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**STRATEGIES FOR TEACHING THROUGH TECHNOLOGY AND
INTERNET IN THE PANDEMIC CONTEXT**

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Abstract

The paper "Strategies for organizing and conducting teaching through technology and the Internet in the context of the COVID-19 pandemic" is based on the size of the application, how to capitalize on the relationship between the context of the COVID-19 pandemic and how to conduct teaching activities through technology and the Internet. The article envisages the connection between quality standards, the legislative, educational and curricular framework, which will facilitate at institutional level the organization and conduct of teaching through technology and the Internet in the context of the COVID-19 pandemic thus streamlining teaching and learning activities in a way as optimal as possible without side effects. In this educational context, teachers depending on the age, individual characteristics of students, but also taking into account the management of the classroom through methods, techniques and tools of digital teaching-learning online influenced the creation and development of digital content, levers effective in improving the educational process. This study considers the effective solutions that teachers have implemented in the teaching act, contributing to the creation of learning communities, to motivate educators for digital collaborative learning, to understand the added value that digital teaching has on the generation net. It also takes into account the concept of positive digital identity and the strategies that educators apply to manage the concept of digital well-being.

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1. Introduction

The current socio-educational context in Romania emphasizes the increasing involvement of technology in the organization and development of the educational act, which is the connection of educational and curricular decisions, educational and curricular policies to the long-term strategic vision of the EU on high digital education. quality, as a challenge and an opportunity for EU citizens for education and professional development (European Commission, 2021). In this context, a harmonization was sought between the quality standards, the legislative, educational and curricular framework, which would facilitate at institutional level the organization and development of teaching through technology and internet in the context of the COVID-19 pandemic in the most optimal way without consequences. collateral.

2. Problem Statement

The organization and development of teaching through technology and the Internet has been a major challenge for educational institutions, as a personal data controller (Order No.5545 / 2020, art. 5), but also for the institutional management team, which, through the measures ordered, must prove the safe storage of personal data, as defined in art. 4 paragraph (4) "(Order No.5545 / 2020, art. 5, paragraph 3). Respecting the methodology-framework for organizing teaching activities in the online environment, the institution has the responsibility to "ensure the resources of the activity in schools" (Order No.5545 / 2020, art. 8, paragraph b), to select and promote in the virtual environment the educogenic messages, to assume continuous training programs for the teaching staff regarding the development of digital competences, but also the extension of the transversal competences regarding the communication in the virtual environment and with the new pedagogical environment generated. Also, the educational institution has the task of "providing resources for familiarizing teachers with applications, platforms and other educational resources" (Order No.5545 / 2020, art. 8, paragraph c), by assuming by teachers of moral, social and professional responsibility in terms of organizing and conducting teaching in optimal parameters, by improving professional performance, professional self-regulation and reflective analysis of their own teaching approach to teaching-learning-digital assessment developed through a shared vision (Senge, 2016).

3. Research Questions

In the context of the Covid-19 pandemic, the management team at the institutional level by conducting the analysis of general and specific educational needs, established the priorities based on which will be organized and conduct teaching through technology and the Internet, evaluation of information resources and human resources with functional skills regarding the use of computer, platforms and applications for digital teaching, but also "implementation of identified solutions" (Order No.5545 / 2020, art. 8, paragraph e). Through responsibility, flexibility, a high level of adaptation and commitment, availability for change and collaboration, teachers have assumed in the new virtual

environment the organization and development of teaching, creating and developing digital content, but also selecting teaching strategy, techniques and digital teaching-learning-assessment tools.

Being under the influence of the context of the Covid-19 pandemic, the research aimed to answer the question: To what extent have the teaching strategies promoted by teachers on the organization and conduct of teaching through technology and the Internet in the context of the COVID-19 pandemic been effective, but have also contributed to increasing the quality of education?

4. Purpose of the Study

In this current digital environment, the teacher has the responsibility to connect the learner to the digital environment, to familiarize him with its challenges and opportunities, but also to facilitate the connection between it and the learning content. The new dynamics of professional life emphasizes the need to develop digital skills and computer literacy skills in the level of the teaching staff, because through unlimited access to digital educational resources that support the teaching act increases the quality of the educational act by promoting quality teaching practices and implicitly and motivation of educators of generation Z.

5. Research Methods

In the current context, for the educational system, elearning is a challenge for teachers, reconsidering the whole system of paradigms regarding the interactive and dynamic virtual environment of the educational approach, so that technology has become a facilitator of the delivery of teaching content, the flexible dimension of the scientific content depending on the age and individual characteristics of the learners, the degree of adaptability to their needs and interests, but also the particularities of the current digital education process with (self) training and (self) evaluation strategies. The current educational reality promoted through new communication technologies promotes a pedagogy focused on the educable, an active student, involved in teaching, content reworking, exercising his skills and metacognitive strategies, but also the exercise of personal reflection aware of the procedural aspect of digital learning, with everything that represents the mechanism of permanent restructuring of acquisitions and cognitive schemes, but also the independence and cognitive autonomy of learners by developing a working memory and an intellectual work style customized to the characteristics and potential of each learner.

The aim of the research was the analysis of the didactic strategies implemented in the didactic approach that contributed to the efficiency of the didactic act, but also to the increase of the quality of the educational act in the context of the Covid-19 pandemic.

5.1. Research Objectives

1. Investigating the measure of the effect of the strategy implemented by teachers in order to streamline the teaching approach in the digital educational environment in the context of the COVID-19 pandemic;

2. Highlighting the possible solutions advanced by teachers in order to streamline strategies for organizing and conducting teaching through technology and the Internet in the context of the COVID-19 pandemic.

The research aimed at making a pedagogical diagnosis on the creative approach of teaching strategies on the organization and development of digital teaching in the context of the COVID-19 pandemic, but also aimed at how teachers have contributed to increasing the quality of education, at a time when the educational environment has been rebuilt by reorganizing the traditional teaching environment, towards the virtual space and digital teaching. In this context, the practices of digital teaching aimed to strengthen the causative factual role of teaching, because the role of the teacher was to facilitate the learning of learners, to involve them as actively as possible in teaching and the individual act of digital learning and development, becoming “actors and authors of their own knowledge, of their own declarative, procedural and conditional / strategic knowledge” (Bocoş, 2013, p. 93).

The objectives of the traced research have been traced and confirmed by formulating the working hypothesis, as a research tool.

5.2. Research hypothesis

The application of a creative didactic strategy in the organization and development of digital teaching contributes to the efficiency of the didactic act, but also to the increase of the quality of the educational act in the context of the Covid-19 pandemic.

5.3. Participants and methodology

In the pedagogical study, the simple random sampling technique was used to substantiate the sample of subjects, who came from 16 pre-university educational institutions with their afferent structures, differentiated by cultural, economic, financial and social diversity of the school population. The sample of subjects consisted of 95 full-time and substitute teachers in pre-university education, characterized by: initial training, management of continuing education programs and the degree obtained, urban or rural environment in which the school is located, seniority in the system education, the seniority assigned to the civil servants in the institution where he is the holder or substitute, the planning of the continuous professional development at the level of the educational institution, the career management. The working methods and tools approached in the study aimed to ensure the sustainability of the research. The interview method was used, as well as the interactive research method, relevant data were obtained from respondents on the problems they face in the educational environment in the context of the Covid-19 pandemic in organizing and conducting digital teaching, but also solutions adopted for efficiency didactic tools and research methods used in data collection, analysis and interpretation of research data, as well as the method of research of curricular documents and other school documents, so that the hypothesis is validated.

6. Findings

In the dynamics of the Romanian reality, the legislative framework was reorganized, but also the educational policies regarding the development of teaching activities. The reconstruction of the context regarding the legislative, curricular and educational framework, in the period of the Covid-19 pandemic, had as finality the reconfiguration of the educational act from the perspective of digitalization. In the current context, the question has often been raised whether the use of new technologies in the organization and development of digital teaching contributes to the efficiency of the teaching act, but also to the increase of the quality of the educational act in the context of the Covid-19 pandemic. More than ever, the last two years have led to the generation of a new social and educational reality, in a permanent connection of information, technologies, knowledge, skills, communities and / or social and educational organizations (Ceobanu, 2016; Ceobanu et al., 2020; Cuc, 2013, 2014, 2019a, 2019b, 2019c, 2020a, 2020b, 2020c). Thus, a percentage of 94% of teachers specified the influence that information, communication and digital technologies had on the development of teaching activities. The technology represented in the context of the Covid-19 pandemic the educational resource of the teachers, who in the didactic approach used applications, programs, platforms in order to improve the didactic act. The respondents mentioned that the most used applications, programs and platforms for integrating technology in the teaching approach were: Microsoft Teams, Google Meet, Google Classroom, Zoom, Facebook, WhatsApp, YouTube, Prezi. At the level of the methodical commission, the depth of integration, the access to quality data and information, but also the rhythm of the use of technology in the development of teaching activities were taken into account. From this point of view, this percentage underlined that the role of the teacher was rethought in the virtual environment, the two dimensions of the current teacher of reflective teacher and expert teacher were associated with the need to integrate technology in discussing the profile of the competent teacher (Redecker & Punie, 2017). From this point of view, the strategies adopted by teachers were also oriented towards personal and professional development, and aimed even in a pandemic context, additional measures advanced at the level of institutional management and quality levels by eliminating obstacles to participation in development, implicitly of pedagogical, digital and collaboration skills, by financing the expenses by the institution, the Teaching Staff House, by public and private funds contracted through public-private partnership, by non-reimbursable funds from European programs, but also by financing and co-financing from the employers' part (Law no.1 / 2011, article 87, article 88). Also, 89% of the interviewees follow in the didactic approaches from the online environment the selection and adaptation of the open educational materials / resources according to the designed learning opportunities, the age and individual particularities of the learners, the educational needs and interests; raising the awareness of educators for certain topics of social and cultural interest and arousing interest in topics of scientific interest; for efficient information processing; by streamlining the teaching-learning-assessment process, by the levels of development, being concerned about the need to support and facilitate digital learning for learners, to create learning communities or why not, to be proactive. From this point of view, for this percentage of subjects it is a solution that the applications, programs or platforms represent not only a space for storing data and information necessary in organizing and carrying out teaching activities, but also an effective tool for searching, selecting and evaluation of data stored and used in teaching, thus contributing to the

development of digital content, their integration into learning units, but also being an effective tool in reworking digital content according to the needs and interests of learners, but also their learning goals. In this context of the reorganization of teaching activities in the virtual educational environment, 78% of respondents stressed the need to reorganize educational learning environments by designing at the micro level of learning environments supported by technologies, effective in achieving learning objectives, with the possibility to monitor the decision, the working tools, the way of representing the information, the possibility of efficient integration by the educators of the knowledge and competences they have, the way that the respondents support represents for the didactic approach in the digital educational environment an efficient solution for training the learning capacities self-regulating (Cuc, 2013, 2014, 2019a, 2019b, 2019c, 2020a, 2020b, 2020c; Curelaru, 2020). Also, 91% of respondents were aware of the need to create a learning community, where collaborative learning in teams is more effective than individual learning, because not only the learning product is collaborative, but also the process itself, and by developing an autonomy in learning the learner improves his personal development mechanism, he has an in-depth vision on the generated contents, but also on the dynamics of the mechanism of building the learner, from the perspective of this percentage of subjects, the teacher in digital teaching has the role of moderator, is an integral and active part of the learning community, but also has the role of facilitating for learners the dynamics of the knowledge construction process (Ceobanu, 2016; Ceobanu et al., 2020). As solutions for capturing and maintaining attention, 84% of respondents said they use interactive materials, images, graphics or digital stories and interactive games that are preferred by digital natives. As solutions advanced by teachers in order to streamline strategies for organizing and conducting teaching through technology and the Internet in the context of the COVID-19 pandemic, 78% of respondents said they approach strategies to cultivate educators' confidence in their own knowledge and skills. successful learning tasks through coherent management of activity planning; by self-determination and by developing the motivation to learn in the virtual environment; knowledge of the needs, interests and expectations of learners; efficient monitoring of elaborated tasks and providing constructive and immediate digital feedback; also other advanced solutions in streamlining the teaching act, but also in increasing the quality of the educational act in the context of the Covid-19 pandemic, teachers supported the objectives of the promoted educational program: the need for digital autonomy, the need for communication and interpersonal relationships in the virtual environment, digital competence (Ceobanu, 2020). From this point of view, the need to develop digital autonomy in educators is reflected in the teaching activity by focusing teachers on building a positive digital identity, by the independence to act in the virtual environment as efficiently as possible, managing their digital reputation, but the development self-control strategies in terms of the impact that its activity in the virtual environment has on the educable, through the added value, but also the risks assumed in order to build a digital well-being in accordance with one's own authentic self (Ceobanu, 2020; Cuc, 2013, 2014, 2019a, 2019b, 2019c, 2020a, 2020b, 2020c; Curelaru, 2020). Also, another sustained solution is the development of skills and self-regulation mechanisms in the virtual environment through the efficient organization by the learner of virtual environments in order to achieve high performance. Last but not least, another advanced solution is the development of communication and interpersonal skills through high capacity for social interaction,

empathic attitude, receptivity to the needs of others, through a high degree of adaptability and belonging to the group.

7. Conclusion

Under the influence of the Covid-19 pandemic, action trends have developed in the evolution of general education, through the implementation of technology in education and teacher training. All these reorganizations have led to substantial changes in educational theory and practice, becoming for professionals in the education system the main directions of study and action, while contributing to the development of a new concept of digital pedagogy and digital literacy (Short, 2018 quoted by Ceobanu, 2020, p. 33). E-didactics, proposes new challenges and infuses the best practices for the current educational context. Each teacher, regardless of the level of training and professional development, capitalization of pedagogical expertise, is the reflective practitioner, who in this context of the pandemic reflects on their own practices, analyzes the limits and shortcomings of teaching, finding viable solutions to improve teaching and management learning spaces built through technology; selects with great professional responsibility the work tools taking into account the type of learning and the educational needs and interests of the learners. Through technology, the activities are interactive, promote teacher-educator interaction and support collaborative learning, organize desirable learning experiences for learners so that they benefit from positive influences of technology in developing their independence and cognitive autonomy, in developing motivation to learn, but and in cultivating an intellectual work style appropriate to each learner, but also the feeling of belonging to a learning community (Albulescu & Catalano, 2021; Ceobanu et al., 2020; Redecker & Punie, 2017; Șerbănescu et al., 2020; Weinberg & Rolnick, 2020).

References

- Albulescu, I., & Catalano, H. (2021). *e-Didactica. Procesul de instruire în mediul online* [e-Didactics. The training process in the online environment]. Didactica Publishing House.
- Bocoș, M. D. (2013). *Instruirea interactivă. Repere axiologice și metodologice* [Interactive training. Axiological and methodological landmarks.]. Polirom.
- Ceobanu, C. (2016). *Învățarea în mediul virtual* [Learning in the virtual environment]. Polirom.
- Ceobanu, C. (2020). *Reconfigurări educaționale în era tehnologiei digitale* [Educational reconfigurations in the age of digital technology]. In C. Ceobanu, C. Cucuș, O. Istrate, & I. O. Pânișoară (Eds.), *Educația digitală* [Digital education] (pp. 21-36). Polirom.
- Ceobanu, C., Cucuș, C., Istrate, O., & Pânișoară, I. O. (2020). *Educația digitală* [Digital education]. Polirom.
- Cuc, M. C. (2013). Ways to Streamline Didactic Communication. *Procedia - Social and Behavioral Sciences*, 92, 225–230. <https://doi.org/10.1016/j.sbspro.2013.08.664>
- Cuc, M. C. (2014). Development of a Communication System for Capitalizing Cultural Diversity. *Procedia Social and Behavioral Sciences*, 143, 63-67. <https://doi.org/10.1016/j.sbspro.2014.07.358>
- Cuc, M. C. (2019a). The Relationship Between Self-Esteem and Academic Success. In the Proceedings of the 6th ERD Conference. European Proceedings of Social and Behavioural Sciences (pp. 36-43). European Publisher. <https://doi.org/10.15405/epsbs.2019.06.6>

- Cuc, M. C. (2019b). Particularities Of Regulatory Mechanisms In Gymnasium Students. *The European Proceedings of Social & Behavioural Sciences EpSBS, LXIII*, 44-54. <https://doi.org/10.15405/epsbs.2019.06.7>
- Cuc, M. C. (2019c). The Well-Being – A Fundamental Indicator In Didactic Activity. *The European Proceedings of Social & Behavioural Sciences EpSBS, LXIII*, 55-65. <https://doi.org/10.15405/epsbs.2019.06.8>
- Cuc, M. C. (2020a). Particularities of Communication and Interpersonal Relationship in Gymnasium Students. *The European Proceedings of Social & Behavioural Sciences EpSBS, LXXXV*, 176-185. <https://doi.org/10.15405/epsbs.2020.06.18>
- Cuc, M. C. (2020b). Parental Migration – A Fundamental Factor In The Development Of School Children. *The European Proceedings of Social & Behavioural Sciences EpSBS, LXXXV*, 186-196.
- Cuc, M. C. (2020c). Narrative Identity – A Fundamental Concept In The Development Of The Self. *The European Proceedings of Social & Behavioural Sciences EpSBS, LXXXV*, 685-693. <https://doi.org/10.15405/epsbs.2020.06.71>
- Curelaru, V. (2020). *Învățarea autoreglată în mediul virtual* [Self-regulated learning in the virtual environment], (pp.148-161). In C. Ceobanu, C. Cucuș, O. Istrate, & I. O. Pânișoară (Eds.), *Educația digitală* [Digital education]. Iași: Polirom.
- European Commission. (2021). Digital Education Action Plan (2021-2027). *Resetting education and training for the digital age*. Retrieved from https://ec.europa.eu/education/education-in-the-eu/digital-education-action-plan_en
- Legea educației naționale nr. 1/2011. Parlamentul României. [National education law no. 1/2011]. https://edu.ro/sites/default/files/_fi%C8%99iere/Legislatie/2021/LEN_2011_actualizata_2021.pdf
- Ordinul ministrului Educației și Cercetării nr. 5545/10.09.2020. Ministerul Educației și Cercetării [Order of the Minister of Education and Research no. 5545/10.09.2020. Ministry of Education and Research] (in Romanian). Retrieved from https://www.edu.ro/sites/default/files/_fi%C8%99iere/Legislatie/2020/OMEC%205545.pdf
- Redecker, C., & Punie, Y. (2017). *European Framework for the Digital Competence of Educators DigCompEdu*. EUR 28775 EN. Luxembourg: Publications Office of the European Union. Retrieved from <https://publications.jrc.ec.europa.eu/repository/handle/JRC107466>
- Senge, P. (2016). *Școli care învăță. A cincea disciplină aplicată în educație* [Schools that learn. The fifth discipline applied in education]. București: Trei.
- Șerbănescu, L., Bocoș, M. D., & Ioja, I. (2020). *Managementul programelor de formare continuă a cadrelor didactice*. Ghid practic [Management of in-service teacher training programs. Practical guide]. Polirom.
- Short, M. N. (2018). Tehnology and Digital Content: Promoting Learner-Centered Pedagogy. In J. Keengwe (Ed.), *Handbook of Research on Digitale Content, Mobile Learning and Technology Integration Models in Teacher Education* (pp. 283-301). IGI Global. http://www.itdl.org/Journal/Jan_05/article01.htm
- Weinberg, H., & Rolnick, A. (2020). *Psihoterapia online. Teorie și practică. Intervenții individuale, familiale, de grup și organizaționale oferite prin internet* [Psychotherapy online. Theory and practice. Individual, family, group and organizational interventions offered via the Internet.]. Trei.