

KIRKPATRICK'S MODEL OF EVALUATION APPLIED UNDER COVID 19 CONDITIONS

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ABSTRACT

Evaluation is of a high importance in any format that has become widely present in educational process, at any level, starting from primary school education and finishing with higher institutional one. In the paper, it has been discussed on the Kirkpatrick's model of evaluation being applied under Covid 19 conditions, the condition that has never been present in the entire world before. It has been described and discussed the evaluation process under these circumstances and what is the satisfaction level of both students and tutors in it, and also all changes occurred during this pandemic. The discussion part of the paper has been researched in its several segments, where both pros and cons have been presented, where the focus is in the virtual classroom activities since the pandemic conditions. The examined sample has included both tutors and students at a university level, where the real outcomes of this process are seen through a prism of the main hypothesis of the paper and it is to examine why the evaluation process is also of importance to be present under Covid 19 conditions. A new element has also been discussed and applied here and it is related to time experience of both students and tutors and how they have perceived it in this virtual learning environment.

Key words: e-learning, Covid 19, a virtual language classroom, learning satisfaction, evaluation.

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INTRODUCTION

E-learning has been included at all levels of education and thus, it has contributed a lot in its formatting and changing. The main aim of this paper is to prove and show several aspects of e-learning, and also, two-side segment of a relation of a student-tutor, and their satisfaction under Covid 19 conditions. Thus, it shall be identified both pros and cons and the researched part has been integrated into this modern educational process. The very complex nature of e-learning technology must be understood in order to integrate it in this very demanding educational process. The paper also offers an insight into the use of e-learning in a completely changed learning environment. The sample has been introduced within the students of a university level, who have also had a chance to learn in these this changed environment, and also, tutors have been examined through a questionnaire. A new element of time reference has also been discussed here since it is closely related to the examined learning environment and how it has been perceived within it. The examinees have also had a chance to explore the context of learning and how much can all previously mentioned aspects of this process could have their positive or negative impacts to it.

THEORETICAL BACKGROUND OF THE E-LEARNING ENVIRONMENT

In an attempt to give an indication of the e-learning environment, firstly we have to emphasize the very nature of a learning process, where three primary elements are included into it: a tutor (professor), a student and a learning environment [1]. The first figure in this process, a tutor or a professor, is the person who teaches in this process. When talking about it, this person has always been present in it, regardless of whether we talk of a traditional or a virtual classroom. It refers to the immediate person who delivers knowledge, has power to examine and test it, and finally, is the person of a key importance in any classroom. Without this figure, the entire process could not be possible and would become irrelevant. The second figure is a student, it is a person highly involved in this process and again, present in it from the very establishment of any educational process. Like with a tutor, the educational process would not be possible if we would not have a student in it. Therefore, a student cannot be left out of it and the process would not have a key segment in itself to be implemented. The third one, e-learning environment is the segment that has evolved and changed in the highest degree. It is the segment where both previously mentioned figures exist and cooperate, learn and teach and function in it. When comparing traditional and modern classroom, this part is the most visibly changed and thus, it has several aspects to be mentioned, so as to be better understood. The fourth figure is learning content and it cannot be neglected in this process, either. Thus, all four figures equally exist and share the learning space, called a classroom or e-learning environment. This segment has also included in itself a lot of changes due to its complexity and nature, and as the third one, is the most visible in its changes and challenges it faces with.

The aspect of the highest importance, never been present before in this learning environment, is Covid 19 virus and the influence it had during the process. Covid 19 is, as defined on the official site of the World Health Organization Corona virus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. However, some will become seriously ill and require medical attention. Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illness. Anyone can get sick with COVID-19 and become seriously ill or die at any age." This element is present for the first time ever in the history of a learning process and is examined to prove the main hypothesis of the paper. The scope of its effect to the entire world population is one of its primary characteristics and is worth examining in this part of a learning process. One of the e-learning definitions states: "E-learning is an innovative approach to delivering electronically mediated, well designed, student-oriented, interactive e-learning environment, independent of the place and time, whether by using the Internet or digital technologies according to the instructional design principles. There are numerous names for online learning, including E-learning, Web-Based Learning (WBL), Web-Based Instruction (WBI), Web-Based Training (WBT), Internet-Based Training (IBT), Distributed Learning (DL), Advanced Distributed Learning (ADL), Distance Learning, Online Learning (OL), Mobile Learning (or m-Learning) or Nomadic Learning, Remote Learning, Off-site Learning, aLearning (anytime, anyplace, anywhere learning). I use the term E-Learning to represent open, flexible and distributed learning. Designing and delivering instruction and training on the Internet requires thoughtful analysis and investigation, combined with an understanding of both the Internet's capabilities and resources on the ways [2]." As it is clear from this statement, it is a student-oriented environment, where a student is again a key segment in it. The next line actually represents the learning content, and it is an interactive format, where studying is faster, easier, and not very often, completely free. In this segment, we can see the greatest change, especially compared to a traditional classroom. We do not have paper books anymore and the cost of learning is significantly lower. The time and place are also the following parts, where we can learn anywhere, at any time most appropriate to us and our needs, thus, we have the term e-Learning. This is also the part where a traditional classroom has been completely replaced, and a new form of learning has taken its place, where the Covid 19 conditions influenced it to the highest level of change. The last, instructional design principle is actually a role of a tutor, and this part also shows how much the role of a tutor or professor, has changed due to e-learning format.

RESEARCH GOAL AND METHODOLOGY

The current paper has for its aim to address the following hypothesis: the need of evaluation in the learning process affected by the Covid 19 pandemic; there is two-side segment, i.e. a tutor-student one, to show pros and cons, but also the level of satisfaction in this process; a time reference and its perception and experience in this changed learning environment.

THE USEFULNESS OF EVALUATION IN THE PANDEMIC CONDITIONS

Evaluation in the learning process is a very valuable tool and it assists in examining several pros and cons regarding it. When we talk about e-learning, we can notice several important notions on it and they should be reconsidered in this part of the paper. The examinees' part of the paper includes several segments to be noted here: the experimental part has been conducted at a university level, with the students of both social and science fields. The pandemic conditions influenced and changed completely the entire educational system and the impact they had are of the researched interest; "The global outbreak of the COVID-19 pandemic has spread worldwide, affecting almost all countries and territories. The outbreak was first identified in December 2019 in Wuhan, China. The countries around the world cautioned the public to take responsive care. The public care strategies have included hand washing, wearing face masks, physical distancing, and avoiding mass gathering and assemblies. Lockdown and staying home strategies have been put in place as the needed action to flatten the curve and control the transmission of the disease" [3]; the tutors' part includes social and science fields like with the sample students. The main idea is to have involvement of different academic skilled tutors and their perspective in this changed learning environment in order to have evaluation process examined two-sided; the evaluation process has included e-learning one, respecting Kirkpatrick's model as a guiding one, where the differences have been noted immediately and have been very visible from the very beginning of this research; when talking on Kirkpatrick's model of evaluation, it has been applied in its primary form and then developed through the questionnaire related to several segments of this model; all relevant information has been presented to have all clearer figures of the outcomes.

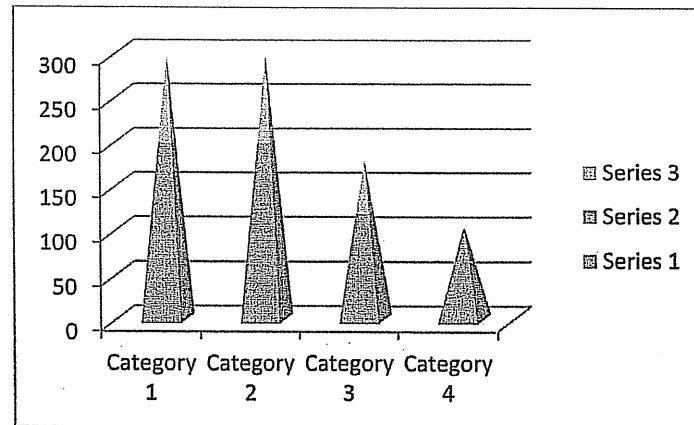
The questionnaire of both students and tutors has included several segments examined here: the first one has been related to Covid 19 and the influence of the pandemic onto the learning process; Maslow before Bloom is the common phrase used in education circles. This must be the mission for online learning for the continuation of education during the present pandemic. The phrase is typically used to ensure that our students are safe and have their basic needs met before online learning commences [4]. With students now experiencing homeschooling during this Covid-19 pandemic, conducive environment at home for all standards and socio-economic conditions is not uniform; the next one is oriented towards satisfaction, as a primary level one indicator of any learning process. The satisfaction level shall emphasize technology literacy and how much it is important in this process. Since both tutors and students are examined from social and science fields, it is also an indicator of how much profession can be a pre-determining point in some cases of examination; the third level of the model, including behavior of students, has also been discussed in a form of narrative answers of students and what is the most influential form of learning that has influenced and caused this change; the time reference is examined separately within the paper and it shows very clearly how the perception of a real time and virtual one is opposing to students and their tutors, especially in the pandemic changed environment.

The ratio of students and professors is of the same number of them, since the idea is to have a wider scope of the persons included in this research, of both social and science fields (the total of 400 hundred examinees). The examined students had both female and male gender included (130 females and 70 males). A different ratio of professors is included in this research (80 female and 120 male professors). When talking about social sciences, there are 120 students included, while science included the total of 80 students. E-learning tools have played a crucial role during this pandemic, helping schools and universities facilitate student learning during the closure of universities and schools [16]. "The art and science of helping adults learn. In the andragogical model there are five assertions: 1) Letting learners know why something is important to learn, 2) showing learners how to direct themselves through information, 3) relating the topic to the learner's experiences. In addition, 4) people will not learn until they are ready and motivated to learn. 5) This requires helping overcome inhibitions, behaviors, and beliefs about learning [5]."

The usefulness of evaluation as a process can be seen in the following lines, where Kirkpatrick's four-level of training evaluation shall be presented. As it can be seen, Kirkpatrick has explored the process of evaluation to maximize learning, Kirkpatrick has represented a four-level model of evaluation process and it can be divided in the following way: Level 1: Reaction; Level 2: Learning; Level 3: Behavior; Level 4: Results. There are three main reasons to evaluate any training process: a) to improve it; b) to maximize transfer of learning to behavior and subsequent organizational results; c) and to demonstrate the value of any training [6]. When reconsidering all four previously mentioned levels, there are certain characteristics to be emphasized: Level 1: Reaction – In this level, the first recognizable characteristic is *satisfaction*, when measuring any form of training. Thus, it is the primary level and the degree of someone's satisfaction and it does have a positive correlation to any form of learning; Level 2: Learning – It is the level describing the degree to which participants acquire knowledge, skills, attitudes, confidence and commitment in a learning process; Level 3: Behavior – This level describes the degree to which participants apply what they have learned during any training. This form requires having adequate processes and systems to reinforce, monitor, encourage and reward performance of anyone's behavior; Level 4: Results – This is the level of evaluation to describe the degree to which targeted outcomes occur, as a result of training. The leading indicators in this part are short-term observations and measurements, so as to create a positive income of the desired results [6].

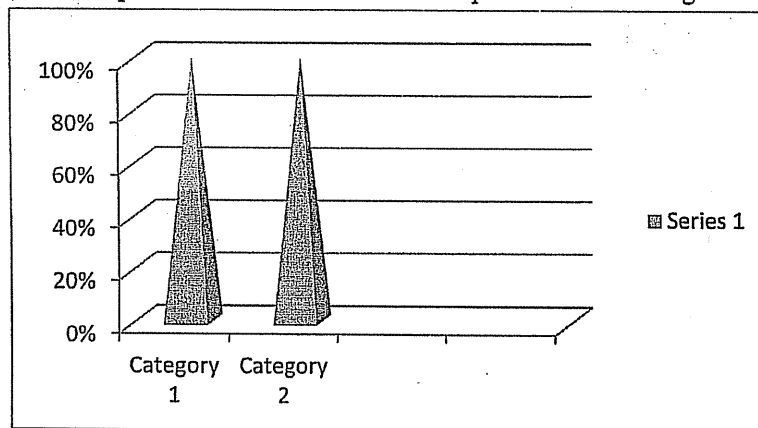
When discussing each level separately, the first notion of satisfaction has been examined through a survey conveying these four levels. The survey has included these four elements in itself and it serves as a starting platform in measuring the changed learning environment.

Level 1 has been included within the question related to satisfaction of both students and tutors in this Covid 19 learning environment. The answers gained from students have showed two different learning satisfaction levels. These levels could be divided into two segments: the first level of satisfaction included the period one year i.e. immediately during the pandemic period; and the second level one year and a half after the pandemic. The ratio of all examined students showed for the first level to be completely satisfied with the learning environment they participated in. This level brings 100% satisfaction and it showed the e-learning environment used for the first time in this format was a complete success (200 students). E-learning proved to be useful completely and served its purpose entirely in this beginning stage of this process. The same ratio applied to professors, i.e. tutors and their level of satisfaction was the same as with students. This is one of the questions included into the questionnaire, where the most common answer has been by professors, they felt completely safe at their homes and still done their jobs in this way (200 professors, i.e. tutors). The classroom of the 21st century student has become more diverse, and teachers have had to view and interact with these diverse students as people, not problems. They have had to personalize and individualize the curriculum and environment as much as possible, just as a parent would. Cooperation and collaboration have been valued, and competition has been de-emphasized. Many students have shared in creating classroom communities where everyone is committed to helping everyone else learn and feel valued for his or her own special qualities. Recognition has often been utilized more than rewards, prizes, or high grades. Recognition has frequently come in the form of a note from a teacher or the opportunity to present student work to real audiences in the classroom, school, and community. Many students have felt valued when asked for their opinions because the classroom environment has often fostered personal growth, academic learning and trust. It has enriched the lives of many students, and it may have given those students who have had the least support outside school their only chance at a bright future [7]. This has been especially visible during the pandemic in the conditions never met before. The second level of satisfaction shows different results regarding this segment of the research. As the time has progressed, the learning process also changed and formed a different image of e-learning environment. Students' satisfaction level decreased from the beginning 100 to 60 due to the reasons they stated as key ones in this change: the assignments have been more difficult and they could not solve them by themselves; they started to miss the real interaction; they felt isolated and more stressed than before; their obligations piled up and the time factor also influence their productivity; their personal growth has been prevented by stress caused with the pandemic. The same change has been noticed with professors who also reacted similarly to the changed atmosphere of their e-classroom: there is a decreased level of satisfaction from 100 to 50 due to the increased stress; there is the lack of motivation and organization in their classes; the professors of social sciences have had more problems related to technology use than science professors (technology literacy); the stress of organization and delivery of their learning have also influenced this change. The ratio is a bit higher within students (10%), where they have been more adoptable to this new environment and they are more used to it, regarding the online hours they use and spend in their everyday life. This has been an advantage to them since they feel more comfortable in e-learning environment due to their more frequent technology exposure.



Graph 1. The decreased satisfaction level of students and professors

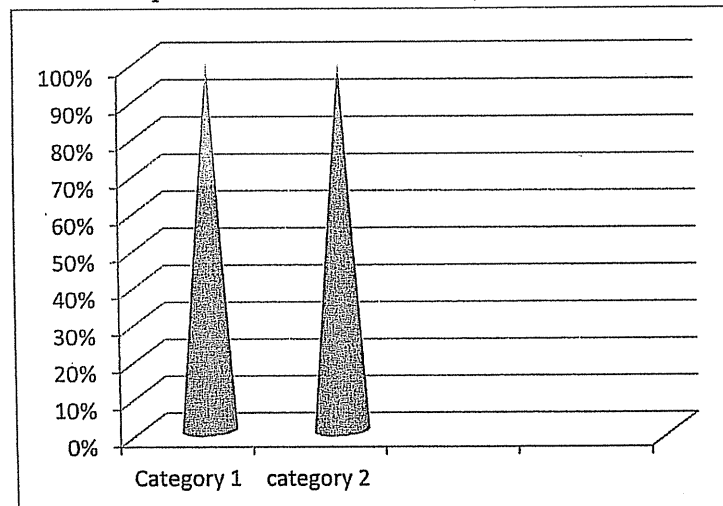
The second level is seen through a prism of learning itself as a process and how much students progressed in it. The examined students of both social and science fields felt their learning capacities lowered due to the pandemic. The direct consequence of this pandemic is visible in their answer for this segment where the students emphasized less motivation, less interest and less interaction in a learning process (out of 200, 140 emphasized these three as the main points of their changed learning process).



Graph 2. Learning progress with students

The third level of evaluation is seen through behavior of both students and professors (tutors) in this-learning environment. The question in the survey related to students' behavior has been identified through a more relaxed attitude towards the learning process, which has proved to be less efficient regarding their results. The examined students expressed their opinion in the form of a descriptive answer, where they explained their opinions. They have explained it since tutors are not directly in front of them and sometimes, they could escape their class obligations in a form of a bad connection or impossibility to see or hear their tutors. The examined students have claimed to be more satisfied in e-learning environment and their behavior during online classes has been more relaxed in the sense they could not be seen, and if they wanted, they could only be heard. The greatest change in their learning behavior is expressed in their complete absence from any classroom activities (in the first part of the pandemic crises), and as the time progressed this behavior changed to a complete dissatisfaction of it (out of 200 satisfied students, the ratio dropped to only 20 satisfied with the learning progress). Since the 1950s the literature has consistently reported that the relationship between satisfaction and productivity is neither predictive nor causal. This lack of predictive link between satisfaction and productivity led most researchers and theorists to conclude by the 1960s that morale studies were important only if measures of satisfaction were sought, but such studies were relatively meaningless for use in making inferences about productivity [8]. This stimulated a number of studies based on the assumption that a direct and casual link between human satisfaction and human productivity exists [9]. The first two levels proved to be closely related to one another and this relation created the results visible in two segments of their examination (the first satisfaction and the direct progressing in a learning process). The examinees showed and expressed their great satisfaction in not

having any need to be properly dressed or behaved during their online classes since they have had the option not to turn on their cameras, just sound, i.e. their microphone tool (out of 200 students, the ratio is of only 25 students constantly used all learning tools in this process). Regarding tutors' behavior, this segment also proved to be very demanding for them, especially regarding their preparation process. Their answers have also contained a descriptive feedback in the sense they needed more new skills to acquire to have a very good teaching process. This has included more technology skills in the form of different networks to be used and also all free available platforms for their teaching process (WebEx, Zoom and similar ones). The professors' results are visible in two segments (professors of social sciences, the total of 125 out of 200) had more difficulties regarding the tools used during their classes (technology literacy has been more visible within 75 professors of the science field).



Graph 3. The ratio of used learning tools with students

The final evaluation level is seen in the results of it and how much they have had positive or negative learning outcomes. Having discussed students' results, there are several segments to be noted: the results are directly related to their participation in e-learning process or not being present during e-learning; the students have also needed to adopt new skills in order to be able to follow e-learning environment and it is visible in their technology use; the interest of students has decreased by the time and it is an indicator of how much students' level of concentration is not the same in e-learning classroom.

RESEARCH RESULTS AND DISCUSSION

The number of the examined students and also tutors has stayed the same until the final phase of this research. While starting to use evaluation in this, all pros are visible in the following: satisfaction is the primary level of any educational process with both a tutor and a student; students are actively involved in this process; the students need to have an open discussion regarding any learning content and material; the scope of learning tools is larger and more varied; the scope of ideas and images is quite higher; the motivation is at a higher level at the beginning learning phase, but it significantly decreased; the speed of learning is different; the behavior of students is different due to technology tools in e-learning environment; a more relaxed attitude of students is visible both in their participation and motivation during online classes. This discussion of this type is named "think aloud" and it is important to give a good argument for it. "The central idea was that by asking a person engaged in an activity to "think aloud" while performing the activity verbal data could be elicited that would allow researchers to gain access to the person thought processes and would provide evidence how the human mind worked. A central claim, which was particularly relevant for attempts to understand language operations such as translation, was that in tasks where the relevant information was available in verbal form in short-term memory (STM) concurrent verbalization would not change the nature of the primary mental processes that the researcher wanted to uncover [10]." The Zoom platform has been used by many universities around the world during the COVID-19 epidemic. This Californian application has seen its number of downloads increase enormously since March 2020. Nevertheless, it is now being criticized over its lack of security and shortcomings in

terms of personal data protection [17]. Opposite of the previously stated pros, cons can be visible in the following segments: a tutor is completely responsible for learning content, in creating, shaping and integrating the learning content [11]. Communication barriers also exist in this process and they are related to poor level of technological literacy of some students, but sometimes even among tutors [12]. The decreased level of interest is noticed both within a tutor and a student [13].

CONCLUDING IDEAS

The challenges how to improve quality of education in e-learning environment [14] still appear and no one has a perfect solution for the ones. The future process of education must be carefully examined and reconsidered and especially critical for higher education [15], since the pandemic opened completely new issues to be discussed and researched in the future period. It is hoped for this paper to give some new ideas for further explorations related to evaluation and the importance of having it, especially when it is applied for the first time ever in these changed pandemic conditions. The outcomes presented within this paper could be further examined in order to have adequate support in any of its segments, and all for the benefit of both students and professors.

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