The attitude of teachers toward students’ self-assessment of educational achievements in inclusive education lessons

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Abstract

Self-assessment is to engage students as active participants in their learning and to reflect the results of their efforts since the key idea of self-assessment is that a child should achieve the learning goal and realize his achievements. The purpose of the study is to reveal the factors causing the lack of self-assessment in primary school lessons. The research collected data using observations and a questionnaire. The participants included 60 primary school teachers from the school of Almaty, the Republic of Kazakhstan. The collected data were analyzed using percentages. Based on the results of the research, the lack of the self-assessment component in the educational process is caused by the lack of assessment tools, which explains the negative attitude of teachers toward self-assessment. The efficiency of the implementation of the innovation in inclusive education needs to ensure the proper training of teachers, including key competencies for working in inclusive classes, and strengthening of its practical component.

Keywords: self-assessment, educational process, assessment, students with SEN

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1. Introduction

The international program “Education for All” considers inclusive education as an equal opportunity for all students to receive high-quality education and develop potential regardless of gender, social and economic status, ethnic origin, geographic location, need for special education, age, and religion (Agavelyan et al., 2020). Following the main provisions of the Conventions, Kazakhstan undertakes to provide inclusive education at all levels (pre-school, middle school, higher educational institutions) (Model rules). It is important to understand that inclusive education is a natural stage in the development of the education system in any civilized state that has reached a certain level of economic, cultural, and legal development (Haug, 2017).

Under the conditions of the updated content of education in the Republic of Kazakhstan, a criterial system of assessment of educational achievements of the students, including children with special educational needs (SEN), was introduced. Instructional guidelines of I. Altynsarin National Academy of Education that regulate the education of children with SEN in the inclusive environment reflect the key requirements for the system of assessing achievement of the planned results of the students and present the requirements in the short-term, mid-term, and long-term support of the needs of a student (Agavelyan et al., 2020). It was noted that the assessment system shall “assess the dynamics of educational achievements” and motivate the students with SEN. This approach is aimed at revealing the effectiveness of education and determining progress over short periods through self-assessment and finding little progress in the development of students’ skills, which will let the teachers respond timely and adjust programs to improve the learning outcomes. However, in practice, the individual achievements of students are still assessed using the traditional five-grade scale. The mentioned problem is exacerbated by the fact that currently there is insufficient use of the pedagogical potential of assessment tools as part of the organization of control and assessment of the activity of younger schoolchildren in the work of Kazakh educational institutions.

1.1. Literature review

The problem of self-assessment of primary school students in the educational process has been drawing the attention of researchers both in foreign special pedagogy and domestic pedagogy. So, in his study, Zapitis (2011) argues that self-assessment is an integral element of the assessment process since the students get the relevant feedback and continue improving their learning skills (Zapitis, 2011). Moreover, if we devote a certain time to this process during a lesson, it will be justified since it makes students more independent and responsible for their learning.

The purpose of self-assessment is to engage students as active participants in their learning and to reflect the results of their efforts since the key idea of self-assessment is that a child should achieve the learning goal and realize his achievements. Besides, Leach (2012) argues that self-assessment reduces stress and improves personal and intellectual development and social skills. The studies by McMillan and Hearn (2008) prove that self-assessment increases motivation.

Since self-assessment is the key component of the formative assessment, in the course of which the students analyze the quality of their work and the degree of reflecting the formulated goals, principles, and criteria is assessed, it becomes the source of the assessment procedure [5]. Assessment based on criteria using self-assessment will have a strong impact on learning. The effect can be both short-term when self-assessment influences the performance of a student in a certain task, and long-term since the students become more self-regulated in their learning. Topping (2003) confirms that the long-term goal of self-assessment is to engage students as active participants in their learning and to confirm their learning, which reflects the results of their efforts in the educational process.

Harris and Brown (2018) emphasize that there are two main aspects for teachers to encourage self-assessment in the classroom. First of all, self-assessment is a part of self-regulated education; second, the assessment of students without targeted training and instruction of a teacher will differ.
from the basic standard of education. At the primary school age, self-assessment has a positive influence on motivation since the motivational component (Clift, 2015) makes the students assume responsibility for their learning and contributes to the development of skills (Anastasiadou, 2013). However, it is necessary to focus on the communicative direction in self-assessment, which improves the oral skills of the students and helps them identify their strengths and weaknesses in learning (Chalkia, 2012) since communication in the student environment broadens the mind of the students.

When organizing any class activity, the teacher tries to know each student, their peculiarities, and needs, taking into account the current development zone. When activating the students in lessons, an important feature is the focus of work not only on a positive result but also on the satisfaction of each child with his activity in the classroom. The inclusive practice will be effective only when the children with SEN will participate in the assessment of their learning outcomes (Anufriev et al., 2018).

1.2. Purpose of study

The purpose of this research is to identify the reasons for the lack of self-assessment of educational achievements of primary school students. What factors hinder the self-assessment of educational achievements of primary school students? Our research focuses on searching for answers to the questions. It is important to identify existing problems in the daily educational process.

2. Materials and Methods

2.1. Data Collection instrument

As a method of experimental research, the observation in the classroom, questioning, and survey of teachers was chosen. Observations in the lessons were used to reveal the fact of how often the teachers conduct and organize self-assessment of educational achievements at the lesson stages since the observation in the classroom may provide factual and reliable data (Cohen et al., 2011, p. 456). The research tool contained a questionnaire and a checklist with a distinctive design containing revealing questions.

2.2. Participants

The questionnaire and checklist were tested in the state general education school of Almaty, the Republic of Kazakhstan, and the number of respondents included 60 primary school teachers. The study was conducted during business hours, within three weeks. The survey was anonymous and was appraised by professors of the Department of the Institute of Pedagogy and Psychology of Abai Kazakh National Pedagogical University. The answers of the experts to the questions were absolutely 100% consistent (all of them were positive) and were rated the same every time as very good and excellent. It demonstrated the possibility of using a prepared research tool. The questionnaire created for this research was used to collect data to obtain information about the professional qualification of each participant of the experiment, length of service in this field, work experience, professional education and qualification category in inclusive education, their understanding of an individual plan and a learning approach, and to identify the improvement of professional skills in inclusive education courses and the attitude of teachers toward updating the content of education, including self-assessment of educational achievements of students.

2.3. Analysis

The analysis of questionnaire was analyzed using percentages. The results of the observation were discussed using content analysis.

3. Results

3.1. Results of the questionnaire
The teaching staff of primary school teachers includes only women (60; 100%). The length of service in these organizations was from 10 to 15 years, 38% of teachers had over 5 years of work experience in pedagogy, and there were also teachers whose length of service in this educational institution was over 20 years, which constitutes 22% of teachers (Table 1). Among them, 82% of the respondents had higher pedagogical education. The rest 18% had vocational education and training. 22% of them had the highest category, 36% had the first category, and the rest were teachers without a qualification category, mainly young specialists (bachelor).

**Table 1**

**General information about schoolteachers**

| Questions                                      | %   | absolute value |
|------------------------------------------------|-----|----------------|
| Length of service 0-5                         | 38  | 23             |
| 10-15                                         | 40  | 24             |
| 20-25                                         | 22  | 13             |
| Education (higher)                            | 82  | 49             |
| Vocational education and training             | 18  | 11             |
| Category (highest)                            | 22  | 13             |
| 1st category                                  | 36  | 22             |
| No category                                   | 42  | 25             |
| Experience in working with SEN (No experience)| 40  | 24             |
| Some experience (insufficient)                | 20  | 12             |
| Experience in working with SEN                | 4   | 3              |
| Young specialists                             | 36  | 21             |
| Do you take into account the individual abilities of students? (yes) | 40 | 24 |
| Sometimes                                     | 40  | 24             |
| Rarely                                        | 20  | 12             |

The analysis of the results of the study showed that:
1) 40% (24) of teachers have no experience of working with students who have educational needs and acknowledge the lack of necessary skills and knowledge (Table 1);
2) 20% (12) of teachers working in the general education school say that they work with children with SEN, but, in their opinion, their professional experience is insufficient for successful work in inclusive education (Avramidis et al., 2000). These participants have assessed their professional competence in inclusive education as low;
3) 4% (3) taught at an inclusive school (with work experience);
4) the rest 36% (21), young specialists who have just completed the bachelor’s program, are still gaining certain experience of working with various categories of primary school students.

As we see, the professional experience of teachers in working with students who have SEN is an important factor that determines the level of social acceptance of these children by the class. A positive attitude towards inclusivity is considered one of the most influential factors and even a prerequisite for the success of inclusive education (Agavelyan et al., 2020).

The level of professional qualification and knowledge acquired by the teachers have a positive influence on the effectiveness of their teaching and contact with students of various categories and with various degrees of psychophysiological deviations and shortcomings (Taylor & Ringlaben, 2012). However, 40% of respondents regularly take into account the individual abilities of students in these educational institutions. 20% of teachers gave unpromising answers, although 40% of them take individuality into account, but not always (Table 1).

The teacher’s lack of experience in working with various categories of students also causes several problems since, in the course of organizing educational process for children with psychophysiological deviations, regular questions arise as part of the didactic and technical support in the lessons conducted and the adequate perception of the potential of children with various deviations. The
absence of unified standardized mechanisms for assessing the learning outcomes in the regulatory document (Guidelines for the system of criterial assessment of educational achievements of children with SEN) causes subjectivity and levels out transparency in the assessment of learning activity. Descriptors for the criterial assessment of students’ knowledge should be prepared for each assignment to be checked, which does not reflect reality.

The second set of questions is aimed at identifying the lack of self-assessment in the organization of education (Table 2).

**Table 2**

*Analysis of self-assessment shortcomings*

| Possible answers                                                                 | %   | Number |
|---------------------------------------------------------------------------------|-----|--------|
| A lot of paper documents (printing of forms, their storage in folders, etc.) in addition to the electronic journal | 35,14 | 21     |
| I’d like the tasks to be developed by the methodological board of the school.  | 7,14 | 4      |
| The tasks for self-assessment are not developed clearly.                        | 10,71| 6      |
| No unified criteria of assessment (Guidelines)                                  | 0,00 | 0      |
| I would like to have uniform tasks for each class.                              | 17,86| 11     |
| It creates a system of regular reviews of material in primary school            | 7,14 | 4      |
| I’d like the tasks to be sent by the “department of education”.                | 8,05 | 5      |
| It’s difficult to explain its essence to parents                                | 11,00| 7      |
| After the summative assessment for the section, this knowledge is no longer checked, even if the student has improved his result | 2,96 | 2      |
| Creates a lot of stress for students                                           | 0,00 | 0      |
| **100%**                                                                        |     | 60     |

At the same time, difficulties in the work of teachers are caused, first of all, by the lack of developed and tested tasks for self-assessment 10,71 % and a shortage of criteria for all stages of students’ learning activities in the classroom, while 8,05% of teachers want the tasks to be given “from upstairs,” and, preferably, be uniform for each parallel of classes. 35,14% of teachers mention the difficulty of performing (printing and paperwork) and explaining the work for self-assessment to parents 7%. However, the survey has shown that self-assessment does not create any stress for students, that is, the current review and consolidation of the material studied will have a positive effect on summative assessment and mastering elementary basic knowledge. However, the educational program itself is focused on deepening and extending the knowledge, which is laid (strengthened) by further basic knowledge. Our further research was focused on identifying the most common methods of assessment used by primary school teachers (Table 3) (Checklist).

**Table 3**

*Methods of assessing educational achievements of students used in primary school*

| Methods of assessment                                                                 | %   | Absolute value |
|--------------------------------------------------------------------------------------|-----|---------------|

647
Assessment by a teacher | 88 | 53
Self-assessment | 12 | 7
Five-grade scale | 51 | 31
Other assessment | 49 | 29
Use the scale of 5,4 | 51 | 31
Do not use | 22 | 13
What other methods do you prefer? () | 27 | 16
Agrees with criterial assessment | 82 | 49
Traditional assessment | 18 | 11

These data show that self-assessment has low dynamics in daily practice: the students are assessed under the traditional system of assessment. For example, 88% of primary school teachers mentioned “assessment by a teacher” as an assessment method, and only 12% of teachers use self-assessment methods, allowing the students to assess their educational achievements and the educational achievements of their peers. 51% of teachers name the five-grade scale a convenient method, but 82% of teachers adhere to the criteria assessment.

In a conversation with teachers, we found out that teachers with no work experience (bachelors) were going to ensure compliance of their practice with the innovations in educational programs, while more experienced teachers were focused on being inclusive in relations. Imray and Hinchcliffe (2013) argue that the practice of teachers in an inclusive environment requires a special approach as the basic inclusive pedagogy is based on a relatively narrow focus on diversity. This study emphasized the need for teachers to adapt their practice according to the standards of basic pedagogy and understand the relationship between the ability of students and their environment, taking into account basic education. The introduction of innovations and the difficulties in their organization identified in this regard by the teachers make us think that inclusive education needs the proper organization of self-assessment of students, in particular, the development of uniform criteria and descriptors as well as special tasks for self-assessment following learning goals. The latter should be focused on a personal approach and contribute to the creation of conditions for the full development of personality.

3.2. Observation results

Daily lessons in primary school, where a large number of lessons confirm the lack of self-assessment of educational achievements of students at the lesson stage. The lessons were held in a traditional format, and assessment is carried out following the general standard of education, often depending on the pedagogical experience and intuition of a teacher. Most of the lessons did not confirm the strategy of supporting all students, including those with SEN. High expectations for everyone were observed in the math lessons in three classes, and some evidence was found in four lessons, and in other ones, evidence that differed from the traditional format was not observed. In five lessons, clear and detailed instructions for students with SEN were observed, while in four lessons, the instructions were given not so effective. The use of the work on self-assessment in pairs was observed in three of the six lessons. Although in six lessons we observed the use of questions at different levels to engage all students and it was effective to some extent, it was not observed in three lessons. Visual materials were not used effectively to support teaching in four of the nine lessons. In five lessons, the supporting sheets were available for assessment, while four lessons lacked this practice.

4. Discussion

Thus, the study allowed us (Yeun et al., 2004, p. 68) to identify the lack of objective self-assessment at the lesson stage, which may later harm personality formation. The conducted research confirms that self-assessment in primary school is fragmented. These data allow us to conclude that there are...
no uniform criteria of assessment for all stages of education, and the students have not developed the self-assessment skills during the educational process.

The mentioned gaps and shortcomings in education influence the formation of the students’ skills, and, accordingly, the entire educational process. Strengthening of these gaps in educational activity hinders strengthening of the practical orientation of the educational process; the management of not only the content but also the operating part of educational activity is weak (for example, what actions and in what order should be performed when solving the orthographic, grammar, speech, and arithmetic task) (Technologies, Khanty-Mansiysk, 2015); the systems of knowledge and skills based on the digestion of connections between the concepts and skills by the students are poorly formed; the role of upbringing in the educational process is leveled out; there is no systematic approach to learning and no system for the formation of the ability to learn.

The individually differentiated approach to the assessment of educational activities is not implemented sufficiently, which does not allow focusing on the strengths of the assessment tools necessary to determine the criteria. For children with special educational needs, it is important to adjust the scope of learning goals, the content, and educational strategies. Child labor should be assessed stepwise and differentially, according to the criteria and taking into account their characteristics, as well as according to the adequate learning difficulties and special needs (Florian, & Spratt, 2013). The principles of self-assessment are underdeveloped, which makes this activity (self-assessment) unclear and incomprehensible for teachers, students, and parents.

There is a lack of necessary methodological tools of the teaching staff to detect the problems associated with self-assessment of primary school students, in particular, among the children with special needs, as well as the necessary methods to solve the mentioned problems. Teachers’ perception of inclusive education showed that most of them feel negativity toward inclusivity. The participants mentioned several factors influencing this: class representation, daily workload, improper adaptation, and insufficient readiness of teachers for inclusion; they also doubt the usefulness and advantages of inclusivity (Helen, 2020) for other students. Difficulties in the work of teachers were caused by the development of criteria for all stages of students’ activity in the lessons (Kalykbayeva et al., 2021). Teachers believe that working on criteria and descriptors is very labor-consuming and takes a lot of time, but criterial assessment is very convenient.

5. Conclusions

Actions are planned to organize self-assessment education and opportunities for teachers to take advanced training courses and cooperate in the lesson exchange program to improve their understanding of inclusive practice and differentiation of assessment in an inclusive environment. Training is also planned to let the teachers encourage the students to identify and jointly develop criteria of successful learning and set goals.

The positive impact of these actions is based on the development of a common definition of inclusion for the teaching staff and the entire school community, including support staff and children. The actions are planned to arrange the following for Teachers:

- Develop the criteria that contribute to obtaining high-quality results;
- Have operating information to analyze and plan its activities;
- Improve the quality of teaching;
- Improve the quality of learning;
- Build an individual learning path for each student concerning his abilities and characteristics;
- Use various approaches and assessment tools;
- Make proposals for improving the content of an educational program.

This system will allow the student to:
develop independence in assessment and learning; know and understand the assessment criteria to forecast his learning outcome and realize the success;
• take part in reflection, assessing himself and his;
• use knowledge to solve real problems and express various opinions.

The parents – get objective information about the achievements of their children to:
• Monitor the learning progress of their children;
• Support the children in the course of learning;
• Have feedback with the schoolteachers and administration;
• Be sure that the children feel comfortable in the class and school

These conditions will ensure the inclusion of students in the process of self-knowledge and skills of students aimed at their conscious motivation; interaction of subjects of the educational process - teachers, students, and parents – to achieve (develop) the uniform requirements for educational activities in an inclusive environment. Besides, the quality of training of teachers and training in the field of inclusive education should be improved. The training of teachers is a key factor for the effective implementation of inclusive policies and practices. The philosophy of inclusive education requires constant professional development of a teacher to satisfy various needs of children with SEN.

Reference

Agavelyan R.O., Aubakirova S.D., Zhomartova A.D., Burdina E.I. (2020). Teachers’ Attitudes towards Inclusive Education in Kazakhstan. Integration of Education, 24(1), 8-19. https://doi.org/10.15507/1991-9468.098.024.202001.008-019

Anastasiadou, A. (2013). Self-assessment: Its impact on students’ ability to monitor their learning process in the English classroom and develop compensatory strategies. Research Papers in Language Teaching and Learning, 4(1). http://rpilt.eap.gr/current-issue/table-of-contents/18-alexandra-anastasiadou

Anufriev, E. A., Meleshkina, E. A., Ivanova, E. U., Zimin, D. A., & Goltseva, O. S. (2018). Inclusive distance education of children with disabilities of different types. Journal of Pharmaceutical Sciences and Research, 10(4), 863-867. https://search.proquest.com/openview/a498f362c0a57f16e567c7aaa72a87f/1?pq-origsite=gscholar&cbl=54977

Avramidis E., Bayliss P., Burden R. A Survey into Mainstream Teachers’ Attitudes towards the Inclusion of Children with Special Educational Needs in the Ordinary School in one Local Education Authority. Educational Psychology. 2000; 20(2):191-211. (In Eng.) DOI: https://doi.org/10.1080/713663717

Chalkia, E. (2012). Self-assessment as an alternative method of assessing speaking skills in the sixth grade of a Greek state primary school classroom. Research Papers in Language Teaching and Learning, 3(1). Retrieved from http://rpilt.eap.gr/previous-issues/volume-3-issue-1-february-2012/table-of-contents/37-ekaterini-chalkia

Clift, L. (2015). The effects of student self-assessment with goal setting on fourth-grade mathematics students: Creating self-regulating agents of learning (Doctoral dissertation, Liberty University, Lynchburg, USA). Retrieved from https://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=2145&context=doctoral

Cohen, L., Manion, L. and Morrison, K. (2011) Research Methods in Education (7th edition). London: Routledge. https://gtu.ge/Agro-Lib/RESEARCH%20METHOD%20COHEN%20ok.pdf

Connett, H. (2020). Action research to improve confidence in meeting diverse needs and the quality of inclusive practice through lesson observations. Support for Learning, 35(2), 178-191. https://doi.org/10.1111/1467-9604.12798
Florian, L. and Spratt, J. (2013) Enacting inclusion: a framework for interrogating inclusive practice. European Journal of Special Needs Education, 28, 2, 119– 135. https://www.tandfonline.com/doi/abs/10.1080/08856257.2013.778111

Harris, L. R., & Brown, G. T. (2018). Using self-assessment to improve student learning. Routledge. https://www.routledge.com/Using-Self-Assessment-to-Improve-Student-Learning/Harris-Brown/p/book/9781138283374

Haug, P. (2017). Understanding inclusive education: ideals and reality. Scandinavian journal of disability research, 19(3), 206-217. https://www.tandfonline.com/doi/abs/10.1080/15017419.2016.1224778

Imray, P., & Hinchcliffe, V. (2013). Curricula for teaching children and young people with severe or profound and multiple learning difficulties: Practical strategies for educational professionals. Routledge. https://www.taylorfrancis.com/books/mono/10.4324/9781315883298/curricula-teaching-children-young-people-severe-profound-multiple-learning-difficulties-peter-imray-viv-hinchcliffe

Kalykbayeva, A., Satova, A., Autayeva, A., Ospanova, A., Suranchina A., & Elmira, U., (2021). Using self-assessment instruction to develop primary school students’ self-esteem in inclusive practice in Kazakhstan. Cypriot Journal of Educational Science. 16(4), 1631-1642. https://doi.org/10.18844/cjes.v16i4.6049

Leach, L. (2012). Optional self-assessment: some tensions and dilemmas. Assessment & Evaluation in Higher Education, 37(2), 137-147. https://www.tandfonline.com/doi/abs/10.1080/02602938.2010.515013

McMillan, J. H., & Hearn, J. (2008). Student self-assessment: The key to stronger student motivation and higher achievement. Educational Horizons, 87(1), 40-49. https://www.jstor.org/stable/42923742

Taylor R.W., & Ringlaben R.P. (2012). Impacting Pre-Service Teachers’ Attitudes toward Inclusion. Higher Education Studies. 2012; 2(3):16-23. (In Eng.) DOI: https://doi.org/10.5539/hes.v2n3p16

Topping, K. (2003). Self and peer assessment in school and university: Reliability, validity, and utility. In Optimising new modes of assessment: In search of qualities and standards (pp. 55-87). Springer, Dordrecht. https://link.springer.com/chapter/10.1007/0-306-48125-1_4

Yuen, M., Westwood, P. and Wong, G. (2004) Meeting the needs of students with specific learning difficulties in the mainstream education system: data from primary school teachers in Hong Kong. International Journal of Special Education, 20, 1, 67– 76. https://eric.ed.gov/?id=EJ846528

Zapitis, M. (2011). The effects of self-evaluation training on the writing of students in grades 5 & 6 (Master’s thesis, University of Toronto, Toronto, Canada). Retrieved from https://tspace.library.utoronto.ca/bitstream/1807/29492/1/Zapitis_Marina_201106_MA_thesis.pdf