

# TEACHERS' ATTITUDES TOWARDS INCLUSIVE EDUCATION IN NORTH MACEDONIAN SCHOOLS

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## ABSTRACT

**Aim.** This study examines the views of primary school teachers on inclusive education in North Macedonia, focusing on factors influencing their attitudes, including gender, teaching experience, education level, and prior experience with inclusive education.

**Methods.** A total of 377 teachers participated in the study. The ATIES was used to assess their perceptions, and statistical analyses, including t-tests and ANOVA, were conducted to identify differences based on demographic factors.

**Results.** Teachers expressed slightly positive attitudes towards inclusive education ( $M = 3.09$ ,  $SD = 0.859$ ), with the most favourable views on social inclusion and the least favourable on behavioural inclusion. Male teachers reported significantly more positive attitudes than female teachers. Experience in inclusive education had a significant impact, with teachers who had advanced experience demonstrating the most positive attitudes across all dimensions. In contrast, overall teaching experience and education level showed minimal influence.

**Conclusions.** While teachers in North Macedonia generally support inclusive education, their attitudes vary based on gender and prior exposure to inclusive practices. The findings highlight the importance of targeted professional development to enhance teachers' confidence and preparedness for inclusive education.

**Keywords:** inclusive schooling, North Macedonia, teacher beliefs, teacher experience

## INTRODUCTION

Inclusive education has emerged as a fundamental principle in contemporary educational policies, advocating for the integration of students with diverse learning needs into mainstream classrooms (Ainscow, 2020). The concept aligns with global movements such as the Salamanca Statement (UNESCO, 1994) and the CRPD (United Nations General Assembly, 2006), which emphasize the necessity of providing quality education to all learners, with or without disabilities. Research has found that success of inclusive education greatly relies on the attitudes of teachers, as they play a crucial role in implementing inclusive practices (Avramidis & Norwich, 2002; Ainscow et al., 2004). In North Macedonia, inclusive education has been progressively introduced through legislative and policy reforms, but its practical application is still evolving (Ramadani Rasimi, 2023).

## LITERATURE REVIEW

### Conceptual Framework for Inclusive Education

Inclusive education is supported by various theoretical perspectives. Lev Vygotsky's (1978) sociocultural theory highlights the importance of social interactions and scaffolding, suggesting that inclusive classrooms should promote peer collaboration and teacher support. Similarly, Urie Bronfenbrenner's (1979) ecological systems theory underscores the influence of environmental factors and the need for systemic support. Together, these perspectives imply that teachers' attitudes are shaped by broader social, institutional, and policy contexts (Sharma et al., 2012). Diversity in education has often been framed

as an issue of individual maladjustment, leading to separate provisions for certain students rather than fostering an inclusive environment (Davis, 2013). However, since the 1980s, critiques from disability studies have pushed for a broader perspective, expanding inclusion beyond disabilities to historically marginalised groups (Ainscow et al., 2006). This shift challenges the traditional divide between special and mainstream education, which tends to categorise students by deficits rather than addressing systemic barriers to learning. Consequently, inclusive education requires rethinking special education approaches that often rely on diagnostic tools and technical labels, which may obscure broader structural issues rather than promoting true participation (Dovigo, 2017).

Ann Cheryl Armstrong et al. (2010) argue that inclusive education remains contested, shaped by national policies, historical contexts, and global inequalities, and its success depends on both educational reforms and addressing broader social justice issues. Inclusive education is most effective when it acknowledges neurodiversity as a natural variation rather than a deficit, adopting approaches like UDL to provide flexible teaching strategies that benefit all students, particularly those with learning and attention differences (Chennat, 2020). The expansion of inclusive schooling in England and the USA has been driven by social, political, and economic interests, often perpetuating inequalities by manufacturing the “inability” of lower attainers and marginalized groups through ideologies of fixed ability and IQ measurement (Tomlinson, 2017). However, the true outcome of inclusion can only be visible with equal participation of diverse members in any organization or institution.

## **Teachers’ Attitudes Towards Inclusive Education**

Over the past thirty years, there has been a substantial rise in studies exploring teachers’ perspectives on inclusion (Wilczenski, 1995; Sharma & Jacobs, 2016; Sharma et al., 2023; Forlin & Chambers, 2011). A significant portion of this research has been dedicated to understanding the key factors shaping teachers’ attitudes (Romi & Leyser, 2006). Teachers in countries with long-established inclusion policies tend to have more positive attitudes than those in nations with recent reforms (Saloviita & Schaffus, 2016). Umesh Sharma et al. (2017) found Italian teachers viewed inclusion more favourably than Australians, attributing this to the duration of reforms. Teachers’ mindset regarding student inclusion is shaped by a multitude of factors, including their understanding of students experiencing disabilities, their experiences in inclusive settings, and the availability of professional development opportunities (Forlin, 2010). Research suggests that teachers with prior experience in inclusive classrooms tend to have more positive attitudes, as they develop strategies to accommodate diverse learners (Avramidis et al., 2000). However, some studies indicate that teachers without adequate training or support may perceive inclusive education as challenging and demanding (Jordan et al., 2009). In North Macedonia, teachers’ attitudes towards inclusive education vary significantly depending

on their level of experience, the resources available to them, and the cultural perceptions of disability (Jovanova et al., 2020; Kingsdorf et al., 2024).

## **Challenges in Implementing Inclusive Education in North Macedonia**

The implementation of inclusive education in North Macedonia has encountered several challenges, including inadequate teacher preparation, insufficient resources, and societal attitudes towards disability (Ramadani Rasimi, 2023). Research highlights that many teachers feel unprepared to teach students with disabilities due to a lack of training in special education methodologies (Stepaniuk, 2019; Kaczorowski & Kline, 2019; LeDoux et al., 2012). Furthermore, limited access to assistive technologies and classroom support staff exacerbates the difficulties in implementing inclusive practices (Alnahdi, 2014; Okolo & Diedrich, 2014). The cultural context also plays a significant role in shaping teachers' attitudes, as some communities may still hold stigmatizing views towards individuals with disabilities, affecting the overall inclusivity of the education system (Van Steen & Wilson, 2020). Studies indicate that teachers who undergo specialized training in inclusive education exhibit greater confidence and willingness to implement inclusive practices (Moriña, 2020). In North Macedonia, teacher education institutions have started incorporating inclusive education courses into their curricula, but there remains a gap in continuous professional development opportunities (Ramadani Rasimi, 2023). Providing teachers with workshops, mentorship programs, and in-service training can enhance their skills and positively influence their attitudes towards inclusion (Sharma & Sokal, 2016). Collaborative teaching models, classroom assistants, and access to special education consultants are essential in facilitating inclusive practices (Friend & Bursuck, 2018). Research suggests that teachers who receive adequate support from school administrators and colleagues are more likely to develop positive attitudes towards inclusion (De Boer et al., 2011). In North Macedonia, the enhancement of teacher training programs alongside the allocation of essential resources—including assistive technologies and infrastructural improvements—has been recommended as a strategy to strengthen inclusive education. Additionally, the establishment of clear, coordinated policies and the promotion of multi-sectoral collaboration among government, schools, and communities has been advised as an approach to ensure equitable access to quality education for all students (UNICEF, 2024).

## **Current study**

This study explores teachers' attitudes towards inclusive education in North Macedonia, focusing on factors that shape their perspectives, such as gender, overall teaching experience, education level, and experience with inclusive education.

- This investigation is guided by key inquiries outlined below:
- What are the general attitudes of teachers in North Macedonia towards inclusive education?
  - How do gender, overall teaching experience, education level, and experience with inclusive education influence teachers’ attitudes towards inclusive education?

By examining these aspects, this study deepens our understanding of the factors influencing the adoption and effective implementation of inclusive practices, while providing valuable insights for policymakers, educators, and other stakeholders in North Macedonia.

METHOD

Participants

The research sample consisted of 377 teachers at the primary level, whose demographic information is displayed in Table 1.

Table 1  
Participant Demographics

Variable	N	n	%	
Gender	Female	377	297	78.8
	Male	377	59	21.2
Inclusive Ed. Experience	No Experience	377	61	16.2
	Limited Experience	377	250	66.3
	Advanced Experience	377	66	17.5
Teaching Experience	Less than 20 years	377	213	56.5
	20 years or more	377	164	43.5
Education Level	Bachelor	377	319	84.6
	MA/PhD	377	58	15.4

Source. Own research.

Instrument

The Attitudes Toward Inclusive Education Scale (ATIES) (Wilczenski, 1992) was used to assess teachers’ attitudes towards inclusive education, assuming that the educational context in North Macedonia may still reflect the conditions present at the time of the scale’s development, as it was created during a formative period of inclusive education in the USA—a phase that shares similarities with the current stage in North Macedonia. This easily administered 16-item scale measures four distinct dimensions: physical, academic, behavioural, and social. Principal components analysis confirmed these dimensions, demonstrating satisfactory

internal consistency (Wilczenski, 1992). In the current study, the scale’s reliability coefficient was  $\alpha = 0.924$ , indicating strong internal consistency (Taber, 2018). Felicia L. Wilczenski (1992) further noted that the factors possessed sufficiently high reliability coefficients—with moderate factor intercorrelations suggesting that the four dimensions were reasonably independent. Specifically, the overall ATIES has a Cronbach’s alpha of .92, with the subscale alphas reported as follows: Physical = .83, Academic = .84, Behavioural = .87, and Social = .82. Chris Forlin et al. (2007) assessed pre-service teacher attitudes using the ATIES, reporting a total Cronbach’s alpha of 0.88. Subscale reliabilities were 0.84 (Academic/Physical), 0.71 (Social), and 0.69 (Behavioural), affirming the scale’s reliability. The ATIES is widely adopted in research, demonstrating sufficient reliability and validity across studies (Wilczenski, 1995; Sharma et al., 2003; Parsuram, 2006; Sharma et al., 2006).

**Table 2**  
*Internal Consistency of the ATIES and Its Factors*

Dimension	No of Items	Cronbach’s alpha
ATIES	16	0.924
Physical	4	0.828
Academic	4	0.766
Behavioural	4	0.832
Social	4	0.699

*Source.* Own research.

Procedure

Permission to use the ATIES was first obtained from Felicia L. Wilczenski (1992) to ensure the ethical use of the instrument. After receiving authorization from the author, approval to conduct the survey was sought from school principals across North Macedonia. To ensure representativeness, the online survey was distributed to primary school teachers throughout the country. Participants rated each item on a 5-point Likert scale, from 1 (Strongly Disagree) to 5 (Strongly Agree). The survey included an explanatory statement outlining the objectives of the research and participant involvement. Informed consent was obtained by requiring participants to select a confirmation button before proceeding with the survey.

Data Analysis

SPSS v.25 was used for descriptive statistical analysis to determine the characteristics of the data. The reliability of the ATIES scale was assessed using Cronbach’s alpha to mea-

sure internal consistency. After confirming that the data did not deviate significantly from a normal distribution, t-tests and ANOVA were identified as the appropriate statistical techniques. Mean comparisons were performed using the t-test, and statistical significance was determined at  $p < 0.05$ . For ANOVA, the LSD post hoc test was applied to examine differences between specific groups when significant results were found.

RESULTS

Attitudes of Primary School Teachers Towards Inclusive Education

Teachers’ attitudes towards inclusive education, as measured by the ATIES scale, are slightly positive ( $M = 3.09$ ,  $SD = 0.859$ ). The analysis of subscales reveals variations in attitudes across different inclusion dimensions. For physical disabilities ( $M = 2.96$ ,  $SD = 1.058$ ), attitudes are slightly below the neutral midpoint, indicating reservations about including students with significant physical impairments in regular classes. Regarding academic challenges ( $M = 3.18$ ,  $SD = 0.926$ ), teachers express a somewhat more favourable stance compared to physical disabilities, particularly for students requiring individualized functional academic programs or self-help training. Attitudes towards behavioural difficulties ( $M = 2.75$ ,  $SD = 1.082$ ) are the least favourable, with the lowest mean scores, particularly for students displaying physical aggression or disruptive behaviours. The most positive attitudes emerge in the social domain ( $M = 3.47$ ,  $SD = 0.854$ ), but still indicating a moderately favourable stance towards the inclusion of students who are shy, withdrawn, or have speech difficulties. Detailed item-level results for each ATIES factor (Wilczenski, 1992) are provided in Table 3.

Wilczenski’s (1992) study (lower scores indicate more favourable attitudes) shows that pre-service teachers had an overall mean score of approximately 2.99 ( $SD \approx 1.24$ ), compared to teachers’ 3.09 ( $SD = 0.86$ ). While overall attitudes are similar, pre-service teachers demonstrate greater support for social integration ( $M \approx 2.19$  vs. 3.47) but less willingness to accommodate academic ( $M \approx 3.32$  vs. 3.18) and behavioural challenges ( $M \approx 3.67$  vs. 2.75).

Table 3  
Descriptive Statistics for ATIES Factors among Primary School Teachers

Scale Items	M	SD
Factor I: Physical	2.96	1.058
Mobility	3.03	1.326
Vision impairments	2.94	1.277
Manual communication	2.95	1.299
Hearing impairments	2.90	1.309
Factor II: Academic	3.18	.926

Scale Items	M	SD
Minor curriculum changes	3.18	1.164
Major curriculum changes	2.97	1.243
Functional academic training	3.09	1.249
Self-help skills training	3.49	1.172
Factor III: Behavioural	2.75	1.082
Conflicts with authority	2.92	1.306
Verbal aggression	2.84	1.335
Physical aggression	2.53	1.349
Disruptive behavior	2.73	1.319
Factor IV: Social	3.47	.854
Shyness	3.86	1.116
Language disorders	3.71	1.110
Speech disorders	3.25	1.211
Absenteeism	3.06	1.269
Overall	3.09	.859

*Note.* The factor items are abbreviated from ATIES (Wilczenski, 1992).

*Source.* Own research.

### ***Teachers' Attitudes and Demographic Factors***

Further analysis explored teachers' attitudes towards inclusive education in relation to gender, teaching experience, and experience with inclusive education.

**Table 4**

*Gender Differences in Teachers' Attitudes Towards Inclusive Education*

Factor	Female (N=297)		Male (N=80)		t	p	d
	M	SD	M	SD			
ATIES	3.04	.858	3.30	.833	-2.421	.016*	0.31
Physical	2.88	1.056	3.22	1.028	-2.525	.012*	0.32
Academic	3.12	.925	3.42	.893	-2.650	.008*	0.34
Behavioural	2.70	1.078	2.95	1.081	-1.825	.069	0.23
Social	3.44	.848	3.59	.873	-1.415	.158	0.18

*Note.* \* $p < .05$

*Source.* Own research.

Table 4 presents the results of the t-test analysis comparing ATIE between female and male teachers. Significant differences were found in overall attitudes ( $t = -2.421$ ,  $p = .016$ , Cohen's  $d = 0.31$ ), with female teachers ( $M = 3.04$ ,  $SD = 0.858$ ) showing less favourable attitudes towards inclusion than male teachers ( $M = 3.30$ ,  $SD = 0.833$ ).



This pattern is consistent across the physical ( $t = -2.525$ ,  $p = .012$ ,  $d = 0.32$ ) and academic ( $t = -2.650$ ,  $p = .008$ ,  $d = 0.34$ ) dimensions, where female teachers also reported less positive attitudes. No significant differences were observed in the behavioural ( $t = -1.825$ ,  $p = .069$ ) or social ( $t = -1.415$ ,  $p = .158$ ) dimensions.

**Table 5**

*Influence of Teaching Experience on Attitudes Towards Inclusive Education*

Factor	Less than 20 Years (N=213)		20 or More Years (N=164)		t	p	d
	M	SD	M	SD			
ATIES	3.07	.844	3.12	.879	-.513	.608	-0.06
Physical	2.93	1.054	2.99	1.064	-.617	.538	-0.06
Academic	3.21	.931	3.14	.920	.654	.514	0.08
Behavioural	2.67	1.106	2.86	1.043	-1.732	.084	-0.18
Social	3.48	.847	3.46	.865	.178	.859	0.02

*Source.* Own research.

The t-test results in Table 5 indicate no statistically significant differences in attitudes towards inclusive education based on teaching experience. Overall attitudes ( $t = -0.513$ ,  $p = .608$ ) do not differ significantly between teachers with less than 20 years of experience ( $M = 3.07$ ,  $SD = .844$ ) and those with 20 or more years ( $M = 3.12$ ,  $SD = .879$ ). Similarly, no significant differences are observed in the physical ( $t = -0.617$ ,  $p = .538$ ), academic ( $t = 0.654$ ,  $p = .514$ ), or social ( $t = 0.178$ ,  $p = .859$ ) dimensions. However, the behavioural dimension ( $t = -1.732$ ,  $p = .084$ , Cohen's  $d = 0.18$ ) approaches statistical significance, though the small effect size indicates that the difference in attitudes between more and less experienced teachers is minimal. Teaching experience does not significantly impact attitudes towards inclusive education, though a slight trend suggests more favourable views on behavioural inclusion among experienced teachers.

**Table 6**

*Independent Samples t-Test Results for Teachers' Attitudes by Educational Level*

Factor	Bachelor (N=319)		MA/PhD (N=58)		t	p	d
	M	SD	M	SD			
ATIES	3.07	.859	3.19	.858	-.916	.360	-0.14
Physical	2.91	1.048	3.19	1.089	-1.872	.062	-0.27
Academic	3.18	.918	3.20	.974	-.198	.843	-0.02
Behavioural	2.76	1.066	2.74	1.176	.101	.919	0.02
Social	3.45	.864	3.60	.793	-1.287	.199	-0.18

*Source.* Own research.

Table 6 presents the independent samples t-test results comparing teachers with a bachelor’s degree (N=319) and those with an MA/PhD (N=58) across five factors. No statistically significant differences were found for ATIES ( $t = -0.916$ ,  $p = .360$ ), Academic ( $t = -0.198$ ,  $p = .843$ ), Behavioural ( $t = 0.101$ ,  $p = .919$ ), and Social ( $t = -1.287$ ,  $p = .199$ ). The Physical factor approached significance ( $t = -1.872$ ,  $p = .062$ , Cohen’s  $d = -0.27$ ), suggesting a potential trend where teachers with higher education levels rated this aspect more favourably, though the difference did not meet the conventional significance threshold and the effect size was small. The findings indicate that educational level does not significantly impact teachers’ perceptions across these dimensions.

**Table 7**  
*Impact of Inclusive Education Experience on Teachers’ Attitudes Towards Inclusion*

Factor	No Formal Experience (N=61)		Limited Experience (N=250)		Advanced Experience (N=66)		F	p	$\eta^2$
	M	SD	M	SD	M	SD			
ATIES	2.87	.893	2.96	.763	3.80	.819	32.184	.000*	0.147
Physical	2.61	1.097	2.84	.975	3.72	.975	25.112	.000*	0.118
Academic	2.95	1.038	3.06	.827	3.86	.875	24.632	.000*	0.116
Behavioural	2.56	1.141	2.57	.945	3.65	1.081	31.719	.000*	0.145
Social	3.36	.945	3.37	.808	3.97	.768	14.641	.000*	0.073

*Note.* \* $p < .05$

*Source.* Own research.

Table 7 presents the one-way ANOVA results comparing teachers’ attitudes across three levels of experience: no formal experience (N=61), limited experience (N=250), and advanced experience (N=66). Significant differences were found across all factors. Inclusive education experience had a large effect on ATIES ( $F = 32.184$ ,  $p < .001$ ,  $\eta^2 = 0.147$ ) and Behavioural attitudes ( $F = 31.719$ ,  $p < .001$ ,  $\eta^2 = 0.145$ ). Medium to large effects were observed for the Physical ( $F = 25.112$ ,  $p < .001$ ,  $\eta^2 = 0.118$ ) and Academic factors ( $F = 24.632$ ,  $p < .001$ ,  $\eta^2 = 0.116$ ). A medium effect size was found for the Social factor ( $F = 14.641$ ,  $p < .001$ ,  $\eta^2 = 0.073$ ). Teachers with advanced experience reported significantly higher mean scores across all dimensions, indicating a strong association between experience level and attitudes towards inclusive education. The LSD post hoc test shows that teachers with advanced experience in inclusive education reported significantly higher attitudes across all factors ( $p = .000$ ) compared to those with no formal or limited experience. No significant differences were found between the no formal and limited experience groups ( $p > .05$ ). Experience with inclusive education strongly influences teachers’ attitudes, with advanced experience associated with more favourable views. Minimal exposure appears insufficient to impact attitudes significantly.

## DISCUSSION

The reliability of the ATIES in the current study (Cronbach's  $\alpha = .924$ ) is consistent with the original reliability reported by Wilczenski (1992) ( $\alpha = .92$ ), supporting the instrument's robustness and appropriateness for assessing teachers' attitudes towards inclusive education in the context of North Macedonia. Teachers in North Macedonia exhibit slightly positive attitudes towards inclusive education, with more favourable views on academic and social inclusion, and reservations about including students with physical impairments and behavioural challenges. Compared to Wilczenski's (1992) study, North Macedonian teachers show a slightly more positive stance overall. Pre-service teachers in Wilczenski's study expressed stronger support for social integration but were less willing to accommodate academic and behavioural challenges, suggesting a more balanced approach among North Macedonian teachers across different inclusion dimensions. Garyfalia Charitaki et al. (2022) found that UK teachers had the highest cognitive attitude scores, significantly higher than the USA, suggesting stronger conceptual support for inclusion. In Jordan, 60% of teachers supported inclusion, but most preferred mixed-classroom models, citing structural and training limitations (Al-Zyoudi, 2006). In the current study, 17% of teachers strongly agreed with inclusive education, while 13.7% strongly opposed it, reflecting a polarized perspective similar to Finnish teachers, where 20% strongly opposed and only 8% strongly supported inclusion (Saloviita, 2020). Aleksandra Jakovchevska et al. (2022) found that 71% of teachers supported the inclusion of visually impaired students in regular classes, indicating higher acceptance for this group, whereas in the current study, 33% expressed support for their inclusion. Additionally, Jakovchevska et al. (2022) reported that 28% of teachers in North Macedonia had prior training in working with visually impaired students, whereas 17.5% in the current study had advanced experience with inclusive education.

The results indicate that female teachers hold less favourable attitudes towards inclusive education than their male counterparts. This trend is particularly evident in perceptions related to physical and academic aspects of inclusion. Elias Avramidis & Brahm Norwich (2002) observed that female teachers generally demonstrate greater openness and empathy towards inclusive practices, which may contribute to their more positive attitudes. Similarly, Chris Forlin & Dianne Chambers (2011) found that female pre-service teachers were more supportive of inclusion and perceived fewer barriers compared to male teachers. Teaching experience does not significantly alter attitudes towards inclusive education across physical, academic, and social dimensions, consistent with Sharma et al. (2012), though it may slightly enhance favourability towards behavioural inclusion, despite lacking statistical significance. However, Christopher Boyle et al. (2013) suggests that without proper support, prolonged exposure to classroom challenges can increase resistance among experienced teachers. Charitaki et al. (2022) found that teachers with the most experience (15–19 and >20 years) exhibited the least positive attitudes towards

inclusive teaching across all factors. This may stem from older teachers' reduced willingness to adapt their educational methods (Vähäsantanen & Eteläpelto, 2009).

This study found educational level minimally impacts teachers' attitudes towards inclusion, aligning with Avramidis & Norwich (2002), where training or experience may overshadow degrees. Conversely, Bryan G. Cook (2001) suggests advanced education fosters positive attitudes via inclusive pedagogy exposure, absent here, with a slight trend in one factor hinting at partial overlap but highlighting contextual differences. Teachers with advanced experience in inclusive education reported significantly higher attitudes across all factors, while no differences emerged between those with no formal and limited experience. This aligns with research highlighting the impact of specialized training on teachers' perceptions of inclusion. Zarife Seğer (2010) found that in-service training significantly improved attitudes, while Olli-Pekka Malinen et al. (2012) demonstrated its positive effect on self-efficacy.

## CONCLUSION

The ATIES reliably assessed teachers' attitudes in North Macedonia, revealing mildly positive views, with greater endorsement of academic and social inclusion than physical and behavioural domains. Attitudes were polarized, with female teachers showing less favourable perceptions, notably in physical and academic inclusion. Experience and education minimally influenced attitudes, except for a non-significant rise in behavioural inclusion favourability with experience. Advanced inclusive education experience markedly enhanced attitudes across all factors, highlighting structured training's superiority over minimal exposure. For North Macedonia, implementing mandatory, targeted professional development is recommended to bolster inclusive education efficacy.

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