

**Yankova, Zh. (2018)**Development of Special Educational Needs Support For Children and Students with Special Educational Needs, Научно списание, Стратегии на образователната и научната политика, кн.5, с.545-551

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## **ATTITUDES AND KNOWLEDGE ABOUT INCLUSIVE EDUCATION OF STUDENTS WITH VISUAL IMPAIRMENT: ELEMENTARY AND HIGH SCHOOL TEACHERS**

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### **Abstract**

The success of inclusive education (IE) largely depends on teachers' attitudes and knowledge toward students with disabilities (Dapudong, 2014). A great deal of scholarly research focuses on the attitudes of teachers regarding educating students with disabilities. Unfortunately, a small number of studies refer to teachers' attitudes and knowledge toward students with visual impairment (VI). This research focuses on elementary and high school teachers' attitudes and knowledge regarding the inclusive education of students with visual impairment. This study brings up the following research questions: 1) Do elementary and high school teachers have positive attitudes towards IE of students with VI? 2) Do these teachers consider that they have enough knowledge toward inclusion of students with VI? A total of 135 teachers, working in elementary and high schools, returned the completed survey. A two-part questionnaire was used in this study. Part one gathered information relating to personal and professional characteristics of the teachers. Part two was a 14-item Likert scale titled, Attitudes, Knowledge and Previous Experience about Inclusive Education Questionnaire (AKPEIEQ). The major finding of the study was that the elementary and high school teachers had positive attitudes towards the inclusion of students with VI. Almost all of participants (90,4%) considered the presence of support professionals (special educators) in the classroom an indispensable element for an efficient IE. In addition, 39.3% of them have the ability to provide guidance to students with VI about their future professional opportunities and felt qualified to do their job according to the requirements of IE.

**Keywords:** *teachers, attitudes, knowledge, inclusive education, students with visual impairment*

### **Introduction**

Inclusive education (IE) is not simply about making regular schools available for students with visual impairment. In fact, it is about being proactive in identifying barriers and obstacles faced by those students in trying to access quality education opportunities, as well as removing

those barriers that lead to exclusion (UNESCO, 2013). In order inclusive education to become a reality, we as a society must ensure that all students, especially students with disabilities, have access to quality education.

In a very large number of studies, the attitude of teachers towards the education of students with disability has been put forward as a decisive factor in making schools more inclusive. Namely, if mainstream teachers do not accept the education of these students as an integral part of their job, they will try to ensure that someone else (often the special educators) takes responsibility for these students and will organize covert segregation in school (Mutasa, Goronga, & Tafangombe, 2013).

Teachers seem to be a key factor in successful inclusion, as they have an important position in education (Forlin & Chambers 2011). They serve as intermediaries between the state, various stakeholders in education, parents, policies and legislation, and the students, as they are responsible for implementing policy in inclusive environments and sharing and promoting inclusion principles in the classroom (Pappas, Papoutsi and Drigas, 2018).

The success of inclusive education largely depends on teachers' attitudes and knowledge toward students with disabilities (Dapudong, 2014). A great deal of scholarly research focused on the attitudes of teachers regarding educating students with disabilities. Unfortunately, a small number of studies refer to teachers' attitudes and knowledge toward students with visual impairment (VI).

This research focuses on elementary and high school teachers' attitudes towards and knowledge about inclusive education of students with visual impairment. The present study explores the following research questions: 1) Do elementary and high school teachers have positive attitudes towards IE of students with VI? 2) Do these teachers consider that they have enough knowledge toward inclusion of students with VI?

## **Method**

### *Sample*

The research involved 135 teachers from two municipalities: Berovo and Negotino. Of these, 71 (52.6%) are teachers in elementary school, and 64 (47.4%) are high school teachers. Half of them, 68 (50.4%) are aged 35-50, over 35 were 45 (33.3%), and 22 (16.3%) were less than 35 years old. According to the length of service, the respondents were divided in 3 groups: up to 10 years, from 10 to 20 years, and more than 20 years of work experience. Most of them had a working experience of 10 to 20 years (55 or 40.7%), and at least up to 10 years (36 or 26.7%).

### *Instrument*

The Attitudes, Knowledge and Previous Experience about Inclusive Education Questionnaire (AKPEIEQ) was used to examine educators' attitudes and knowledge about educational inclusion of students with VI. This instrument consisted of two parts: (a) the IE Attitude Scale, and (b) the IE Knowledge Scale, which comprised seven items. Both dimensions used a five-level Likert scale (1= Strongly disagree, 2= Disagree, 3= Undecided, 4= Agree, 5= Strongly agree). For the purposes of this research, the original term "students with special educational needs" was replaced by "students with visual impairment". At the beginning of the questionnaire, the definition of students with visual impaired was briefly explained. In the Republic of North Macedonia, blindness is defined as visual acuity equal to or less than 0.1, or equal to or less than 0.25 corresponding visual field loss to less than 20°, in the better eye with the best possible correction. Low vision is defined as visual acuity equal to or less than 0.4, in the

better eye with the best possible correction, or more than 0.4, if there is a medical prognosis of progressive reduction of visual acuity(Official Gazette of the Republic of Macedonia, No.30/2000). The umbrella term visual impairment includes low vision and blindness.

In our country, students from 5 to 14 years of age are educated in elementary school, and in high school from 14 to 18 years of age. Both schools are compulsory.

### Statistics

The results were analyzed using the software package SPSS 14.0. In order to compare and determine the relationship between the obtained data from the different groups of subjects, an independent test T-test, and Fisher's test were used at a level of significance of  $p < 0.05$ .

### Results

From Figure 1 it can be noted that 42 (59.2%) teachers and 31 (48.4%) of the professors reported having teaching experience with students with visual impairments. With the application of the Fischer test, no statistically significant difference between teachers and professors regarding teaching experience with students with visual impairments was determined ( $F = 0.2302$ ,  $p > .05$ ).

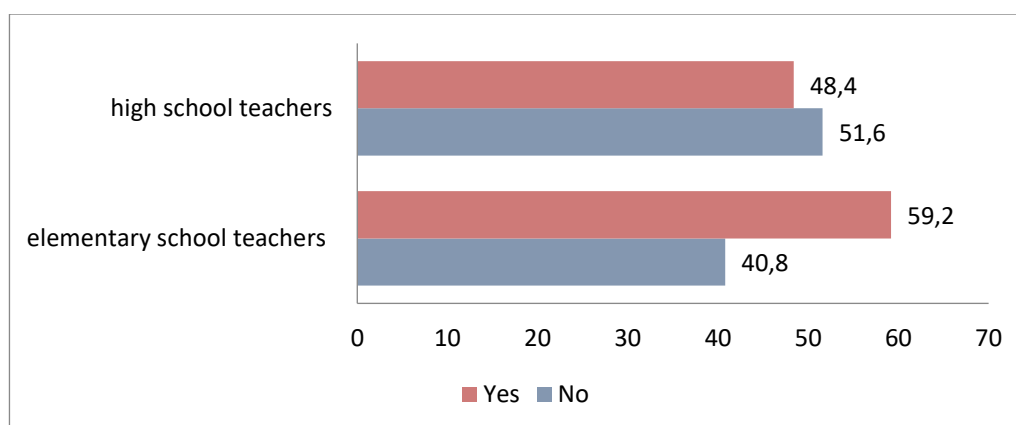


Figure 1. *Teaching experience with students with VI (%)*

The first part of the questionnaire named as *IE Attitude Scale* consists of seven items expressed in the form of statements (Table 1). Five answers are offered for all statements (1 = strongly disagree, 5 = strongly agree).

Table 1. *Attitudes towards inclusion*

Items	Disagree	Unsure	Agree
It is unfair to separate students with SEN from the rest of their peers	11 (8,1%)	4 (3%)	120 (88,9%)
IE develops tolerance and respect among students	4 (3%)	10 (7,4%)	121(89,6%)
I think that all students, including those with moderate and severe disabilities, can learn in inclusive settings	23 (17%)	29 (21,5%)	83(61,5%)
IE* is also possible in secondary education	13 (9,7%)	28 (20,7%)	94(69,6%)
Inclusion has more advantages than disadvantages	7 (5,2%)	42 (31,1%)	86(63,7%)
I am in favour of inclusion	21 (15,6%)	55 (40,7%)	59(43,7%)
Inclusion requires the presence in the classroom of support educators	3 (2,2%)	10 (7,4%)	122(90,4%)
Total	82 (8,7%)	178 (18,8%)	685 (72,5%)

\* Inclusive education

As Table 1 shows, less than half of the participants (43.7%) were in favour of IE, although 88.9% have declared themselves against educational segregation of students with visual impairment. The majority of participants (89.6%) believe that IE develops tolerance and respect. Almost the same percentage of the respondents think that IE is possible in secondary education (69.6%), and the IE has more advantages than disadvantages (63.7%). Lastly, almost all of participants (90,4%) considered the presence of support professionals (special educators) in the classroom an indispensable element for an efficient IE.

Table 2. *Knowledge toward inclusion*

Items	Disagree	Unsure	Agree
I know the declaration and the convention on the rights of persons with VI*	47 (34,8%)	26 (19,3%)	62 (45,9%)
I am able to diagnose a student with VI*	15 (11,1%)	19 (14,1%)	101 (74,8%)
I know the different schooling modalities available for students with VI*	59 (43,7%)	37 (27,4%)	39 (28,9%)
I can provide guidance about the organizational proposals which should be included in a School Educational Project in order to develop IE**	26 (19,3%)	57 (42,2%)	52 (38,5%)
I am able to provide guidance about the methodological adaptations that can be used in class in order to deal with students' diversity	18 (13,3%)	26 (19,3%)	91 (67,4%)
I can provide guidance about future professional opportunities for students with VI*	33 (24,4%)	49 (36,3%)	53 (39,3%)
I feel qualified to carry out my work according to the requirements of IE**	39 (28,9%)	43 (31,8%)	53 (39,3%)
Total	237 (25,1%)	257 (27,2%)	451 (47,7%)

\* Visual impairment \*\* Inclusive education

From Table 2 it can be seen that one third (34.8%) of the participants admitted that they do not know the international regulations for IE. It is interesting that a large percentage of them (74.8%) are considered capable of making a psychopedagogic assessment for students with

visual impairment. 39.3% of them have ability to provide guidance to students with visual impairment about their future professional opportunities, and felt qualified to do their job according to the requirements of IE. Also, 67.4% of them agree that they are able to provide guidance about the methodological adaptations that can be used in class in order to deal with students' diversity. At the same time, 28.9% of participants confirmed they did know about the different inclusive schooling modalities of students with visual impairment.

Table 3. *Differences in attitudes towards inclusion*

Items	elementary school teachers n = 71 M (SD)	high school teachers n = 64 M (SD)	t	p
Separate students with VI*	4.27 (0.92)	3.95 (0.82)	2.075	< .05
Tolerance and respect among students	3.99 (0.83)	4.17 (0.48)	-1.554	> .05
All students can learn in inclusive settings	3.73 (0.83)	3.44 (0.48)	1.834	> .05
IE** is also possible in secondary education	4.03 (0.60)	3.65 (0.55)	2.635	< .05
Has more advantages than disadvantages	3.62 (0.90)	3.72 (0.65)	-0.724	> .05
I am in favour of inclusion	3.21 (1.09)	3.47 (0.81)	-1.536	> .05
Requires the presence of special educators	4.45 (1.09)	4.33 (0.81)	0.942	> .05

\*Visual impairment\*\* Inclusive education

The differences between educators' attitudes was statistically analyzed using the independent-samples t-test (Table 3). A statistically significant difference was found in two of the above statements: "it is unfair to separate students with visual impairment" ( $p < 0.05$ ) and "IE is also possible in secondary education" ( $p < 0.05$ ). Namely, high school teachers had more positive attitudes toward the above statements.

Table 4. *Differences in knowledges towards inclusion*

Items	elementary school teachers n = 71 M (SD)	high school teachers n = 64 M (SD)	t	p
Declaration and the convention	3.24 (1.07)	3.09 (1.10)	0.774	> .05
Diagnose a student with VI*	3.8 (0.82)	3.8 (0.92)	0.039	> .05
Modalities available for students with VI*	2.96 (1.00)	2.83 (0.93)	0.772	> .05
Develop IE**	3.22 (0.77)	3.23 (0.91)	0.045	> .05
Methodological adaptations	3.69 (0.80)	3.55 (0.99)	0.926	> .05
Future professional opportunities	3.46 (0.93)	3 (0.90)	2.916	< .05
Qualified to the requirements of IE**	2.99 (1.03)	3.38 (1.01)	-2.200	< .05

\*Visual impairment\*\* Inclusive education

It was particularly noticeable that elementary school teachers are much more likely to think that they can provide guidance about future professional opportunities for students with VI than high school teachers ( $p < .05$ ). At the same time, high school teachers state that they are more qualified to do their job according to the requirements of IE ( $p < .05$ ).



Table 5. *Differences in attitudes and knowledge towards inclusion*

Teachers	Attitudes	Knowledge	t	p
Elementary school	3.89 (0.79)	3.34 (0.92)	3.821	< .05
High school	3.83 (0.69)	3.27 (0.97)	3.763	< .05

An independent-samples t-test was carried out to evaluate the differences in attitudes towards IE and its specific knowledge and the results did prove to be statistically significant at  $p < .05$  level (Table 5). The educators in this study reported that they had more positive attitudes than knowledge about the inclusion of students with VI in both elementary and high education.

At the end of the questionnaire, educators could write their comments about the inclusion of students with visual impairment. Most of them stressed the need for additional training and educational workshops for working with students with VI, as a need for the continuous professional help from a special educator. One respondent noted: "I accept inclusion, but only on the condition a special educator to be employed in the school," another one believes that "only students with mild impairment can be included in regular school." Obviously they are more positive toward students with moderate visual impairment. This could mean that the effectiveness of inclusive education depends on the types of disabilities. A review of existing literature from the United States, Asia, and Africa suggests that attitudes of teachers toward inclusive education seem to be influenced by the severity of disability and the lack of facilities to support inclusion (Bailey et al., 2015; Gyimah et al., 2009).

### **Conclusion**

Reviewing the attitudes of teachers toward inclusive education, de Boer, Pijl, and Minnaert (2011) posit that teachers are often negative or neutral toward inclusion due to the lack of resources and adequate training they receive. Namely, teachers' attitudes toward inclusion are often not based on ideological arguments but rather on practical concerns about how inclusive education can be implemented (Warnock et al. 2010). In this study, the majority of educators express positive attitudes toward inclusion of students with VI, but at the same time emphasize the need of appropriate teacher training and continuous professional help from a special educator. Consequently, inclusive schools should provide special education training to their teachers to promote inclusion of students with VI. Furthermore, inclusive education in our country is a relatively new concept. Further research is needed to understand the current state of inclusive education of students with VI within the country.

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## **Students with visual impairment and physical education: segregated in “inclusion”?**

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### **Abstract**

After the decades of purposeful and consistent segregation of individuals with disabilities during the Soviet regime of Hungary, The LXXIX. Act on Public Education of 1993 stated that all students with disabilities have the right to attend mainstream schools, and study together with their non-disabled peers. As a result, the number of students with VI (visual impairment) in mainstream schools has been multiplied since 1993. These students, their families and teachers, however, still face challenges of different types. Segregation is present in many school subjects: more than half of students with VI do not participate in PE (physical education) lessons or in extracurricular physical activity. Blind and low-vision students are therefore facing all physiological and social risks of a physically inactive lifestyle. The majority of PE teachers and coaches are not provided education on inclusion and students with disabilities, and the term ‘adapted physical education’ is not yet part of the scientific vocabulary of PE. This paper highlights the barriers of involving students with VI in mainstream PE lessons, and introduces initiatives which are meant to promote accessible PE.

Keywords: visual impairment, physical education, access

### **Background**

Regular PA (physical activity) has multiple, life-long benefits for persons with VI (visual impairment) or blindness, and individuals with disabilities in general. It is therefore vital to underline these outstanding benefits on the widest possible range of scientific and teacher training forums, among experts and parents likewise. This paper introduces participation rates of individuals with disabilities in PA. Then, consequences of an inactive lifestyle, followed by