

Online pedagogical practice in special education. Students' perspective

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Abstract

The aim of this study is to investigate students' perceptions of pedagogical practice in special education during online teaching. A number of 24 students from the "Aurel Vlaicu" University of Arad, specialization Special Psycho-pedagogy who attended online activities in classes with severe, profound and multiple mental disabilities completed a questionnaire and provided feedback related to the virtual school. The perception of the students participating in the pedagogical practice is that the virtual educational environment is an opportunity for special education, but only temporarily.

Keywords: university students, pedagogical practice, online teaching, special education

1. Introduction

1.1. Organizational change in the context of the pandemic

Over time, the Romanian education system has undergone continuous transformations, in a joint effort to improve the educational skills and well-being of students. To evolve, any system must constantly adapt to the indoor and outdoor environment, accept and embrace change. In the organizational field, change and resistance to change are reference themes of organizational behavior, which indicates that change is a "normality", intelligent systems being adaptive.

The great psychologist Jean Piaget highlighted these phenomena in his theory of the development of intelligence (Piaget, 1977). According to the author, intelligence means adaptation to the environment, through the processes of assimilation and accommodation. Previous cognitive patterns are the basis for learning new elements. External stimuli are assimilated through existing cognitive patterns, but once we become aware of the impossibility of a similar response, cognitive imbalance determines accommodation to new patterns. We accept the new, we reposition ourselves and thus adapt to the environment.

In organizations, the processes of assimilation and accommodation take place on several levels. We can talk about adapting to non-human environment conditions (such as new technologies or legislative frameworks) and to human environment conditions (such as fluctuations in work, changes in hierarchy, new managers, colleagues or beneficiaries). The new working conditions involve from the members of the organization, either the accumulation of new knowledge, learning different procedures and ways of action, or the change of mentality and attitudes. Resistance to change often occurs in the process of adapting to the environment. People prefer the known because it provides predictability, stability and a sense of coherence. Energy consumption is low when the action pattern is familiar. Assimilation and accommodation

require too much effort on the part of the members of the organization, who therefore refuse to change.

The year 2019 was marked by an event that forced all organizations to adapt to change. The spread of the SARS-CoV-2 virus imposed a radical change in humanity, both personally and socio-professionally. In this context we can speak less of a pro-active change and more of an *adaptive* one (Predișcan, 2004) that acts from the external environment to the internal environment. When change is imposed, all components of the system are affected, order is destabilized, restructuring and reorganization take place, to restore homeostatic balance. Transformation is inevitable, and finally a new identity is created. All systems and subsystems, organizations and non-organizations were forced to accept, at least temporarily, their new identity. The Romanian education system was no exception to the rule, being metamorphosed into a virtual education environment.

1.2. Changing education - the challenges of university and pre-university education

Schools are organizations that assimilate information from the external environment, are structured and transformed permanently (Mulford, 2005; Dunning, 1993). In the field of education, the pandemic has introduced a new type of learning, online learning. Traffic restrictions and social distance norms have forced the education system to introduce technological learning as a basic method of training educational skills. The use of computers and the online environment is not, however, a radical change, having been introduced for more than two decades as teaching methods and means. The element of novelty and possibly also a factor that determined the resistance to change was that of exclusive use of the online environment in didactic communication. The sender and receiver have somewhat retained their nature, but the means of communication has been partially or totally changed. Thus, the teaching-learning-assessment triad took a new form, the virtual one, which required the acquisition and improvement of digital skills of teachers and students alike. In the virtual space, the teacher-student and student-student interactions were reframed, the educational actors also learning a new way of socialization, online socialization.

The new type of education and its challenges have manifested themselves on all levels of the education system, both at university and pre-university level. The transformations began with the language used. Teachers and students have learned a new teaching terminology. Terms such as synchronous, asynchronous, Zoom, Google Meet, Google Classroom, meeting id, passcode, chat room, screen sharing, files sharing or drive are now part of the basic vocabulary when it comes to school learning. The technological lexicon was also doubled by the rethinking of the contents and teaching methods. Graphics, interactive applications, power point supports are just some of the new teaching-learning strategies.

The efficiency of virtual education depends on both the quality of the technology and the knowledge in the IT field held by users. Lack of computers, disconnecting from the internet, blocking or slowing down programs are among the most common problems faced by education beneficiaries. These shortcomings have been added to existing ones, such as school difficulties or low motivation to learn.

However, the aspect that showed the most the quality of learning during the pandemic was the lack of human face-to-face interaction. Harlow demonstrated in his classic experiment

on monkeys, the need of human beings and animals to attach to real fellows, which provides warmth and protection (Harlow and Zimmermann, 1958). In the real school space, the appearance, the prestige, the inflections of the voice are indicators of the status of the beneficiaries, an element that regulates the conduct of the participants. Or, even in the synchronous version, the implicit knowledge associated with the non-verbal has a much smaller volume than face-to-face. Implicit information is an indispensable element in the emergence of group processes, in creating trust and engagement in social relations (Curşeu, 2007, p. 240). Online teaching has significantly diminished the formation or maintenance of group cohesion, with students still being members of the group but of a virtual group. In essence, the group involves "being together" or in the context of the pandemic, each student worked individually, from home. Formal and non-formal were intertwined, the family space became both the school space, the difference being given by using or not using the computer.

At university level, the challenge for didactic specializations, which train future teachers, was to maintain quality standards in terms of practical training of students - an essential aspect in acquiring psycho-pedagogical skills. The purpose of these subjects consists both in familiarizing students with the units and the school curriculum, and in assisting and carrying out teaching activities in the classroom. In the context of the pandemic, the universities folded after the schools, respecting the scenario in which they were, which required a rethinking of the way of conducting pedagogical practice. Change and adaptation require even more flexibility in the pedagogical practice carried out in special education, given the specifics of its beneficiaries - students with disabilities. To what extent future teachers have managed or not to know the specifics of special education is a question that we will try to answer in this study.

2. Method

2.1. Purpose of the study

The aim of this study is to investigate students' perceptions of the development of pedagogical practice in special education in the online period.

2.2. Research questions

The epidemiological context generated by the SARS-CoV-2 virus in Romanian education and the changes that occurred as a result of its spread raised the following research questions:

- Is online pedagogical practice an effective way to develop the specific skills of future teachers?
- What are the strengths and weaknesses of the online teaching-learning-assessment process, in special education, from the perspective of students?

The answer to these questions can be an important milestone in the design of online pedagogical practice in the university environment.

2.3. The group of subjects

This study was attended by 24 students from the "Aurel Vlaicu" University of Arad, specialization in Special Psycho-pedagogy, second year of study. The subjects are in the first year of pedagogical practice. The age is between 20 and 46 years, the average age being 26.6

years. In terms of gender, three subjects are male and the rest are female. 81.8% of the participants in the study stated that they had not attended direct teaching activities with children with mental disabilities.

2.4. Investigation procedure and tools

In the present study, questionnaire-based survey (Rotariu, Iluț, 2001) and content analysis were used as research methods. The data on the perception of online pedagogical practice were selected from the students' practice portfolio and following their completion of an online questionnaire, in google form. The online questionnaire includes 8 items, with Likert-type answers on a scale from 1 to 5, regarding the quality of the information received and the efficiency of online activities in order to prepare students for the future profession.

The pedagogical practice took place at the School Center for Inclusive Education Arad and was structured in two stages. In the first part, there were online meetings with the practice mentor and teachers of the institution regarding the organization of the center, familiarization with the space and its facilities, presentation and analysis of legislation in the field and framework plans after which the teaching process takes place. The second part included practical-observational activities of the lessons, on the Google Classroom platform. In order to respect the conditions of epidemiological safety of the pedagogical practice activities, they were adapted to the scenario in which the educational unit was found during this period. In this regard, the students were assigned online accounts and were associated with one of the four classes with severe, profound and multiple disabilities, selected for the provision of pedagogical practice services. All internal procedures of the special education institution were followed. Participation in the demonstration lessons was done according to the schedule provided by each leader of the group of students.

Subjects were instructed on the confidentiality of data, the rights and obligations they have throughout participating in online lessons, in order to ensure the emotional comfort of students and not disturb the educational act.

In parallel with the activities of online observational practice, students also carried out complementary activities that updated previous knowledge, representing familiarization with online platforms for creating interactive games in various educational fields, adapted and used in special education. As an element of the final portfolio, the students made interactive games in digital format, in the Wordwall platform. The games created were capitalized on an online site and used as open educational resources during lessons. (<https://sites.google.com/view/resurse-educationale-deschise/home>).

3. Results

a. Questionnaire-based survey. Analysis of students' perception of online practice development

In order to obtain statistical data related to students' perceptions of online practice, a questionnaire consisting of 8 items was prepared. The answers to the first 6 items were located on a Likert scale between 1 (to a very small extent) and 5 (to a very large extent). At item 7 the answers were nominal, dichotomous (Yes / No), and item 8 was open-ended. The results obtained are presented in Table 3.1.

Table no. 3.1. The average values - the average and the standard deviation - regarding the development of the online practice from the students' perspective

	Online questionnaire items	M	SD
1.	Do you think that the teachers in the class you attended are well prepared for online teaching?	4.42	.92
2.	Do you think that students with mental disabilities can be trained effectively in the online environment?	2.90	1.09
3.	Do you think that the pedagogical practice on the Google Classroom platform helped you to know the specifics and needs of children with mental disabilities?	3.52	.81
4.	Do you think that carrying out complementary activities, such as Wordwall games, has contributed to the development of your teaching skills?	4.71	.56
5.	Do you think that the meeting with special education teachers contributed to the familiarization with the future profession?	4.71	.64
6.	Do you consider that online pedagogical practice is effective for acquiring teaching skills in your preparation for the future profession?	3.66	1.35
7.	Do you consider that you have been provided with enough information during the online pedagogical practice (regarding students, school, school documents, and legislation) so that you can understand what your future profession entails?	Da= 100%	

Regarding the development of online practice, the participants in the study consider that they have been provided with sufficient information during the online pedagogical practice (regarding students, school, school documents, legislation) so that they understand what the future profession entails, but they are more reluctant on the effectiveness of online pedagogical practice for acquiring teaching skills ($M = 3.66$). This result is somewhat natural, since the students did not carry out teaching activities with the students. On the other hand, the interaction on the Google Classroom platform did not give them much confidence that they themselves can acquire specific teaching skills ($M = 3.52$), or that the online environment is conducive to the development of educational skills of students with mental disabilities ($M = 2.90$). The complementary activities seem to have been much more encouraging, the subjects considering effective the meetings with the teachers in special education ($M = 4.71$) and the realization of the interactive games in Wordwall ($M = 4.71$).

Although the participants in the study believe that virtual teaching is less effective for students with mental disabilities, they still appreciated that the teachers in the class have the necessary skills to train this category of students online ($M = 4.42$).

The last question of the questionnaire concerned suggestions for mentors and practice coordinators. At item no. 8- *What would you suggest to the practice coordinators for the improvement of the activity from the second semester, in the online version (red scenario)*, the subjects had different answers from no suggestion, nothing more, to more didactic activities with

children or organizing several meetings with special education teachers. However, the face-to-face option was most often mentioned, a variant that did not appear in the question.

b. Content analysis. Students' reflections after attending online lessons

At the end of each lesson, the students completed a section with personal reflections, information that was analyzed by the mentor and coordinator of pedagogical practice. The frequency and similarity of the answers determined the formation of two main categories: strengths and weaknesses. The data were quantified, determining the frequency and distribution of responses in the two categories. Reflections that could not be allocated in this diagram are not discussed in this study. The results of the content analysis can be found in Table 3.2.

Table no.3.2. Content analysis of students' reflections on online lessons

	N
STRENGTHS	
-spontaneity of teachers	2
-differentiated and adapted curriculum	6
-adapted language	1
-immediate feed-back	2
-use of online applications	5
-designing and carrying out activities in good conditions	6
-good interaction between students	3
-good teacher-student interaction	4
-attractiveness of lessons	8
-possibility of participation of all students in education	2
-support / communication with the family	1
-psychological comfort of students	2
WEAKNESSES	
-lack of concentration of students' attention	9
-technical / technological problems (computer crash, disconnection, poor sound)	6
-intervention of family members in the online activity	1
-management of students' behavior in the group	2
-lack of knowledge in the field of computer science of students	1
-limited teacher-student / student-student interaction	2
-cognitive difficulties-executive functions	1
-insufficient support	2
-difficulties in adequate reception of the didactic message	1
-difficulties in designing online teaching	1
-limited feed-back	1

The content analysis of the students' reflections as a result of participating in the activities on Google Classroom showed that the attractiveness of the lessons was an aspect mentioned by several students (N = 8). Other strengths were the differentiated and adapted curriculum (N = 6),

as well as the design and development of activities in good conditions ($N = 6$). Also, several subjects considered that the use of online applications ($N = 5$) and good teacher-student interaction ($N = 4$) are other strengths of teaching through virtual communication. Regarding the weaknesses, the highest frequency of responses refers to the lack of concentration of students' attention ($N = 9$) and to technical / technological problems ($N = 6$). Overall, however, the number of strengths is higher than the number of weaknesses.

4. Conclusions

The aim of this study was to investigate students' perceptions of pedagogical practice development in special education in the online period.

To the research question *Is online pedagogical practice an effective way in developing the specific competencies of future teachers?* we can answer affirmatively, but only to a certain extent. Assisted activities in Google Classroom helped the subjects to shape an image of their future profession, but did not convince them if they could, in turn, successfully practice it. Complementary activities, such as creating a common games site or virtual meetings with special education teachers, can increase students' satisfaction with the way pedagogical practice takes place.

To the research question *What are the strengths and weaknesses of the online teaching-learning-assessment process in special education, from the perspective of students?* the answers were diverse, the students noticing to a greater extent the positive aspects of the assisted activities. Given the use of communication technologies as a unique teaching-learning method, the perception of the subjects was that special education teachers are ready for change, adapting teaching strategies to the new educational environment, so that the activities were attractive, adapted to students' needs, designed and developed optimally, while involving teacher-student interaction.

However, the participants in the study reported a number of shortcomings, which are related to both the communication channel and the characteristics of the transmitters and receivers. The disruptive technical effects, the lack of experience in the use of communication technology as well as the lack of concentration of attention of students with mental disabilities were among the most frequently mentioned barriers of didactic communication in the virtual classroom.

Special education addresses heterogeneous categories of students with various disabilities. Children with mental disabilities are more difficult to adapt to the environment (Gherguț, Frumos, 2019). It is difficult for them to differentiate the school from the home environment, when the physical space remains the same. According to the students, the *instrumental* function of communication (Zajonc, 1966, apud Amado, Guittet, 2007) has become somewhat ambiguous, being difficult to ascertain whether, and to what extent, the message transmitted by the teacher has achieved its desired purpose.

The results of this study draw attention to the factors that can influence, but also contribute to the efficiency of online special education. Adapting tasks to the technological potential, ensuring the transfer of information, continuous feedback, increasing group cohesion by using group projects or offering good practice models are some of the aspects to be considered when working with children with disabilities.

In conclusion, the perception of students participating in pedagogical practice is that the virtual educational environment is an opportunity for special education, but only temporarily. Virtual communication can be complementary, but certainly not permanent. In addition to quality informational content, the school has the mission of training and transforming the overall personality of students (Simsek, 2012). In the long run, at any level of education, university or pre-university, “transformational” learning cannot take place fully in virtual reality. “Transformational” learning is mediated by social influence (Curşeu, 2007, p. 341) the emergence of the latter being difficult outside a “real” social.

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