

THE IMPACT OF TEACHERS' KNOWLEDGE AND READINESS TO DEVELOP INDIVIDUALIZED EDUCATION PLANS ON THE MOTIVATION OF STUDENTS WITH SPECIAL EDUCATIONAL NEEDS

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Abstract

This article presents a focused analysis of the empirical part of a quantitative study on factors related to the motivation of students with special educational needs in grades 1–9. The aim was to assess whether teachers with higher knowledge and greater willingness to develop Individual Education Plans (IEPs) report higher levels of motivation among students with special educational needs. The study was conducted in schools in the municipality of Ferizaj and included 115 participants from different professional profiles in the school. Data were collected through a structured questionnaire with demographic and content sections. This article analyzed indicators related to knowledge about IEP, willingness to design it, and teachers' perception of student motivation. To test for differences between groups, the t-test for independent samples was used, while the effect size was calculated with the Cohen's d coefficient. The results showed a statistically significant difference in knowledge about IEP between teachers who were willing to develop a plan and those who were not willing, $t(113) = 11.38$, $p < .001$, $d = 2.30$. Also, a statistically significant difference was found in teacher-reported student motivation, $t(113) = 3.14$, $p = .002$, $d = 0.63$. The findings support the importance of teacher professional capacities and an individualized approach to inclusive practice. The article concludes that strengthening teachers' competencies for IEP should be treated as an institutional priority for advancing the quality of inclusive education and supporting the motivation of students with special educational needs.

Keywords: inclusive education; Individual Education Plan; student motivation; special educational needs; teachers

Introduction

Motivation is one of the most important factors in student engagement and persistence in the learning process (Khamzina et al., 2024). In inclusive education, the importance of motivation is even more pronounced, because students with special educational needs often face additional barriers to participation, self-confidence, learning pace and a sense of belonging in the classroom (Martin et al., 2024). Contemporary literature emphasizes that motivation is not only an individual characteristic of the student, but also the result of the interaction between the pedagogical environment, social relationships and professional support provided in the school (Deci & Ryan, 2000; Gopalan et al., 2017).

One of the most important mechanisms of pedagogical individualization in inclusive education is the Individual Education Plan (Kimhi & Bar Nir, 2025). IEP enables the adaptation of objectives, methods, resources and assessment methods according to the needs and potential of each student. However, the practical value of the IEP does not lie only in the formal existence of the document, but in the quality of its drafting and in the teacher's ability to implement it sustainably in the classroom. For this reason, the professional competencies of the teacher play a key role in the success of the individualized approach (Florian, 2014; UNESCO, 2020).

Studies on inclusive education have shown that teachers often face difficulties in implementing personalized practices when they do not have sufficient theoretical and practical preparation. The lack of professional development, institutional support and clear guidelines can limit the quality of classroom interventions and, consequently, their impact on student motivation (Brackenreed, 2011). In this sense, knowledge about IEP and the willingness to design and implement it can be seen as important indicators of the teacher's capacity to support the motivation of students with special needs.

Recent reviews and studies show that the quality of initial preparation and professional development directly impacts teachers' attitudes, professional self-confidence, and willingness to implement inclusive practices. In particular, training design, duration, relevance to practice and institutional support have been identified as key conditions for the effective implementation of inclusive education (Khamzina et al., 2024; Mosia & Kotelo, 2024; Herrera-Seda & Walton, 2025; Kimhi & Bar Nir, 2025). In the same vein, recent UNESCO reports highlight that teacher preparation and school leadership for inclusion constitute fundamental prerequisites for the quality of inclusive education (Global Education Monitoring Report Team, 2022; Global Education Monitoring Report Team & Network of Education Policy Centers, 2025).

This article presents a focused analysis of empirical data from a larger research on motivational factors in learning for students with special educational needs. The analysis focuses on the hypothesis that teachers with higher knowledge and readiness for designing IEPs report higher levels of motivation among students with special educational needs. In this way, the article aims to provide a practical and empirical contribution to the discussion on the role of teacher competencies in inclusive education.

Method

Study design and participants

The study is based on a quantitative design, with a descriptive and comparative character. The article presents a sub-analysis of that part of the data related to the *Individual Education Plan* and *student motivation*, in order to test the hypothesis “*There is a statistically significant difference in the level of student motivation related to IEP between teachers with a higher level of IEP preparation (knowledge, training and readiness to design) and those with a lower level of preparation*”.

The study involved 115 primary school professionals from the municipality of Ferizaj. The selection of participants was carried out randomly from those educational staff who agreed to participate after being informed about the purpose of the research. The sample was dominated by women (96.5%), while the majority of participants belonged to the age group 35–49 years (53.0%) and had over 6 years of work experience in education (80.9%). In terms of professional role, the majority were classroom teachers (62.6%) and subject teachers (25.2%).

The descriptive results showed that 41.7% of the participants reported having attended training on IEP, while 68.7% stated that they were willing to design IEPs for students who needed individualized support.

Table 1. Main characteristics of the sample

Variable	Category	n (%)
Gender	Female	111 (96.5)
	Male	4 (3.5)
Age	18–24	9 (7.8)
	25–34	17 (14.8)
	35–49	61 (53.0)
	50–65	28 (24.3)
Job position	Classroom teacher	72 (62.6)
	Special needs assistant	8 (7.0)
	Psychologist	4 (3.5)
	Teacher	29 (25.2)
Work experience	1–3 vite	14 (12.2)
	4–6 vite	8 (7.0)
	Mbi 6 vite	93 (80.9)

Instrument

The instrument used in this research was a structured questionnaire for the purposes of the study. The instrument includes 26 questionnaire variables, organized into three main parts: (1) teacher demographics, (2) classroom characteristics, and (3) substantive items measuring teachers' perceptions of motivation of students with special needs, autonomy and curiosity, knowledge and readiness for IEP, impact of IEP on motivation, parental involvement, and peer support. The content part of the instrument included 15 items rated on a 5-point Likert scale (1 = “I strongly disagree” to 5 = “I strongly agree”) and 3 dichotomous items for IEP (0 = “No”, 1 = “Yes”). Questions Q7–Q12 were used to test the hypothesis, which operationalized two main groups of variables. Questions Q7, Q8 and Q9 were treated as indicators related to teachers' preparation for the Individual Education Plan (IEP), including knowledge about IEP, relevant training and readiness to draft it. Meanwhile, questions Q10, Q11 and Q12 measured teachers' perception of the impact of IEP on the motivation of students with special educational needs. At the operational level, the indicator “Motivation from IEP” was constructed as a composite score of Q10 + Q11 + Q12, while readiness to design IEP was used as a grouping variable in the comparative analysis. Also, the variable stored in the dataset based on questions Q7–Q9 was interpreted as a composite indicator of teachers' preparation for IEP, and not only as a narrow measure of knowledge about IEP, as it simultaneously included the cognitive dimension, formal preparation and professional readiness for implementation. To assess the internal consistency of the scales, Cronbach's alpha coefficient was calculated (Table 2). The subscale “Motivation from IEP”, consisting of questions Q10, Q11 and Q12, showed good reliability ($\alpha = .83$), which suggests that the items consistently measure the same construct. In contrast, the block of questions Q7–Q9, related to knowledge, training, and readiness for PIA, showed lower reliability ($\alpha = .50$), which suggests that these questions should be interpreted as interrelated, but not completely homogeneous, indicators.

Table 2. Internal reliability of subscales (Cronbach's alpha)

Subscale	Questions	Number of questions	Cronbach's α
Motivation from IEP	Q10–Q12	3	.83
Knowledge, training and readiness for IEP	Q7–Q9	3	.50

Note. An α value $\geq .70$ is interpreted as indicating acceptable internal reliability.

Source. Own research

Procedure and Ethics

Prior to conducting the research, permission was sought from the principals of the respective schools. Participants were informed about the purpose of the study, the voluntary nature of participation, and the confidentiality of the data. The questionnaire was completed only by those participants who gave their consent to participate.

Statistical analysis

The data were analyzed with descriptive and inferential statistics using the SPSS program. Frequencies, percentages, means and standard deviations were used to describe the sample and variables. The t-test for independent samples was used to test the hypothesis, comparing teachers who declared their willingness to design an IEP with those who did not. To assess the practical magnitude of the differences, Cohen's d coefficient was calculated, while Cronbach's alpha coefficient was reported for the reliability of the subscales.

Results

The hypothesis was operationalized based on two sets of questionnaire questions. The first group included measuring teachers' knowledge of IEP training and readiness for its design through questions Q7, Q8 and Q9. The second group included measuring teachers' perceptions of the impact of IEP on the motivation of students with special needs through questions Q10, Q11 and Q12.

To more clearly present the descriptive results of the study, below are graphical representations of the main questions related to knowledge about IEP, relevant training, readiness for its design, and perception of the impact of IEP on student motivation. After the graphical representation, Table 2 provides a tabular summary of the main results.

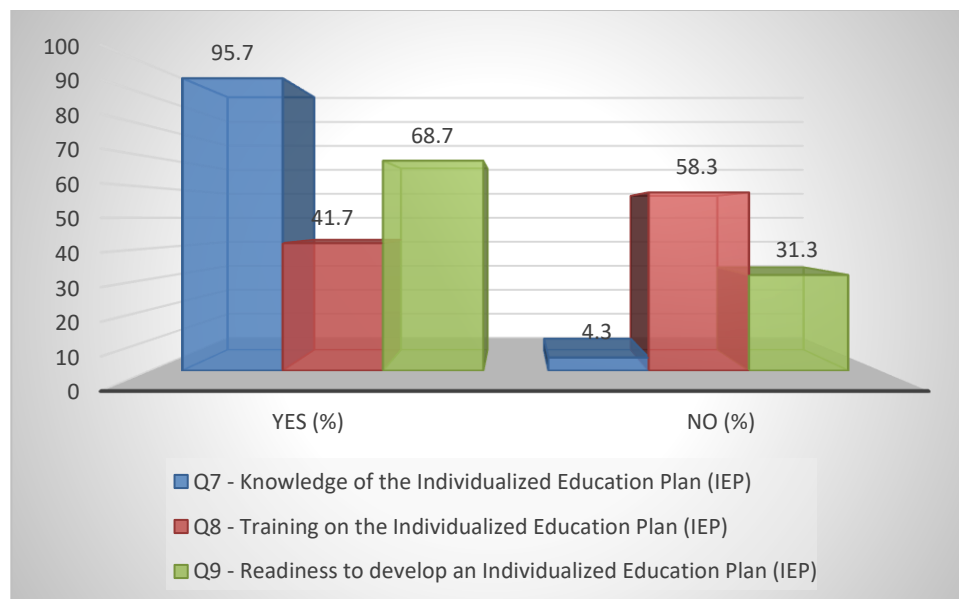


Figure 1. Teachers' knowledge, training and readiness for IEP (Q7–Q9)

Source. Own research

The results of questions Q7–Q9 show that the vast majority of teachers have knowledge of the Individual Education Plan (95.7%), but less than half of them have attended formal training on IEP (41.7%). On the other hand, a significant proportion of respondents express their willingness to design IEPs (68.7%). These findings suggest that, although awareness of the concept of IEP is widespread, formal professional preparation remains more limited. At the same time, the relatively high level of readiness indicates positive potential for greater involvement of teachers in the design and implementation of individual plans, if supported by continuous training and professional development.

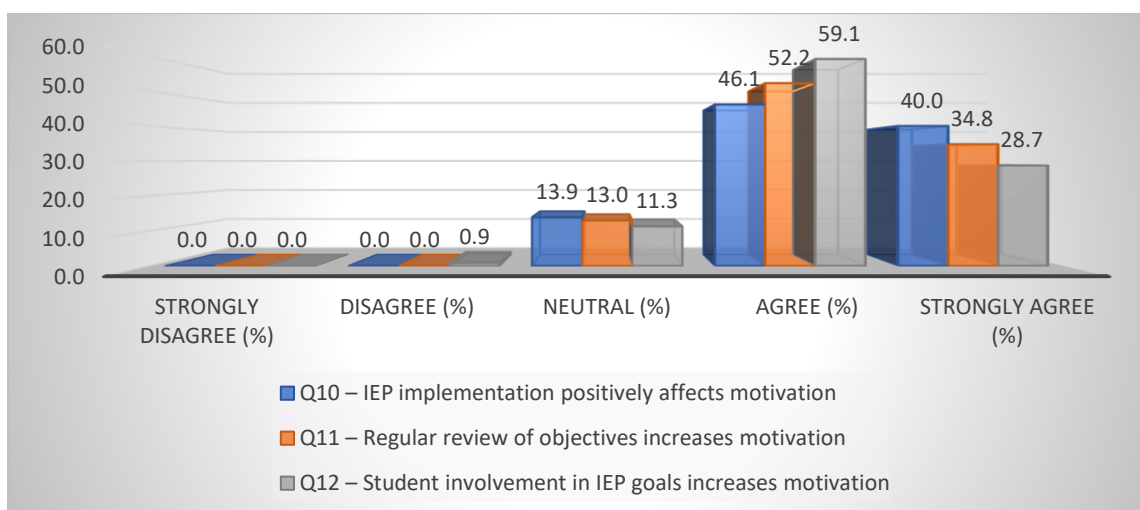


Figure 2. Teachers' perception of the impact of IEP on student motivation (Q10–Q12)
Source. Own research

The results generated by the analysis of items B10–B12 evidence a consistently positive orientation of teachers towards the function of the Individual Education Plan (IEP) as a pedagogical mechanism in promoting the motivation of students with special educational needs. The dominance of responses in the categories “Agree” and “Strongly Agree” in all three statements indicates that respondents perceive IEP as an instrument with high didactic and motivational relevance, capable of effectively mediating between the individual needs of the student and the demands of the school context. More specifically, the high support for statements related to the adaptation of IEP according to the functional profile of the student, with the periodic review of objectives and with the active involvement of the student in the formulation of individual goals, suggests that teachers attribute a determining role in the intensification of motivation to learn to the processes of individualization, pedagogical flexibility and active participation.

The graphical presentations provide a clearer visualization of the distribution of respondents' responses and highlight the main trends observed in the data. To complement this descriptive presentation and to systematize the results in a more concise form, Table 2 is provided below with the main research indicators where the differences between groups according to readiness to design IEP are presented. The analysis focused on our hypothesis showed that teachers who declared readiness to design IEP had a significantly higher average level of knowledge about IEP ($M = 2.56$, $SD = 0.66$) compared to teachers who did not declare such readiness ($M = 1.11$, $SD = 0.58$). The t-test for independent samples confirmed that this difference was statistically significant, $t(113) = 11.38$, $p < 0.001$. The effect size was very high ($d = 2.30$), indicating that the difference is not only statistically significant, but also of high practical importance.

Similarly, teachers who were willing to design IEPs reported higher student motivation regarding the use of IEPs ($M = 12.96$, $SD = 1.69$) than teachers who were not willing to design them ($M = 11.92$, $SD = 1.57$). This difference also proved statistically significant, $t(113) = 3.14$, $p = 0.002$, with a medium effect size ($d = 0.63$).

These findings support the hypothesis and suggest that teachers' knowledge and willingness to design IEPs are associated with more positive perceptions of the motivation of students with special educational needs.

Table 3. Differences between groups according to readiness for IEP development (Summary of results for the main study variables)

Variable	Group	n	M	SD	t	p	d
Knowledge about IEP	Yes	79	2.56	0.66	11.38	< .001	2.30
	No	36	1.11	0.58			
Student motivation from IEP	Yes	79	12.96	1.69	3.14	.002	0.63
	No	36	11.92	1.57			

Note. M = mean; SD = standard deviation; d = Cohen's d .

Source. Own research

Discussion

The aim of this research was to examine whether teachers' knowledge and readiness to design an Individual Education Plan are related to the motivation of students with special educational needs. The findings clearly supported our hypothesis. First, it was confirmed that teachers who are willing to design an IEP have significantly higher knowledge of this instrument. Second, the same group also reported higher levels of student motivation in the context of using IEP. This suggests that the teacher's professional capacity for pedagogical individualization is important not only in planning, but also in the student's learning experience.

The results are consistent with theoretical approaches that see motivation as a product of the interaction between the student's needs and the supportive structure of the learning environment. According to self-determination theory, students are more engaged when they experience competence, autonomy, and a sense of belonging (Deci & Ryan, 2000). IEP, when designed and implemented in a quality manner, creates the conditions for more tailored, clearer, and more accessible teaching for students with special needs. This may explain why teachers with higher IEP competencies also perceive higher motivation in students.

The findings are also consistent with the inclusive education literature that emphasizes that successful inclusion does not only depend on the physical presence of the student in the classroom, but also on the quality of the pedagogical support provided to him (Florian, 2014; UNESCO, 2020). In this sense, IEP should be understood as a functional tool for personalizing teaching and not simply as an administrative document. When the teacher possesses the necessary knowledge and demonstrates a willingness to use IEP, the possibility increases that the objectives, materials and teaching strategies will be more appropriate to the individual needs of the student increases. An additional interpretation is provided by recent studies on motivation. Longitudinal and meta-analytic evidence shows that teacher support is consistently associated with school engagement and student motivation trajectories (Martin et al., 2024; Vargas-Madriz et al., 2024). Also, for students with special educational needs, the fulfillment of basic psychological needs for competence, autonomy, and belonging is closely linked to intrinsic motivation (Loopers et al., 2024). This makes it reasonable to assume that teachers who know how to use IEP qualitatively

create more favorable conditions for motivation, because they offer clearer goals, more realistic expectations, and more individualized support. This interpretation is also reinforced by recent research on IEP priorities, which shows that the quality of individual planning is associated with more meaningful student outcomes (Gormley et al., 2024).

From a practical perspective, the results of this article support the need for ongoing teacher training in the design and implementation of IEP. Although over half of the participants reported prior training in IEP, descriptive results indicate that a significant proportion have not yet received formal training. This is consistent with previous findings that teachers in inclusive contexts often feel unprepared to meet the demands of individualizing teaching (Brackenreed, 2011). For this reason, professional development should not be limited to theoretical training, but should include practical mentoring, collaborative work, and monitoring of IEP implementation in the school.

Although the findings are significant, they should be interpreted in light of several limitations. First, the analysis relies on self-reported data from teachers rather than direct measures of student motivation. Second, the cross-sectional design does not allow for causal inferences. Third, the sample is limited to a local context, which limits the generalizability of the results. Future research should include multiple assessments, student and parent voices, and longitudinal designs to more clearly test the impact of IEP on motivation and academic progress.

Conclusions

This research confirmed that teachers with higher knowledge and greater willingness to develop Individual Education Plans report higher levels of motivation among students with special educational needs. At the same time, the results showed that the level of knowledge about IEP is very high, as 95.7% of teachers declared that they are familiar with this instrument, while 68.7% expressed their willingness to develop it. However, only 41.7% of respondents reported having attended formal training on IEP, which indicates a discrepancy between knowledge of the concept and professional preparation for its implementation.

Overall, these findings suggest that there is a strong knowledge base and considerable willingness among teachers to use individualized approaches, but that this base needs to be more strongly supported by systematic professional development. The marked difference in knowledge about IEP and its relationship with students' reported motivation give this study a solid scientific support. In practical terms, the results highlight the need to strengthen training, professional mentoring and institutional support for the design and implementation of IEP in schools. From a scientific perspective, the study suggests that teachers' competencies for pedagogical individualization should be treated as a key variable in research on the motivation, inclusion and school success of students with special educational needs.

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