SEN students. When considering the fact that they have received limited or no training in the field of inclusive teaching, this finding is not surprising. Therefore, it is natural that they are less open to the philosophy of school inclusion than their younger colleagues. They have doubts about placing SEN students in mainstream schools without considering the extent of their health disadvantages and are more frustrated about communicating with SEN students. The findings also indicate that they feel more helpless when SEN students cannot keep up with their intact peers compared with their younger colleagues, and they are more worried about the requirement to adapt the educational content to the individual needs of every student in the classroom. Even though younger teachers (47 years old or younger) appear to be more enthusiastic about inclusive education, it is not reflected in their everyday teaching practice. Their attitudes towards adapting the classroom environment, the ways of communication, or the applied procedures to the needs of SEN students are statistically significantly more negative than in the group of older respondents. If compared to their more experienced colleagues, they have less positive attitudes towards modifying students' performance assessments and curricula to meet every students' needs. On the other hand, they are more open to the participation of SEN students in all social classroom activities and they show more willingness to physically help students with any kind of health disadvantage during the educational process.

Although it could be presumed that older or more experienced teachers in general have more negative attitudes towards including SEN students in mainstream schools and thus achieve lower scores in the questionnaire survey compared to their younger colleagues, as the concept of inclusive education differs from the currently applied system of school integration, in the case of our research sample, the opposite is true. One of the possible explanations for this finding could lie in the fact that they are professionally more experienced and more confident in their professional activities, which is also reflected in their mastery of teaching. Similar findings can be found in other studies; e.g. Greek teachers with more experience felt more comfortable in teaching students with special educational needs than their younger or less experienced colleagues [54], but e.g. Rakap and Kaczmarek's [55] findings show more positive attitudes in younger teachers in Turkey, and in the study by Boer, Pijl, Post, and Minnaert [56], no significant differences were found according to the variable of age.



Insecurity in working with SEN students and a lack of knowledge and experience are not a country-specific problem. There are a number of studies demonstrating problems with the application of school inclusion. In their study by Rakap and Kaczmarek [55], Turkish teachers showed slightly negative attitudes towards inclusive education. A similar conclusion was made by Boer, Pijl, and Minnaert [57]. Their findings showed that the majority of teachers adopted neutral or negative attitudes. It cannot be claimed that our participating teachers' attitudes towards inclusive education are negative, but they point to the fact that there is no reason for satisfaction with the status quo and there is a lot of work to be done in the field. They can be a signal of unfavourable conditions created for the realization of inclusive education in schools, e.g. a lack of teacher assistants and specialists in schools, missing school equipment, problems with funding, etc., but also of insufficient preparedness of teachers for working in inclusive schools and a lack of teacher training opportunities in this field (in TALIS 2018, 26% of Slovak teachers reported a high need for education in teaching students with special educational needs [58]). Ensuring high-quality teacher training and opportunities to gain knowledge about inclusive practices as well as understanding the principles of creating inclusive environments is a task for universities, which can develop teacher trainees' knowledge but also promote inclusive attitudes in teacher trainees, and thus prepare them for working in inclusive classrooms [59]. The importance of the availability and accessibility of lifelong learning opportunities is accentuated by the European Agency for Special Needs and Inclusive Education [60].

Due to the limits of the research study given by the composition of the research sample and its size, the above-presented findings cannot be generalized to the whole population of Slovak teachers. However, they can be considered significant, especially in the context of the planned process of implementing the new Strategy for Inclusive Education in Slovakia in 2021, as understanding teacher attitudes towards inclusion is an important component of progressing inclusion within schools [19]. Negative attitudes towards inclusion are learned, greatly influenced by prior exposure, and may be the result of a lack of knowledge about, or experience in, inclusive processes. Even though the obtained results cannot be generalized to the whole population, they suggest that the variable of teachers' age should be considered when creating inclusive educational environments in schools. This provides implications for further research.

## 5- Declarations

### 5-1- Author Contributions

Conceptualization, M.K., R.O., S.B. and S.K.; methodology, M.K., R.O., S.B. and S.K.; writing-original draft preparation, M.K., R.O., S.B. and S.K.; writing-review and editing, M.K., R.O., S.B. and S.K. All authors have read and agreed to the published version of the manuscript.

### 5-2- Data Availability Statement

The data presented in this study are available on request from the corresponding author.

### 5-3- Funding

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### 5-4- Institutional Review Board Statement

Not applicable.

### 5-5- Informed Consent Statement

Informed consent was obtained from all individual participants included in the study.

### 5-6- Conflicts of Interest

The authors declare that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

## 6- References

- [1] Mahat, M. (2008). The development of a psychometrically-sound instrument to measure teachers' multidimensional attitudes toward inclusive education. *International Journal of Special Education*, 23(1), 82–92.
- [2] World Health Organization (2005). *World Health Statistics 2005 – 2021. Monitoring health for the SDGs*, WHO. Available online: <https://www.who.int/data/gho/publications/world-health-statistics> (accessed on April 2022).
- [3] OECDiLibrary. *Health at a Glance*. Available online: [https://www.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glance\\_19991312](https://www.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glance_19991312) (accessed on March 2022).

- [4] Moderné a úspešné Slovensko. Ministry of Finance of the Slovak Republic. Available online: <https://www.mfsr.sk/sk/financie/institut-financnej-politiky/strategicke-materialy/ine-strategicke-materialy/> (accessed on January 2022). (In Slovak).
- [5] AINSCOW, M. (1995). Education for all: Making it happen. *Support for Learning*, 10(4), 147–155. doi:10.1111/j.1467-9604.1995.tb00031.x.
- [6] Frederickson, N., & Cline, T. (2015). *EBOOK: Special Educational Needs, Inclusion and Diversity*. McGraw-Hill Education, New York, United States.
- [7] Daniels, H., & Garner, P. (2000). *Inclusive education: Supporting inclusion in education systems..* Kogan Page Limited, United Kingdom.
- [8] CVTI SR. (2019). Štatistická ročenka. Bratislava: CVTI SR. Available online: [https://www.cvtisr.sk/cvti-sr-vedeckakniznica/informacie-o-skolstve/statistiky/statisticka-rocenkapublikacia/statisticka-rocenka-specialne-skoly.html?page\\_id=9600](https://www.cvtisr.sk/cvti-sr-vedeckakniznica/informacie-o-skolstve/statistiky/statisticka-rocenkapublikacia/statisticka-rocenka-specialne-skoly.html?page_id=9600) (accessed on January 2022).
- [9] Yven Bertrand, Y. (1998). Contemporary theories of education. Portal. (In Slovak). Available online: [https://is.muni.cz/www/macku/Soudobe\\_theorie\\_vzdelavani\\_A5.pdf](https://is.muni.cz/www/macku/Soudobe_theorie_vzdelavani_A5.pdf) (accessed on April 2022).
- [10] United Nations Educational, Scientific and Cultural Organization (UNESCO). (1994). The Salamanca Statement and Framework for action on special needs education: Adopted by the World Conference on Special Needs Education; Access and Quality. Salamanca, Spain, 7-10 June 1994. Unesco. Available online: <https://unesdoc.unesco.org/ark:/48223/pf0000098427> (accessed on January 2022).
- [11] Both, T., & Ainscow, M. (2000). *Index for Inclusion: A Guide to School Development Led by Inclusive*. Index for Inclusion Network Limited, Cambridge, United Kingdom.
- [12] Dyson, A. (1991). Rethinking roles, rethinking concepts: Special needs teachers in mainstream schools. *Support for Learning*, 6(2), 51–60. doi:10.1111/j.1467-9604.1991.tb00410.x.
- [13] Warnock, M. (2008). Special educational needs: A new look. *Challenges for Inclusion*, 43-65. Brill Sense, leiden, Netherlands. doi:10.1163/9789087903039\_004.
- [14] Kalambouka, A., Farrell, P., Dyson, A., & Kaplan, I. (2007). The impact of placing pupils with special educational needs in mainstream schools on the achievement of their peers. *Educational Research*, 49(4), 365–382. doi:10.1080/00131880701717222.
- [15] Klein, V., & Šilonová, V. (2016). Inclusive education - a call for positive changes in the current school. *Inclusive school and family*. (In Slovak).
- [16] Poliach, V. (2016). *Basics of personality psychology*. Banska Bystrica. (In Slovak).
- [17] Zacharová, E. (2012). *Basics of general psychology*. University of Ostrava, Ostrava, Czech republic. (In Czech).
- [18] Dorazilova, A. (2014). *General psychology and personalities: Cognitive psychology*. Hradec Králové: Gaudeamus. (In Slovak).
- [19] Boyle, C., Anderson, J., & Allen, K. A. (2020). The importance of teacher attitudes to inclusive education. In *Inclusive education: Global issues and controversies*, 127-146. Brill, Leiden, Netherlands. doi:10.1163/9789004431171\_008.
- [20] Barnová, S. (2019). Inclusion, inclusive education and inclusive school in current understanding. Marian Horváth (Ed.). *Socialium Actualis V. Týn nad Vltavou: Nová Forma*, 69-84. (In Slovak).
- [21] Krásna, S. (2019). Legislative bases of inclusion and inclusive education. M.H.S.A.V (Ed.), *Týn nad Vltavou: Nová Forma*, 85–98. (In Slovak).
- [22] Čepelová, S. (2020). Inclusive education from the point of view of social psychology. *Tyn nad Vltavou - Mala Strana: Nova Forma*. (In Slovak).
- [23] Čepelová, S. (2020). Attitudes of teachers of vocational (vocational) subjects in secondary vocational schools towards inclusive education. In *Týn nad Vltavou. New Form*. (In Slova)
- [24] Čepelová, S. (2020). Attitudes of teachers of vocational (vocational) subjects in secondary vocational schools towards inclusive education. In *Týn nad Vltavou. New Form*. (In Slovak).
- [25] Čepelová, S., & Hasajová, L. (2020). Selected chapters from the management of an inclusive school in the context of the psychoeducational dimension of inclusion of secondary school students. *Dubnica nad Váhom: DTI University*. (In Slovak).
- [26] Hai, T. N., Van, T. T., & Thi, H. N. (2021). Relationship between Transformational Leadership Style and Leadership Thinking of Provincial Administration Leaders. *Emerging Science Journal*, 5(5), 714–730. doi:10.28991/esj-2021-01307.
- [27] Gabrhelová, G., & Čepelová, S. Inclusive education in secondary vocational schools as a current challenge of the European Union. In Jiří Dušek. *Quality of life in educational contexts*. České Budějovice: University of European and Regional Studies, 21–33. (In Slovak).

- [28] Krásna, S., & Barnová, S. (2020). Inclusive education as a reality in Europe 2030. In Jiří Dušek. *Quality of life in educational contexts*. České Budějovice: University of European and Regional Studies, 33–43. (In Slovak).
- [29] Geršicová, Z., & Lajčín, D. (2020). Integration versus inclusion of disadvantaged students in the school environment. In *Pedagogica Actualis XI: society and education*. Trnava: University of St. Cyril and Methodius in Trnava, 120–129. (In Slovak).
- [30] Lajčín, D., Krásna, S., Barnová, S., Geršicová, Z., Gabrhelová, G., Čepelová, S., & Rozvadský Gugová, G. (2020). *School pedagogy III. Inclusive education*.
- [31] Geršicová, Z., & Porubčanová, D. (2020). Pupils with special educational needs in the environment of secondary vocational schools. In *Dubnica nad Váhom: DTI University*. (In Slovak).
- [32] Lajčín, D. (2021). *Inclusive school management in theory and practice*. Týn nad Vltavou - Malá Strana: Nová Forma. (In Slovak).
- [33] *Classroom management in vocational education and training as part of inclusive school management*. In Týn nad Vltavou. New Form. (In Slovak).
- [34] Schulze, S., Lüke, T., Schröter, A., Krause, K., & Kuhl, J. (2019). Replication study concerning the test quality of the attitude scale measuring attitudes towards the inclusive education system in the whole population—a contribution to validation. *Unterrichtswissenschaft*, 47(2), 201–219. doi:10.1007/s42010-018-00034-3. (In Slovak).
- [35] Völlinger, V. A., & Supanc, M. (2020). Student teachers' attitudes towards cooperative learning in inclusive education. *European Journal of Psychology of Education*, 35(3), 727–749. doi:10.1007/s10212-019-00435-7.
- [36] Strakšienė, D. (2020). Opportunities for Inclusive Music Education in the General Education School: An Analysis of Teachers' Attitudes. *Studia Universitatis Babeş-Bolyai Musica*, 65(1), 55–68. doi:10.24193/subbmusica.2020.1.04.
- [37] Van Steen, T., & Wilson, C. (2020). Individual and cultural factors in teachers' attitudes towards inclusion: A meta-analysis. *Teaching and Teacher Education*, 95, 103127. doi:10.1016/j.tate.2020.103127.
- [38] Opoku, M. P., Cuskelly, M., Pedersen, S. J., & Rayner, C. S. (2021). Attitudes and self-efficacy as significant predictors of intention of secondary school teachers towards the implementation of inclusive education in Ghana. *European Journal of Psychology of Education*, 36(3), 673–691. doi:10.1007/s10212-020-00490-5.
- [39] Young, K., Mannix McNamara, P., & Coughlan, B. (2017). Authentic inclusion-utopian thinking? – Irish post-primary teachers' perspectives of inclusive education. *Teaching and Teacher Education*, 68, 1–11. doi:10.1016/j.tate.2017.07.017.
- [40] Raguindin, P. Z. J., Ping, L. Y., Duereh, F., & Lising, R. L. S. (2020). Inclusive practices of in-service teachers: A quantitative exploration of a southeast Asian context. *European Journal of Educational Research*, 9(2), 787–797. doi:10.12973/eu-jer.9.2.787.
- [41] Zelina, M. (2020). Interviews with Teachers about Inclusive Education. *Acta Educationis Generalis*, 10(2), 95–111. doi:10.2478/atd-2020-0012.
- [42] Barnová, S. (2021). *Psychoeducational dimension of secondary school inclusion*. České Budějovice: Nová Forma. (In Slovak).
- [43] Vašat, J. Social exclusion and inclusion. Available online: <http://inul.fse.ujep.cz/download.php?idx=1279> (accessed on January 2022). (In Slovak).
- [44] Valovič, J. (2015). Research report on teacher inclusion. Activity 1.2. In *National Project Increasing the Quality of Education at Primary and High Schools Using Computer-Based Testing*, Bratislava: NÚCEM, 16-17.
- [45] Fazio, R. H., & Olson, M. A. (2003). Implicit Measures in Social Cognition Research: Their Meaning and Use. *Annual Review of Psychology*, 54, 297–327. doi:10.1146/annurev.psych.54.101601.145225.
- [46] Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: A review of the literature. *European Journal of Special Needs Education*, 17(2), 129–147. doi:10.1080/08856250210129056.
- [47] Krásna, S., & Čepelová, S. (2020). Attitudes of secondary vocational school teachers to inclusive education in selected regions of the Slovak Republic. In *Pedagogica actualis XI: society and education*. Trnava: University of St. Cyril and Methodius in Trnava, 230–237. (In Slovak).
- [48] Clough, D. P., Clough, P., & Lindsay, G. (2003). *Integration and the Support Service*. Routledge, Oxfordshire, United Kingdom. doi:10.4324/9780203220795.
- [49] Forlin, C. (1995). Educators' beliefs about inclusive practices in Western Australia. *British Journal of Special Education*, 22(4), 179–185. doi:10.1111/j.1467-8578.1995.tb00932.x.
- [50] Leyser, Y., Kapperman, G., & Keller, R. (1994). Teacher attitudes toward mainstreaming: a cross - cultural study in six nations. *European Journal of Special Needs Education*, 9(1), 1 - 15. doi:10.1080/0885625940090101.
- [51] Vaz, S., Wilson, N., Falkmer, M., Sim, A., Scott, M., Cordier, R., & Falkmer, T. (2015). Factors associated with primary school teachers' attitudes towards the inclusion of students with disabilities. *PLoS ONE*, 10(8), 137002. doi:10.1371/journal.pone.0137002.

- [52] Saloviita, T. (2019). Explaining classroom teachers' attitudes towards inclusive education. *Support for Learning*, 34(4), 433–442. doi:10.1111/1467-9604.12277.
- [53] Boyle, C., Topping, K., & Jindal-Snape, D. (2013). Teachers attitudes towards inclusion in high schools. *Teachers and Teaching: Theory and Practice*, 19(5), 527–542. doi:10.1080/13540602.2013.827361.
- [54] Tsakiridou, H., & Polyzopoulou, K. (2014). Greek Teachers' Attitudes toward the Inclusion of Students with Special Educational Needs. *American Journal of Educational Research*, 2(4), 208–218. doi:10.12691/education-2-4-6.
- [55] Rakap, S., & Kaczmarek, L. (2010). Teachers' attitudes towards inclusion in Turkey. *European Journal of Special Needs Education*, 25(1), 59–75. doi:10.1080/08856250903450848.
- [56] De Boer, A., Pijl, S. J., Post, W., & Minnaert, A. (2012). Which variables relate to the attitudes of teachers, parents and peers towards students with special educational needs in regular education? *Educational Studies*, 38(4), 433–448. doi:10.1080/03055698.2011.643109.
- [57] De Boer, A., Pijl, S. J., & Minnaert, A. (2011). Regular primary schoolteachers' attitudes towards inclusive education: A review of the literature. *International Journal of Inclusive Education*, 15(3), 331–353. doi:10.1080/13603110903030089.
- [58] Organization for Economic Co-operation and Development. (2019). Results from TALIS 2018-Volume I: Teachers and School Leaders as Lifelong Learners. Country Note. OECD, Slovak Republic. Available online: [http://www.oecd.org/education/talis/TALIS2018\\_CN\\_SVK.pdf](http://www.oecd.org/education/talis/TALIS2018_CN_SVK.pdf) (accessed on January 2022).
- [59] Campbell, J., Gilmore, L., & Cuskelly, M. (2003). Changing student teachers' attitudes towards disability and inclusion. *Journal of Intellectual and Developmental Disability*, 28(4), 369–379. doi:10.1080/13668250310001616407.
- [60] Watkins, A. (2012). Teacher Education for Inclusion. Profile of Inclusive Teachers. The European Agency for Development in Special Needs Education and Inclusion (EADSNEI). Available online: <https://www.european-agency.org/sites/default/files/Profile-of-Inclusive-Teachers.pdf> (accessed on April 2022).