

MIS in primary education and IT user satisfaction as indicators of quality improvement

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Abstract

In elementary school, in accordance with the development of information systems, it is necessary to adapt information systems to regular use in everyday work. The work will demonstrate the justification of increased demands for organizational changes, that is, reengineering basic education in order to ensure quality. This activity in the primary school will be presented as part of the joint activity of the school management, and the development of IT (Information Technology) applications in primary education through the distance learning paradigm will be presented, with special reference to the primary school where this application should lead to continuous improvement in teaching and business processes. The increased demands for organizational changes in the era of the COVID-19 coronavirus pandemic caused the reengineering of basic education, affecting the quality of teaching through the application of a distance learning platform. In addition to higher quality education, the goal is to reach more inaccessible users, improve information and communication technology, and ultimately improve communication, that is, the quality of teaching and the learning process itself. The method of systematic approach and the method of theoretical analysis led to the results of the research, which was carried out for the purpose of assessing the current performance of elementary schools in the field of education, as well as the importance of information systems in education. 55 school employees participated in the research. There are numerous problems with the establishment of new information technologies in any business environment, especially in the educational environment, which we have all witnessed in the past period. What should be the essence of reengineering is the establishment of a new system in order to improve the existing one, and how many difficulties we face, many researchers will write. It will be concluded that it is neces-

sary to improve the previous work in order to increase the effectiveness and efficiency of the results and investments in the teaching process.

Key words: *management information system, information technology, distance learning, reengineering, learning platform*

1. Introduction

The organization of teaching work at school has not changed significantly since J.A. Komenski introduced the class-hour system, the key elements and characteristics of which are the frontal form of work, equal teaching for all unequal students. There were and are alternatives, but they are left to the wishes of individuals. What has significantly changed teaching is the development and emergence of informatics and information systems. This introduced a new subject and approach to teaching. Now the teaching can be organized quite differently compared to the postulates set earlier. Unfortunately, the biggest application of information and communication technologies only happened in 2020, when the world started using these systems during the pandemic. The increased demands for organizational changes in the era of the COVID-19 coronavirus pandemic caused the reengineering of basic education, affecting the quality of teaching through the application of a distance learning platform - the teaching is of higher quality, multidimensional, and contents are more available at the individual level of each student.

2. Management information system, information technology and primary school

Experiments show that teaching and learning with the help of information technologies are more efficient than traditional teaching in terms of the quality and quantity of acquired knowledge, the

durability and applicability of that knowledge, and especially in terms of the student's mental mobility, his motivation to learn, as well as more dynamic, more humane and fairer evaluation and evaluation of student work. As the center of social power and social production moved to scientific, information and educational systems, the central problem is not how to organize efficient business, but how to organize decision-making, i.e. information processing (Kudumović, 2018). In this regard, management information systems should be viewed as part of a comprehensive business-teaching information system, while information technologies represent an apparatus for the development of management information systems that will enable the development and creation of competitiveness on the labor market for the organization that uses them, in this case an elementary school. In order to survive on the labor market, schools have decided on different learning platforms in order to offer users (students and teachers) as efficient, effective and high-quality learning as possible. It is not necessary to know the way of evaluating things and phenomena in our organizations in order to understand how influential individuals resist changes and the arrival of young, educated personnel (Dunderović, 2005). What is obvious is the fact that even these individuals will have to comply with the new practices if they want to continue working in the positions in which these changes found them. Taking into account the types of content, strategies of the educational process as well as the organization itself, the application of information technologies will depend (Radenković and Despotović, 2005). "In the future, new technologies will be maximally sophisticated, so they will require great intellectual and physical efforts to master them. Illiterates in the 21st century will not be those who do not know how to read and write, but those who are unable to learn, unlearn and learn again" (Kudumović, 2018, p. 6)

3. Aims

The goal of such changes in primary education is reflected in the following:

- Education becomes of higher quality - communication is facilitated and information is available to all participants of the educational process at any time.

- Education is available even to the health-impaired, in this case they do not suffer the consequences of their condition, and the teachers teach remotely for everyone, without difficulty.
- Improvement of information and communication technology in all schools, regardless of whether they are in urban or rural areas.
- The main goal was to investigate - to show that the use of IT improves communication, and thus the quality of teaching and learning expressed through the degree of teacher satisfaction, as one of the main indicators of quality measurement.

4. Material and methods

The research was conducted in the area of Central Bosnia Canton, Vitez municipality, Preočica village, primary school "Dubravica" in the period from March to June 2021. In this work, the method of systematic approach and the method of theoretical analysis was used. This is a very complex research that was carried out for the purpose of assessing the current performance of elementary schools in the field of education as well as the importance of information systems in education. 55 school employees took part in the research, of which 18 were male and 37 were female, of which 2 were under 25, 25-35 - 15, 36-45 - 21, 46-55 15 years old, 2 respondents over 55 years old. When it comes to the educational structure of the respondents, 3 respondents have completed a pedagogical academy, 37 respondents have completed a bachelor's degree, and 15 respondents have completed a master's degree. Statistical analysis of the process shows that there is a measurable statistical connection to the impact of the quantity and quality of information necessary for the decision-making process in elementary school.

5. Results

The results of the research show that employees are satisfied with communication through information technologies during the COVID-19 coronavirus pandemic. The quality of the received information has significantly improved compared to the period when information was exchanged only by words.

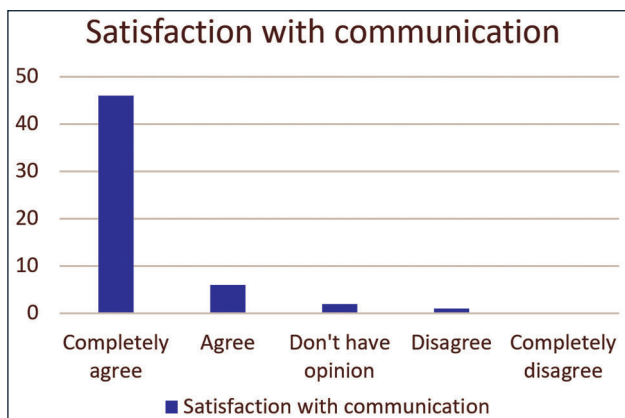


Figure 1. Satisfaction with communication

Furthermore, the respondents declared that they were satisfied with the way they were conducting distance learning and that information technology made it easier for them to teach students, assess their knowledge and cooperate with parents.

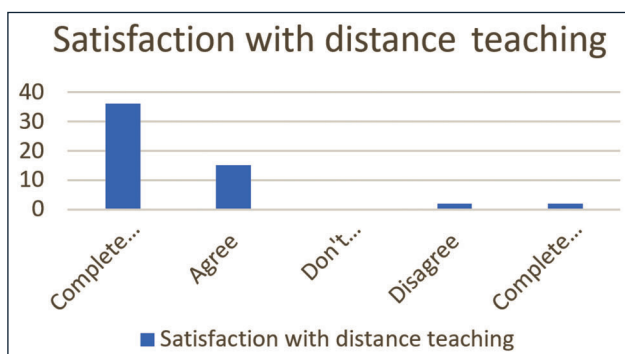


Figure 2. Satisfaction with distance teaching

The respondents declared that they were partially satisfied with the equipment they had for distance learning, communication with management, parents and students.



Figure 3. Equipment satisfaction

6. Reengineering and new information technologies

Similar situations are not foreseen in the Law on Basic Education SBK and its amendment (Ministry of Education of the Central Bosnian Canton, 2001, Ministry of Education of the Central Bosnian Canton, 2004). The reason for this is the obsolescence of the document and its irrelevance in relation to current practice. The school is managed by a director who is responsible for conducting pedagogical activities (Ministry of Education of the Central Bosnian Canton, 2001). There are numerous problems with the establishment of new information technologies in any business environment, especially in the educational environment, which we have all witnessed in the past period. If we emphasized the importance of young, school-trained people, we could initiate changes in the desired direction and at a speed that corresponds to our world of changes (Dunderović, 2005). One problem is the difficulty of establishing information requirements both for the individual user and for the organization itself. What should be the essence of reengineering is the establishment of a new system in order to improve the existing one, and how many difficulties we face, many researchers will write. Reengineering is a process that changes organizational culture, creates new processes, new systems, new structures and new ways to implement change and influence the success of a company, firm, business organization (Kudumović, 2018). “The characteristic of today’s information systems is that, in addition to information for management, it connects all workplaces for the formation, processing and use of information in the interactive work of each user with databases. They become a means of daily work for employees, replacing filing cabinets, letters, forms, mail deliverers, and auxiliary computing devices” (Kudumović, 2018, p. 10).

7. Conclusion

This research shows that the use of information systems and information technologies today is not a matter of choice but a matter of survival in the labor market. Certainly, their application in education and business in education is a revolutionary

phenomenon that should be supported by all participants in any process. Not only does the use of IT improve communication, and thus the quality of teaching and learning, but it also facilitates the education process for all participants in the class as well as for third parties, communication is facilitated and information is available to all participants in the educational process, and education is even available for health vulnerable, regardless of whether the participants are residents of rural or urban areas.

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