

Original research paper

**THE TEACHER LEADERSHIP COMPETENCIES – ASSISTIVE
TECHNOLOGY FOR COMMUNICATION IN ELEMENTARY
SCHOOL EDUCATION**

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Abstract. *One of the important assumptions of leadership in the process of upbringing and education is the readiness of the leader to take responsibility for improving the teaching process's quality and continuously participate in activities directly related to the improvement of educational outcomes. In other words, for a teacher to be a good leader, it is necessary to contribute to the overall development, support, and increase of students' skills through commitment. In this paper, we wanted to examine whether primary school teachers are familiar with assistive technology used to achieve and facilitate verbal communication of children with difficulties in verbal expression, i.e., whether teachers use devices for augmentative and alternative communication in regular classes. The research was conducted in the territory of southern Serbia on a sample of 176 teachers working in elementary schools. An instrument designed for the purposes of this research was used to collect data, which consists of 7 statements. A Likert-type scale was used as an instrument for data collection, with five alternatives. The results show that almost half of the teachers state negatively when it comes to familiarity with assistive technology. Pedagogical implications derived based on the obtained results refer to the empowerment of teachers to acquire the necessary knowledge through professional development in the field mentioned above to adequately provide full support to students with complex communication needs to increase their verbal skills.*

Key words: *leadership competencies, teacher, assistive technology, elementary school, verbal communication*

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1. INTRODUCTION

Rapid scientific and technological development imposes new tasks on all segments of living and working in a society that is learning every day. These are exactly the tasks that change the field of upbringing and education and make it an area of change in which the roles of teachers are also changing. The traditional educational paradigm of the teacher imparting knowledge while the students passively observe him, has been abandoned for centuries, because teachers are significantly more than that – bearers of a quality educational process. In order to successfully fulfill the new demands placed before teachers, it is necessary to continuously work on the improvement of their competencies.

The Rulebook on standards of competence for the vocation of teachers and their professional development (Službeni glasnik RS, 5/2011, p. 147) defines teaching competencies as the following:

"Teaching competencies are the capacity of an individual expressed in the performance of complex activities in pedagogical and educational work. Competences represent a set of necessary knowledge, skills, and values of teachers. Teachers play a central role in improving education and upbringing because they directly influence the learning and development of students. Teacher competencies are defined in relation to learning goals and outcomes and should provide professional standards for a successful teaching. They refer to competencies for teaching field, subject and teaching methodology, teaching and learning, students' personality development support, communication and cooperation".

Considering the importance of their role in the improvement of the educational process, teachers need leadership skills reflected in their innovation, which is the use of new approaches in work. It means that it is necessary to create conditions that enable a better quality of learning and higher productivity of students in the teaching process. Accordingly, teacher leadership appears to be a valuable concept of management and leadership in the educational process (Jovanović, 2022). The teacher's vocation necessarily includes leadership skills that are expressed:

"when managing the educational process and working with students, also when cooperating and communicating with parents and the immediate and wider environment, when identifying interest groups from the environment, designing and launching development projects, mobilizing resources from the local community, teamwork with colleagues and associates" (Arsenijević, 2015, p. 35).

The main guiding principle of teaching should be the focus on the student. In addition to all the listed professional competencies that teachers should have, such as pedagogical competencies, psychological competencies, didactic competencies, and methodological competencies (Jorgić, 2015), communication competencies appear to be crucial for establishing quality interpersonal relationships, which at the same time represent the fundamental assumptions for successful leadership. A good knowledge of native and foreign languages is the basis for the development of the communicative competence of teachers. Communicative competencies are recognized in various activities, among others, through communication and cooperation with students, parents, and the social community, through the process of imparting knowledge, monitoring and evaluating student achievements, through teachers' professional development (Stojanović & Mišić,

2018). Involvement in various programs for the professional development of teachers will contribute to the development of communication competencies of teachers (Zlatic & Luković, 2020). Communicatively competent teachers are more successful in implementing all segments of the teaching process, adapting to different situations, getting involved and successfully managing the communication process, developing communication skills, have developed empathy, and, in addition, successfully achieving social interaction (Bjekić & Zlatic, 2006). The author Jovanović (2009) finds the foundations of an effective teaching process in the organization of quality teaching communication. However, she points out that it is often difficult to achieve effective communication due to the passivity of students, inequality, or the inability for active participation in the communication process.

Given that the modern understanding of education implies an inclusive approach, contemporary teachers experience new demands related to competencies that will effectively implement this approach in practice. In this sense, one of the crucial questions is the competence of teachers to use assistive technology in regular elementary school education and teaching.

Children with disabilities have difficulty interacting with other students in the teaching process. It has an unfavorable affect on their social, emotional, and intellectual development. Therefore, regardless of their individual characteristics, they should be encouraged to participate in various activities, that is to improve their communication skills (Stanojević & Stanković, 2018). Reforms in the education system made it possible and gave a chance to include all students, regardless of their diversity, in regular schools. For the majority of children with developmental disabilities, in order to acquire an education according to their potential, it is crucial to use assistive technology, which in today's conditions of technological development must be available to both the student and the school (Vuković, 2012).

Special pedagogical and educational support can be provided to students with developmental disabilities through the use of ICT, which provides many benefits in the area of adapting teaching materials and activities to the students' abilities. In this sense, assistive technology becomes an important tool for inclusion (Andrić, Dobrić, & Kovačević, 2020). Related to that, the offer of special-purpose funds and technological devices adapted to the needs of people with disabilities has expanded in the last two decades. In working with individuals with disabilities, it is necessary to use adequate assistive tools and information and communication technology tools in order to facilitate the rehabilitation process and overcome certain limitations associated with disabilities, ensure a high degree of independence and engagement not only in the pedagogical and educational process but also in all spheres of life. Innovating the pedagogical and educational work and using adequate assistive technology has a favorable effect on achieving better academic results (Grbović & Vučinić, 2018).

With the tendency that all activities in the pedagogical and educational process should focus on improving the child's potential, inclinations, and needs, the didactic-methodical organization of teaching should rest upon an individual approach to each participant in order to adapt the teaching method to the possibilities and thereby fulfill its goal.

1.1. Assistive Technology in regular classroom

The implementation of regular teaching implies the application of an educational approach and teaching practices that will ensure equal treatment and the possibility of progress for all students without exception. Considering the inclusive approach, assistive technology and competencies for its application have a significant place in achieving effective teaching.

"Assistive technology includes instruments, aids, means and devices that students with disabilities and developmental disorders use to perform tasks that they would not otherwise be able to perform. In addition, assistive technology includes tools with which they can perform these tasks easier, faster and better" (Lazor, Isakov, & Ivković, 2012, p. 14; Lazor, 2017, p. 4).

The means of assistive technology can be diverse, including cognitive and communication aids, adaptive toys, aids that facilitate and improve movement and hearing and visual aids, all aimed at making daily activities easier (Netherton & Deal, 2006). Assistive technology has a significant role in communication. Augmentative and alternative communication technologies (such as computerized communication technologies) can replace the vocal expression for people who, due to their cognitive or physical abilities, are unable to communicate with their voice (Kovačević, Slavnić, & Maćešić-Petrović, 2013). Application of augmentative and alternative communication includes: "all forms of communication (except oral speech) used to express thoughts, needs, wishes and ideas" (Lazor, 2017, p. 2). It is the assistive technology that includes various devices and strategies in order to achieve greater independence of people with speech impairments (Romano & Chun, 2018).

Lazor et al. (2012, p. 21) point out that one should consider the use of augmentative communication as an integral part of assistive technology in cases when: "1) there is a significant and documented gap between the child's understanding of language and his ability for expressive communication, 2) when expressive language is insufficiently developed, which significantly interferes with the student's functional communication skills and 3) when the student's speech is unintelligible to those around him".

There are two types of augmentative and alternative communication used in practice: using or not using technology. Low-tech devices include communication boards or image exchange systems, and high-tech options such as computer speech generation technologies are also used, including mobile technology devices with a wide range of augmentative and alternative applications (Beukelman & Light, 2020). *The Assistive Technology Catalog* lists unaided communication systems (which does not use additional equipment, instead, users typically use body language, movements and sign language) and aided communication systems (require the use of tools and equipment) such as picture communication symbols, communication boards with symbols or images, communication boards, and communication devices with voice output – communicators, and many other devices (Lazor, 2017).

Augmentative and alternative communication can be used permanently or temporarily and complement the existing speech:

"It facilitates the communication of individuals in different situations and with different partners, the realization and expression of desires, feelings, and needs, the acquisition of knowledge and skills, and enables the satisfaction of the basic human need for the realization of interpersonal relationships" (Jovanović-Simić & Terzić, 2011, p. 303).

The choice of suitable aids depends on the child's abilities and possibilities and on the teacher's capacity to include this form of alternative communication in everyday work. Therefore, it is necessary that "the holders of the inclusive system are aware of the potential advantages and possibilities of alternative and augmentative communication, as well as persevere in overcoming all the difficulties that inevitably arise during its application" (Maksimović & Blagojević-Radovanović, 2014, p. 211).

Based on the indicated values and importance of the application of assistive technology in the implementation in regular elementary schools, this research aims to look at the teachers' leadership competencies, from the pedagogical standpoint, in the domain of knowledge of assistive technology and its use in elementary schools.

2. METHODOLOGY

The purpose of this research is to determine whether primary school teachers are familiar with assistive technology in communication, whether such technology is available to them, and whether they apply it in regular education. The descriptive method was used in the empirical part of the research. An instrument designed for the purposes of this research was used to collect data, which consists of 7 statements. A Likert-type scale was used as an instrument for data collection, with five alternatives (from 1 – I totally disagree to 5 – I totally agree). The research was conducted on the territory of southern Serbia, in Niš and Bujanovac, from June to August 2022. The survey included 176 teachers working in regular primary schools. The obtained results were analyzed in relation to the type of teaching (class and subject teaching), the organization of the pedagogical and educational work of the class teacher (work in a combined or non-combined class/single grade class), and the scientific field of work of the subject teacher (social and humanistic sciences, natural and mathematical sciences, philological sciences and art sciences).

Table 1 Sample structure according to variables

Number of respondents in the research		Frequency	Percent
Type of teaching	Class teaching	50	28.4
	Subject teaching	126	71.6
	Total	176	100
The organization of the pedagogical and educational work of the class teacher	Combinated class	15	30.0
	Single grade class	35	70.0
	Total	50	100
Scientific field of work of the subject teacher	Social and humanistic sciences	34	27.0
	Natural and mathematical sciences	44	34.9
	Philological sciences	34	27.0
	Art sciences	14	11.1
	Total	126	100

Table 1 shows the sample structure according to the mentioned variables. The research was carried out directly and through the online application "Google Questionnaire", respecting the principle of voluntary participation.

3. DATA ANALYSIS AND INTERPRETATION

The operationalization of the set goal was done through the research of teachers' attitudes about assistive technology and augmentative communication and the teachers' competencies for their application in practice. In order to determine whether teachers are familiar with assistive technology and whether they apply it in practice, average values (scale values) were

calculated for each statement. The presented results are ranked according to the size of the arithmetic mean.

Table 2 Teachers' attitudes about assistive technology and assisted communication

	M	Sd
The school that I work for does not possess the technology and communication aids for verbal expression of students with communication difficulties.	3.36	1.27
The school I work for has no need to use communication aids for assisted communication.	3.16	1.27
I use different means of assistive technology and assisted communication (communication pictures, communication boards, communication books) in class.	2.85	1.35
I am familiar with assistive technology.	2.78	1.25
I am familiar with augmentative and alternative communication.	2.67	1.22
I use applications for the education of students with communication difficulties (e.g. Easy with Marko Acommunicator, Cboard AAC).	2.67	1.31
I attended seminars and other forms of training on assisted/augmentative and alternative communication.	1.91	1.36

By analyzing the arithmetic averages of the teachers' answers about their familiarity with assistive technology, the statements that are valued as the most dominant were singled out.

The highest arithmetic mean was the statement that the schools the teachers work for do not have the technology and communication aids for students with communication difficulties. The arithmetic mean for this statement is $M = 3.36$ with a standard deviation of 1.27. Looking at the individual answers of the respondents, it is concluded that 50% of the respondents declare that the schools they work for do not have the technology and resources that would improve the verbal expression of students with communication difficulties. There is an equal percentage of teachers (25%) who are not certain whether the schools have the mentioned resources and teachers who declare that their school does have assistive resources that would improve students' verbal competence.

The next one with slightly lower values is the statement that there is no need to use aids for assisted communication in schools ($M = 3.16$). In total, seventy-two class and subject teachers believe that there is no need to use aids for assisted communication in the schools they work for. There is an equal number of teachers (52) who believe that the school they work for needs aids for assisted communication and those who are not confident that there is a real need for its use.

From the presented results, it can be seen that 32.9% of teachers use the aids for assisted communication ($M = 2.85$) and 27.8% of respondents use educational applications for students with communication difficulties ($M = 2.67$). However, there is a higher percentage of those who have never used any aids or internet applications in their practice.

The results of the conducted research also show compatibility between teachers' assessments in relation to familiarity with assistive technology ($M = 2.76$) and augmentative and alternative communication ($M = 2.67$). The results show that almost half of the respondents state negatively when it comes to familiarity with assistive technology and augmentative and alternative communication. Specifically, 47 teachers declare that they are familiar with assistive technology, while only 44 teachers are familiar with augmentative and alternative communication. The obtained data show the insufficient knowledge of technologies applied in classes with students who have difficulties in verbal expression.

The lowest valued statement was whether teachers attended a seminar and other forms of training on assisted/augmentative and alternative communication during their careers. The results of the arithmetic mean of 1.91 show that a large number of teachers evaluated this statement with a grade of 1 or 2 - I completely disagree and I do not agree, which indicates that 73.8 % of them have never attended a seminar on the given topic.

Systematic study of the formulated research goal was carried out through the operationalization of the following research directions:

- Examine teachers' awareness of assistive technology and assisted communication, with defined assertions - *I am familiar with assistive technology; I am familiar with augmentative and alternative communication;*
- Examine the frequency of use of the tools and applications with the purpose of improving verbal communication, with defined assertions - *I use different means of assistive technology and assisted communication (communication pictures, communication boards, communication books) in class; I use applications for the education of students with communication difficulties, e.g. Easy with Marko, ACommunicator, Cboard AAC;*
- Examine teachers' attitudes about school equipment and the need to use assistive technology and augmentative and alternative communication, with defined assertions - *The school that I work for does not possess the technology and communication aids for verbal expression of students with communication difficulties; The school I work for has no need to use communication aids for assisted communication.*
- To examine the representation of the content of augmentative technology as part of the professional development of teachers, with defined assertions - *I attended a seminar and other forms of training on assisted/augmentative and alternative communication.*

Table 3 Differences in teachers' answers in relation to the type of teaching

	Type of teaching	N	M	sd	t	df	p
Awareness	Class teaching	50	2.88	1.21	1.113	174.000	.267
	Subject teaching	126	2.67	1.12			
Frequency of use of assets and applications	Class teaching	50	2.93	1.40	1.065	78.264	.290
	Subject teaching	126	2.69	1.19			
School equipment and the need for its use	Class teaching	50	3.24	0.99	-0.171	174.000	.864
	Subject teaching	126	3.27	1.06			
Advanced training	Class teaching	50	2.30	1.54	2.230	75.876	.029
	Subject teaching	126	1.75	1.25			

Data analysis in relation to the type of teaching taught by teachers showed that the attitudes of class and subject teachers differ statistically significantly only when it comes to attending seminars on assisted/augmentative and alternative communication (Table 3). Class teachers, in relation to the number of respondents within the variable, evaluated the statement about professional development more positively than subject teachers.

Table 4 Differences in teachers' answers in relation to organization of the pedagogical and educational work of the class teacher

	Organization of work	N	M	sd	t	df	p
Awareness	Combinated class	15	2.53	1.01	-1.341	48	.186
	Single grade class	35	3.03	1.27			
Frequency of use of assets and applications	Combinated class	15	3.03	1.32	0.338	48	.737
	Single grade class	35	2.89	1.46			
School equipment and the need for its use	Combinated class	15	3.30	0.96	0.278	48	.782
	Single grade class	35	3.21	1.02			
Advanced training	Combinated class	15	2.20	1.57	-0.297	48	.767
	Single grade class	35	2.34	1.55			

To analyze the differences in the responses of class teachers in relation to the organization of the pedagogical and educational work, a t-test was used in order to compare the results of the respondents who work in a class composed of one or more grades. Table 4 indicates that there is no statistically significant difference in the responses of teachers working in combined and single grade class. Awareness, frequency of use of assistive technology and applications intended for children with communication difficulties, attitudes about school equipment, and the need to use assisted communication, as well as professional development in this area, do not depend on the variable of pedagogical and educational work organization.

Table 5 Differences in teachers' answers in relation organization of the scientific field of work of the subject teacher

	Scientific field	N	M	sd	F	df	p
Awareness	Social and humanistic sciences	34	2.68	.97	.031	3	.993
	Natural and mathematical sciences	44	2.65	1.08			
	Philological sciences	34	2.71	1.32			
	Art sciences	14	2.61	1.21			
Frequency of use of assets and applications	Social and humanistic sciences	34	2.62	1.12	.324	3	.808
	Natural and mathematical sciences	44	2.83	1.22			
	Philological sciences	34	2.59	1.26			
	Art sciences	14	2.68	1.14			
School equipment and the need for its use	Social and humanistic sciences	34	3.21	1.12	1.359	3	.259
	Natural and mathematical sciences	44	3.1	1.03			
	Philological sciences	34	3.57	1.09			
	Art sciences	14	3.21	.87			
Advanced training	Social and humanistic sciences	34	1.14	.86	2.825	3	.042
	Natural and mathematical sciences	44	1.86	1.32			
	Philological sciences	34	1.65	1.28			
	Art sciences	14	2.5	1.51			

The ANOVA test was used to analyze the differences in the responses of subject teachers in relation to the scientific area. In Table 5, the obtained data show that a statistically significant difference was confirmed only when it comes to attending a seminar on the use of assisted communication technologies as part of the professional development of teachers in the field of art science ($M = 2.5$). However, one must take into account the fact that a significantly smaller number of respondents from the mentioned field participated in the research compared to other categories.

4. RESULTS AND DISCUSSION

The collected data indicates that almost half of all respondents declare that they are not familiar with assistive technology and augmentative and alternative communication technologies intended for improving communication skills. The research conducted in primary and special schools in Belgrade and Novi Sad (Arsenić, Jovanović-Simić & Daničić, 2022) indicates that most respondents evaluate their levels of knowledge about assistive technology differently. A third of respondents mostly agree with the statement that their understanding of AT is very limited, while, a third of the respondents declare that they are familiar with general assistive technology used in the education of students with developmental disabilities. The research results of the mentioned authors speak in favor of teachers and special education school teachers who work in special education schools because they mostly or entirely agree with the statement that they are familiar with general assistive technology used in the education of students with developmental disabilities. On the other hand, teachers in regular schools generally or partly disagree when they answer the research statement (Arsenić et al., 2022).

When it comes to the frequency of use of assistive technology and assisted communication tools and applications for the education of students with communication disorders, the results show that a certain number of teachers use applications and means of assisted communication. However, there is a higher percentage of those who have never used any aids in their teaching practice. They more frequently use means of assisted communication in comparison to Internet applications. To justify the obtained results, the vast majority of schools in which the respondents work do not have the means of assistive technology and assisted communication. Almost 41% of teachers believe there is no need to use augmentative and alternative communication in their schools. There is an equal percentage of the respondents who are not sure and who believe that there is no need to use aids like communicators, communication pictures, communication boards, and applications for assisted communication in the schools they work for.

The research of Odović, Bakoč, and Rakić (2018), conducted in primary and secondary schools, aimed to examine the benefits of using assistive technology in the education of students with developmental disabilities as well as the conditionality of work experience and the use of assistive technology. The research confirmed that teachers have a positive attitude towards the application of assistive technology and believe that assistive technologies contribute to student better acquiring knowledge, achievement and self-esteem. One of the reasons for obtaining such results, as stated by the authors, was that the schools in which the research was conducted do have assistive technology equipment.

For teachers-leaders to improve the quality of the teaching process, it is necessary to work on their professional development and training. This research determined that the presence of the content of augmentative technology within the professional development of teachers is significantly low, as indicated by the respondents' views on the subject matter. Regardless of the small number of those who attended seminars and other types of training on augmentative and alternative communication, there is statistical significance in the answers of class teachers and subject teachers in various scientific fields. The statistical significance speaks in favor of the art field. One of the reasons for the obtained results may be giving socially desirable answers, but on the other hand, there is a connection of the answers with the obtained results. Teaching subjects in the field of art play a significant role in the overall development of a child. Assisted technology for people with communication

disorders relies on drawings, pictorial symbols, communication cards, and auditory communicators. Music and art education use different media, techniques, and audio-visual aids, which can justify the interest of art and music teachers in attending the program training.

In the course of the research, we determined that there were accredited programs intended for teachers, educators, and professional associates in the previous period within the Catalog of professional development of employees in education for the school year 2018/21, available on the website of the Institute for the Advancement of Education. The programs include the following: 1. "Augmentative and alternative communication, a creation of means and application in practice"; 2. "Assistive technology, support in the education of children with developmental disorders"; 3. "The use of applications for students with communication disorders and learning problems". The existence of the accredited programs indicates the fact that teachers in Serbia do have the opportunity to develop their competencies in this area.

5. CONCLUSION

The obtained research data indicate that out of the total number of respondents, almost half of the teachers in the territory of southern Serbia declare that they are not familiar with augmentative and alternative communication and assistive technology. The results show that a certain number of teachers use applications (e.g. Easy with Marko, ACommunicator, Cboard AAC) and means of assisted communication (eg. communication pictures, communication boards, communication books) in their practice. Means of assisted communication are being used a little more often compared to available applications intended for children with communication difficulties.

A separate problem is the technical and material impoverishment of school. Therefore, most schools included in this research do not have the technology and means to improve the verbal expression of children with communication difficulties. An equal percentage of respondents' answers show uncertainty about the existence of the need to use the means of assisted communication. The lowest values are present on the last research task related to the presence of the means of augmentative technology as part of the professional training of teachers. It is determined that over 70% of teachers have never had any professional training related to the afore mentioned subject. However, the assumption is that professional training had not ever been offered, which is why an insight was made in the theoretical part of the research paper in the Catalog of professional training programs for teachers. Statistical significance was found in the last research question related to the presence of the means of augmentative technology within the professional development of teachers. Teachers from the field of art attended training on assisted communication more often than teachers from other scientific fields. However, the fact that a significantly smaller number of respondents from the field of art participated in the research compared to other fields must be taken into account.

Given the importance of the pedagogical aspect of this problem, future research should overcome the limitations of this study. The limitations are the following: territorial representation of the sample of teachers on respondents from Niš and Bujanovac, the unevenness of the number of respondents within the categories of included variables, and the possibility of giving socially desirable answers due to the presence of the researcher, in cases when the respondents were filling in the answers directly. The most significant

pedagogical implications arising from the research results are related to certain areas of strengthening the leadership competencies of teachers: Encourage teachers to familiarize themselves with the technologies used in working with children who have difficulties in verbal communication through professional development; Prepare and motivate teachers to recognize the need and successfully use augmentative and alternative communication tools in regular teaching, which would improve students' verbal communication; Carry out similar research within the pedagogical sciences in order to increase awareness of the need for a better individualized approach to each student.

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LIDERSKE KOMPETENCIJE NASTAVNIKA – ASISTIVNA TEHNOLOGIJA ZA KOMUNIKACIJU U OSNOVNOŠKOLSKOM OBRAZOVANJU

Jedna od važnih pretpostavki liderstva u procesu vaspitanja i obrazovanja jeste spremnost lidera da preuzme odgovornost za unapređivanje kvaliteta nastavnog procesa i da kontinuirano učestvuje u aktivnostima koje su direktno povezane sa unapređivanjem ishoda obrazovanja. Drugim rečima, da bi nastavnik bio dobar lider, neophodno je da svojim zalaganjem doprinese celovitom razvoju, podršci i povećanju veština učenika. U ovom radu želeli smo da ispitamo da li su nastavnici osnovnih škola upoznati sa asistivnom tehnologijom koja se koristi u cilju ostvarivanja i olakšavanja verbalne komunikacije dece sa poteškoćama u verbalnom izražavanju, odnosno da li nastavnici u redovnoj nastavi primenjuju uređaje za augmentativnu i alternativnu komunikaciju. Istraživanje je sprovedeno na teritoriji južne Srbije na uzorku od 176 nastavnika razredne i predmetne nastave. Za prikupljanje podataka korišćen je instrument kreiran za potrebe ovog istraživanja, koji se sastoji od 7 tvrdnji. Za prikupljanje podataka korišćena je skala Likertovog tipa, sa pet alternativa. Rezultati pokazuju da se skoro polovina nastavnika negativno izjašnjava kada je reč o upoznatosti sa asistivnom tehnologijom. Pedagoške implikacije izvedene na temelju dobijenih rezultata odnose se na osnaživanje nastavnika da putem stručnog usavršavanja u navedenoj oblasti steknu neophodna znanja kako bi na adekvatan način pružili punu podršku učenicima sa kompleksnim komunikacijskim potrebama u cilju povećanja njihovih verbalnih veština.

Ključne reči: *liderske kompetencije, nastavnik, asistivna tehnologija, osnovna škola, verbalna komunikacija*