

LIMITS OF USING ICT IN TEACHING AND LEARNING

Keywords

teaching-learning, advantages/disadvantages/limits of using ICT, TCI, SCT, gadgets.

Abstract

The importance of using ICT in teaching and learning is undoubtedly undisputable these days, in the world of hi-technology era. On the one hand, the focus lays on the innovative techniques that teachers should master while doing their job, and on the other hand, the efficiency of transmitting the information and enriching the students' capacity of knowing and understanding new ideas and concepts, while helping them still count on their critical thinking. Thus, it is important to know which are the benefits and disadvantages of using ICT so that we can establish its limits in the teaching-learning process. In order to keep a balance in this process, the present research focusses on four types of limits: temporal, relational, physical, and spatial.

1. Introduction

The modern world that we face nowadays is the world of technology and gadgets - a different world than the one that used to be in the not so far away past - so that one can easily notice that every field of our life is flooded by this change, both in the social, cultural and political field, and in the field of academic activities. Facing this perspective, the teachers of this technological era, have only two choices: to keep on doing things as they used to do, and consequently, they cannot wait for different or better results - both from the teaching and from the learning point of view - or making an effort and updating themselves together with this new trend, thus really having different results, and also in a shorter period.

In this respect, the idea of using ICT in learning and teaching has lately become so important that it has brought about some researchers who want to come to a correct conclusion concerning the amount of quality and also quantity of ICT used in teaching techniques and the results of using it, or on the contrary, as it has already been stated above, the lack of using it, which consequently would lead to a different perspective, both for teachers and students. Thus, concerning the key competences for long life learning programs, among the eight accepted competences it was included the digital one, ICT.

Moreover, knowing that the latest equipment is part of the technology world, which is seen as the world of quick information in every aspect of life, and global connectivity for almost all occupations and ages, and also rapid and more fruitful learning - most of the teachers, not only beginners, but also teachers who have been teaching for many years, started connecting themselves to this new and indispensable means of teaching, in order to answer the new needs and requirements of today's world, even if not all teachers feel comfortable with this new trend. Thus, being one of the most important changes in education lately, this usage

of ICT, still in the beginning in some places, is developing very fast these days influencing the young generation and not only.

Even though some researchers have even expressed some doubts regarding the effectiveness of ICT usage in class (Kleiman, 2004; Kozma, 1994), there are even more people that agree with the fact that it can, and should be used effectively as an important tool for learning and also as an instrument of teaching (Bruce and Levin, 2001).

Fransson et. comp (2018) also speak about these things in terms of the explicit theme in ICT to which we add value for learning and teaching, which leads us to effectiveness, while speaking about the other obvious dimension - ineffectiveness- as the idea of less good teaching. Undoubtedly, the students will appreciate each teacher differently, and consequently, the use of ICT will be discussed in a different manner, from teacher to teacher, no matter if we speak about the usage of the same method.

Thus, it is necessary to speak at this point about the shift from the traditional image of the teacher-centred instruction (TCI) to the one of the student-centred learning (SCL) which nowadays is very much in use, even if for sure it is impossible to be done accordingly in all situations. Researchers' results indicate the fact that professional development in general has an impact on teachers' beliefs and practices (Muainga et al, 2019), something that indeed, cannot be denied. It is shown in this study that teachers who train thoroughly, and use ICT in their teaching, really believe that ICT contributes to changes in students' learning outcomes and in the quality of educational process. In fact, this belief is proved to be right, and the result is beneficial on both sides, while, at the same time, these competences are used for learning and teaching purposes, or for entertainment, under the condition of using them properly. This is why we need to establish some limits that can offer us a protection for staying healthy, both from the mental and from the physical point of view.

The matter in discussing of this paper research is this: Should we establish some limits in using technology in this teaching-learning process? For this, we have to identify the real value of ICT, but at the same time, we should also have the courage to mention the possible flaws that may appear.

2. Benefits of using ICT in teaching

ICT does not only bring its contribution in order to determine the objectives of learning and teaching in teachers' case, but it also enhances their independence in technology usage, even though not everything that is on internet can be seen as useful or reliable, given the fact that everybody can upload whatever one wants on it. Even though, ICT develops teaching methods that give courage to teachers to interact and connect with different and multiple learning websites all over the world. In this respect, a lot of teachers can be assisted in providing effective feedback by using these innovative methods. As a result, for example, after the lesson was taught, and the homework sent, the students can receive back their work checked rigorously, thus being a great help for the class interaction afterwards, a lot of time being saved, when the work has been checked in advance, so that a lot of other interesting things can be discussed in class.

In this respect, it is the students' creativity the one which has to be developed by the teacher, who has an important role in shaping a healthy vision about world and life. He is also the one that can come up with an interesting or, on the contrary, a boring perspective in teaching, and moreover, when we speak about technology, as we know that everything can be both a blessing or a curse, it depends on the teacher, in his class, to help the students understand how to properly use this innovative instrument, so that it can be a real gain in all aspects of life, especially if we consider ICT as a source that prepares the learners for the real world outside their class. Some researchers such as Bruce and Levin (2001)

indicate that technology can be useful in classroom environment by encouraging students to communicate, as a result of models received through different methods and techniques of usage of ICT.

In their comparative study Zare-Ee and Shekarey (2010), focus on five roles, which are really relevant and which show us the importance that technology can play in education, as they had already been mentioned two decades before by Bransford, Brown, and Cooking (2000), and they can be rendered in the following ideas: the real-world experiences are brought about as they are, into the classroom, then, scaffolding is provided so that it permits those that learn to take place in a complexity of situations. There is an increasing number of opportunities for students to get personalized and sophisticated results as feedback, there is also the interest to form groups of situations where teachers, students, parents, or other interested groups can interact, and last, but not least, there is a great range of opportunities for teachers to increase their knowledge and skills.

When we speak about the technology which is used in the teaching - learning process, we usually mean any new electronic media devices, including computers, video, Iphones, I pads, etc. Considering these five roles mentioned above, Zare-Ee and Sherkarey (2010) spoke about some relevant qualities, that can be considered indeed very important in this field of ICT usage in teaching, which can be rendered in the following statements: this means of teaching provides rich banks of resources and information, it offers to teachers and learners a good way of progress and up-dating, it offers multi-media capabilities, can pave the way for individualised learning, facilitates distance learning, makes individualised feedback easier, encourages communication, and can be used very interactively. This also offers to learners and teachers' chances for numberless situations in which they can repeat, and it can be used whenever and wherever learners and teachers wish, and last but not least, it can be motivating and can

offer high face-validity. Considering so many advantages, one can say that the use of ICT can, for sure, be an important, effective and indispensable tool in teaching, but we also have to pay attention to some real disadvantages that should not be totally ignored, so that having a comprehensive image we can establish certain limits.

3. Disadvantages of using ICT in teaching

We can speak about some changes that are found in education as a consequence of ICT usage as being both gradual and constructive but also revolutionary and kind of destructive if not used properly (Tajabady and Ranjar, 2016). A second idea can be connected to the fact that ICT usage in teaching can only be seen as positive only when we speak about adequate training for its use. But who can say if this training is assimilated and respected as it is, thus having good results only, especially when we think about some situations in which students can be disturbed in no time from the things they are learning about, and they can even search sites that should not be visited, while pretending they do what is required by the teacher. At the same time the students could tend to neglect learning sources other than computer or internet, which can lead to limitations in the students' critical thinking.

Among the disadvantages of using ICT we can mention the fact that the staff in a school for example, may become so reliant on ICT that they cannot work if the computer fails, or that the training can be so expensive when the systems are updated.

Here are some disadvantages of using ICT in any teaching setting, disadvantages that can be considered important, both from the teacher and from the students' point of view (Zare-Ee and Sherkarey, 2010): when learning how to use ICT properly, the teacher is required to allocate both time and energy, and we should be aware of the fact that the 'new stuff' factor present in using ICT can become in the end a distraction from real learning goals and have negative effects while the process as it is, of

teaching and learning, could thus be touched in a negative way by the so-called computerized classroom syndrome. We do not go too deep in the matter if we dare to say that ICT is able to involve the learners too much in individualized learning and thus, create isolation.

Some other changes that the usage of ICT can bring are those connected to the teacher's role, changes that sometimes could not be optimistic in any way, and it is known that computers can crash from time to time, which really happens, from different reasons, and this can be really annoying, because while having technical problems, if not solved quickly we lose time and show our incapacity to be able to face any difficult situation, which is not easily tolerated.

This list of disadvantages can give us a different perspective of seeing things, and once we know the limits, we should always be ready to teach with the help of technology unless we count on it as being the ultimate best tool in teaching. Considering the lists of good points and bad points of ICT usage, we can be sure that the one who uses the computers and ICT in general in such a manner that it can become something desirable in class, is the qualified teacher. This is why this perspective is waited for, and not something that students and teachers alike want to get rid of.

Some researchers believe that it is crucial for this generation of teachers to train for this purpose so that when problems of any kind occur with the computer, the teacher is able to solve it so that the teaching process should not suffer any alteration. This being said, there was a good number of teachers who did their best and spent some time to learn how to properly use computers and ICT in terms of learning and teaching also. Thus, in doing so, they showed that they saw it as a representative goal of the today's development and reform which forces all the teachers, from now on to be responsible also in this field of communication technology.

A study that included a presentation about technologies, multimedia and interactive whiteboards, emphasizes that ICT is

just a tool, and not the secret to good teaching. Moreover, it has the potential to enrich the experience of the one who learns, as well as the teacher's (Jarvis, 2015).

Thus, it is very important for teachers to make sure they can work properly on different devices and use ICT in the teaching technique they use, as long as they use it in their learning, too, this being a very important part of today's educational reform and development. In fact nowadays, especially in developed countries where technology has an important place, we can't teach any object properly, without the use of technology, at least for one reason: these kids already use ICT in their games, while searching for information, in communicating to one another, and the process of teaching cannot be left behind without losing the contact between the teacher and his students, which will give birth to a gap, and speaking about this gap, the teacher should provide the tools to overcome it, and the proper usage of ICT is the solution.

4. Limits of using ICT in teaching

Alkhatni (2017), speaks in his study about two significant shortcomings encountered in using ICT in teaching: one is the lack of proper training on the teachers' side, and the other one could be the lack of equipment. As a consequence, the result of this study shows a shortage of a minimal understanding considering students and teachers' way of using the equipment, a lack of mastery of ICT teaching techniques, and a lack of teacher training to cover the gap. We should also mention here the lack of using the electronic equipment at their best, and problems we face when it is about repairing them. Here we can also mention complicated systems or slow hard work which can cause stress, or a lot of distractions and incorrect information, which leads to a real discomfort. Planning and implementation should also involve managers, directors and teachers and this can help to improve problem solving and even

prevent ICT problems before they occur, and for this, the teacher should be well equipped with a lot of skill and information.

Thus, the basic components of new ICT are rapid feedback and instant connectivity in teaching, and the purpose of the use of these methods is to gain maximum output of the students, to identify the value of ICT and to examine if the use of ICT is helpful in teaching no matter the amount of time consumed, or else, wasted in some cases, when some students become interested in learning only when using the computer in accomplishing their tasks, otherwise losing their interest of any other type of teaching which leads to the situation in which they can become too dependent on the all possible devices which help them to do their homework, and prevents them from counting on the knowledge they have gathered during all the school years. This ultimately leads to a signal that has negative aspects towards the growth of education and humanity in the modern world, the modern students could become weaker in sustaining their own point of view, if not backed up by internet resources.

As a result of the different opinions concerning the advantages and disadvantages of using ICT in teaching and learning, we can say that it is difficult to clearly establish a limit, for each of the situations mentioned above and, on the account of all that has been written so far, we will try to draw out some axiomatical aspects in using ICT, seen in the following four directions.

Temporal limits

Even if we have lately faced a large amount of using ICT in the educational sphere and notice the increasing of the motivation of learning for students, especially because of the quantity of time that people, and first of all, the students, dedicate to using certain technologies such as mobile phones, social media, videogames, while in class, the whiteboard also, and the internet in general - and this being done outside of the school environment, we should notice the flaws here, too.

Spending a lot of time being taught or learning through ICT, the students could be affected when we consider their physical and psychical health. Another flaw connected to time would be the fact that students can get the information much faster through the help of ICT, instead of studying a book, and get out the information by working harder. In this respect, faster does not mean better only because we can get information from the best experts on internet, because one thing is to get the information and quite another thing is to really use it properly.

Maybe one of the greatest responsibilities that teachers and parents have in this respect is that of helping the students to establish the order of priorities that help them to be efficient in real life. Thus, organizing the personal time in connection to the responsibilities for personal development, family, school and society requires strict discipline and planning. This is why, there must be a strict program from the school, when we speak about teaching through ICT for young learners, so that they should not become addicted, which will finally be the case if things are not controlled. On the other side, with older students, parents, teachers and the students themselves should cooperate in order to find the best amount of time spent for this purpose. Otherwise, too much can mean being destructive, and can definitely separate the students from the real-life expectations.

Relational limits

In the context of using ICT in teaching, when thinking about the amount of time spent, we should remember keeping the relation among the participants involved in this process: teacher-students, students-students, or even parents-students-teachers, which will ultimately lead us to the relational feature. In their study, Zare-Ee and Shekary (2010) bring into discussion another study which speaks about a sensible position expressed in an educational supplement, and which said that, as a result of a research into the matter, which lasted twenty years, it was specifically shown that

ICT really has an impact on learners, under some conditions, but this definitely cannot replace the teacher, at least not these years, which is quite encouraging for the moment being. In this respect it is already known the fact that the teacher has a key role in managing and integrating ICT, together with another knowledge, and this role the teacher will always like to have. As a result of too much time spent in such environment as ICT teaching, students can become isolated from society, which is neither desirable, nor accepted, and sometimes, the students' minds are more likely to wander from their set task, because of too much exposure at ICT. Also, the idea of using ICT may be not so easy for those students that are weaker in some points, for those that find it difficult to work independently and may need support from the teacher or need to be backed up by their fellow students in the tasks they have to perform for the class.

Even if, under some circumstances, the teacher should teach through the help of ICT from the distance, for example, we still speak about the human element, the relation between the teacher and his students being still important. Thus, while facing some situations when teaching from the distance through ICT is needed, it is still the teacher who leads the meeting, choosing the topics and leading the discussion, the teacher still having the role to moderate the class, to supervise the tasks given, in order not to become a chaos. So, doing this, the students are connected together with the teacher and the other students, while the teacher presents the lesson and invites the students to express their opinion, to participate in debates, to be part of this process. A feature of this relational limit is the authoritative one, and we can speak here about the modelling factor which resides in the fact that the influence of the teacher should never be totally replaced by the usage of the computer, or of ICT in general.

In establishing relational limits, we should consider the interaction with the teacher and with the other students so that the aspects concerning the elements of communication, consisting

of body language, verbal language and eye contact, to be the foundation in transmitting the information. Research revealed the fact that teaching through the interactive method is one of the best ways for students to get knowledge, and this can be done through the help of the teacher, whose abilities are meant to focus on the needs of each student, sometimes.

Physical limits

First of all, we should be conscious that a computer will never be able to fully replace the teacher, because the physical presence offers more than the logical, rational information, it offers a *modus vivendi*. Lopez and Fernandez show in their study the fact that the use of ICT influences skills such as attention, perception and memory (Lopez and Fernandez, 2019). Their investigation was meant to enhance the influence of ICT on the learning of second languages – concretely, on learning English, to test whether there is a relation between neurophysiological maturity, learning second languages and finally to discover the role played by attention in learning second languages and to investigate whether learning second languages through ICT influences students' motivation. This study shows that the motivation to learn was found to be greater in students learning via ICT and that students with more advanced neurophysiological development and who score higher attention find it easier to learn a foreign language, in this case, English.

Scherer (2017) says that there are a lot of adolescents who seem to be confident in connection to the use of information and communication technology (ICT), and they are also sure that this helps, and will help them to learn and achieve, which is true, but, on the other side recent research shows that some teenagers are reporting physical discomfort using ICT such as sore eyes, thus, we can speak about a great negative physical side-effect (vision problems), and pain in neck and shoulders. Considering the fact that in the future students will use ICT much more, we could state that these health problems will increase. As a result, the emotional

balance and the physical capacity must be regarded with a lot of attention and consideration in using ICT.

Spatial limits

The management of an ICT classroom is clearly always different from other classrooms. In order for the students to gain maximum output teachers have to use different methods which are both interesting and innovative in nature. For example, in a study, Ali (2015) says that similarly English Language teaching arena is also deeply affected by the use of technology in language classrooms as this helps the teachers to introduce innovative methods and techniques to learn the English language which has a global acceptance and considered as lingua franca of the world.

In a study led by Linqiong Lu, the author speaks about our era facing a high popularity of a great number of open online courses in most places, a new era in teaching students of every age, as a result of the fast development of new technology and media. Using technology to facilitate teaching and learning has become a common consideration of educational institutions worldwide. In this respect, in China for example, the microlecture proved to be the entry point into MOOC era. In 2010, The Chinese State Council promulgated the Educational Reform and Development Schema (2010-2020), to promote the use of digital resources in foreign language education and learning (Lu, Linqiong, 2018).

Even though, one thing is to use the computer, and quite another one is to use the phone, or one thing is to use the smart board and another one is to use a laptop. The possibility of participating in activities, all together, using the smart board is quite different than using a simple laptop, which is still done in many places. As a result, it does matter the management of the class and the distance between these devices and the students, both for efficiency and for their health.

These four types of limits function as a whole and anytime the use of ICT leads to the loss of balance among these, both the teacher and the student should sense it and start acting.

5. Conclusions

In this study, we firstly brought into discussion an important matter, that of using, ICT in learning and teaching, pointing to some benefits and disadvantages, and then tried to draw up some guiding principles which the teachers, and respectively, the students should consider.

While there still may be some teachers who are not so keen on using ICT, we have to admit that in this era of connectivity it is almost impossible to deny the value and importance of technology. We find technology everywhere, and nowadays we find technology in all houses, poor or rich, used by intellectuals or people working in different fields. In fact, technology makes our life much easier, and we practically could no longer do a lot of the modern world stuff without it, and when it comes to teaching, ICT opened a way with unthinkable results.

For a long time the teacher used to be regarded as a source of wisdom and knowledge (and how proud were the teachers in this period), but nowadays, with so much information that students can get from the internet, teachers cannot compete with it, especially that they can have it so fast from the best experts in the world, without waiting for the next day to meet and ask the teacher about some questions for which they have no answer.

When speaking about disadvantages of using ICT, we should be aware that not all teachers are keen on ICT, but they are forced to use it, and in some situations the students tend to have some presentation which are rather superficial, and copy resources from the internet, and in most of the cases they may have less opportunities to use oral skills and handwriting.

For an efficient use of ICT, we suggested in this paper four directory lines which define a certain balance in the teaching-learning process: the temporal, the relational, the physical, and the spatial limits. Thus, for each of these we have come to the following conclusions:

The temporal limit points to the fact that the information can be obtained much faster nowadays through the help of ICT, rather than studying lots of books- although we should keep reading real books, not only e-books, and getting the information through a hard and permanent work, or asking the teacher and receiving the information through his help.

The relational limit brings into discussion the human element, the relation between the teacher and his students. Even in some situations when teaching from the distance is needed, the teacher needs to be the one who should lead the meeting. The students being connected together with the teacher and other students, the teacher still has to be one that has the modelling role that brings together the old and the new, the ICT and the benefit of real books, close to I-books, as it has already been stated above.

The physical limits focus on the idea that, even if a lot of adolescents feel confident about using ICT, believing that it can help them to learn and achieve information, still there arises the health problem of many adolescents who report physical discomfort using ICT, such as sore eyes, and pain in the shoulders, to mention just a few of the problems of this kind. We should consider the fact that the health problems will increase as a result of too much usage of ICT.

The spatial limits point to the use of comparison of using the computer, or the phone, or on the contrary to use the smart board in comparison with a laptop. The possibility of participating in activities, all together, using the smart board is quite different than using a simple laptop, which is still done in many places. As a result, it does matter the management of the class and the distance between these devices and the students, both for efficiency and

for their health. At this point we should keep in mind the blessed usage of books, the position needed for the health of the body, the side from where the light should come, things that are no more important in ICT usage, but still so good for all of us.

Thus, while some teachers will force things in technology so much, another option will be the need to use the classical method too, besides this technology, meaning that none of them could be used alone, or separately. The teacher has to use both methods in a correct manner, both modern and classic, he needs to be creative, and this technology has to be used at the right moment and with measure, neither too much, nor too little.

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