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Telepresence in education – Romanian example

Abstract. Telepresence is a modern method used for distance learning. The lower text is a description of the telepresence application in education in Romania

Everybody who made school knows what is classic education. Let's just remember the unfolding of school course hours when we was students. Which were the steps? The teacher enter in the class room, notes the missing students, questioning students about the daily lessons, teaching the new lesson, he gave homework and after that left the class. The student's task was to learn from his notebook and from the book, to do his homework and to be able to convey the knowledge. The teacher had the main role, and without him there was no progress. As in all fields, slowly the modernism entered in education. The education became centered on the student, which means that the student discovers and developes his abilities. With the help of IT and modern technology, school become more and more attractive. Happily the distance is not an obstacle any more, because online courses are available. There are very efficient programs that help us to learn a new language or anything else. All of them are extremely useful and we are happy for the existence of these opportunities.

Though, I do consider that in education is an mandatory constancy, which is the TEACHER. From my point of view the teacher cannot be replaced by technology. The knowledge that the teacher is teaching can
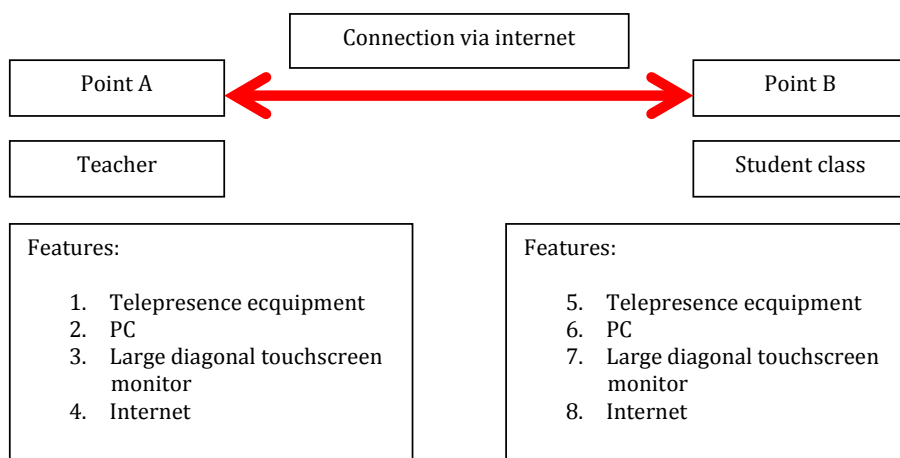
be found and accessed in many other places but this cannot be replaced by the good feeling that is given by the encouraging smile of the teacher, the approving look which shows you that you are on the good way, the exciting and personalized way that a good teacher transmits his / her knowledge playing with the will and brain of the student.

That is why I think the combination teacher + modern technology is very useful. That modernism in which the human factor is present, and in this sense I would like to make known an orientation through which this is possible, an orientation that I would like to be existent also in Harghita County.

Let me explain you what's all about.

With the help of technology the children from everywhere can benefit from some good teachers services regardless the distance between them. With the help of a telepresence system connected via internet, with a large diagonal touchscreen monitor used as a board, a teacher can be „present" in a classroom and teach the lesson, even if he is actually many kilometers away.

For a better understanding, let's follow the plan:

Connection via internet		
Point A	⬅➡	**Point B**
Teacher		Student class

Features:	Features:
1. Telepresence ecquipment 2. PC 3. Large diagonal touchscreen monitor 4. Internet	5. Telepresence ecquipment 6. PC 7. Large diagonal touchscreen monitor 8. Internet

Fig. 1. Plan of Connection via internet

How the learning process developes? As same like the traditional ones. The teacher (from point A) "enter" in the student's class room

(point B). The distance between them is physically thousands of kilometers but they have almost physical contact trough the telepresence system. They see eachother trough the monitor and they comunicate between them. The teacher teaches the lesson and everything that is on his blackboard (the touchscreen monitor from Point A) appears instantly on the screen from the classroom blackboard (the touchscreen from Point B). The students are able to write on their board and these writings will appear instantly on the teachers board, and the teacher can make the necesarry observations and corrections that will be shoun on the Point B blackboard. The telepresence system allowes the teacher (from point A) to see any spot from the classroom (from Point B), to zoom in and out the image, and being able to read anything that the student is writing in his notebook.

Therefore this is how the technology reduces distances, but the constant necessary for a quality education, THE TEACHER, is present. Everything is personalised for the student's needs: questions, explanations, encouragement, the tone of the voice, the smile, and soul in transmitting and receiving knowledge.

The lessons can be recorded, and so there is made (on going) a library with lessons for those who want to learn the learning method from renown professors, or for those who wish to understand better a certain lesson.

This model was allready experienced and implemented in Romania, by the Association for Open Education, with his centre in Bucharest. The map of networked locations can be seen on the map showed below. The first beneficiars were students from the Danube Delta, a superb area where due to isolation, are many localities without qualified teachers.
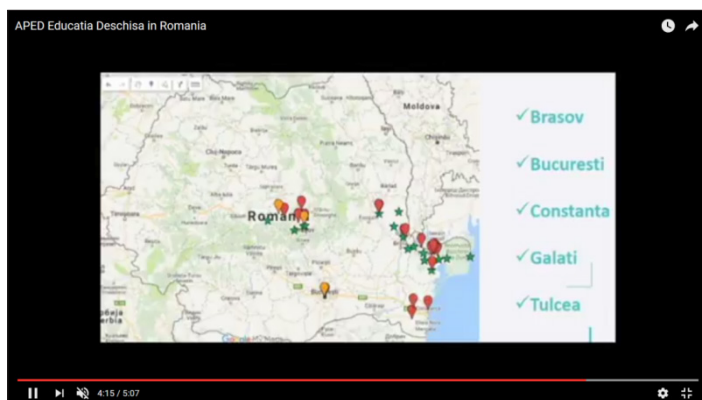
Offered services:
– Dissemination of educational content
– Counseling and orientation of teachers through non-formal methods
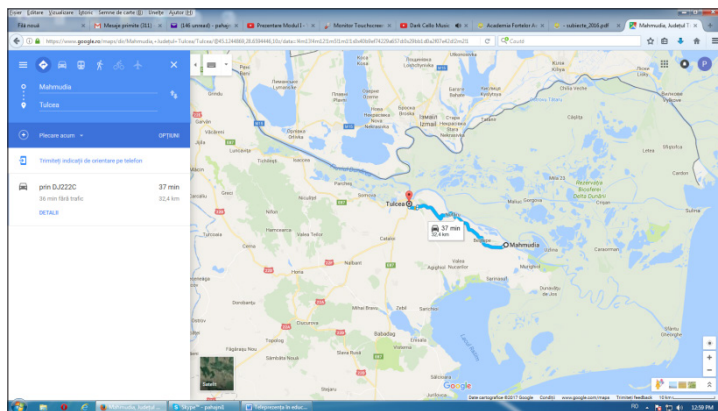– Workshop type services

Benefits:
– Improving exam results
– Increasing student teaching motivation
– Equal opportunities for disadvantaged students

– Better training for emplyment market
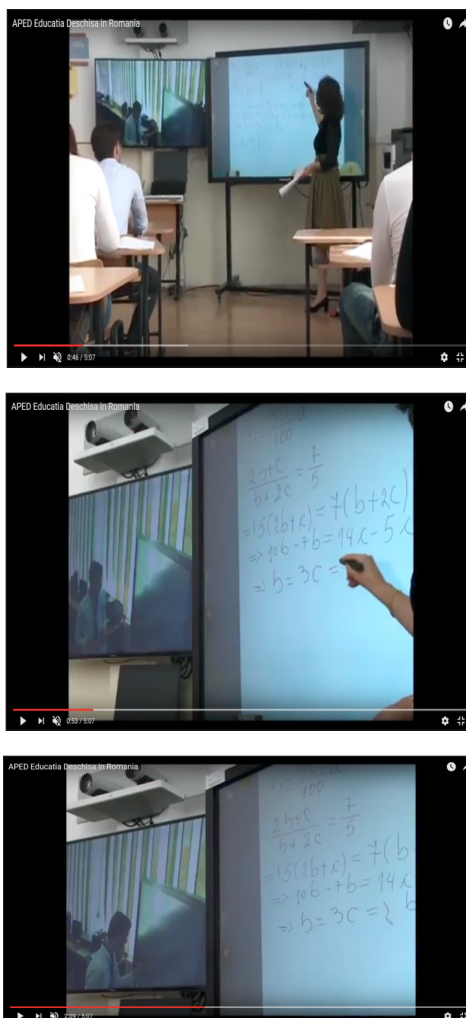– Professional development of teachers

Fig. 2. The map of networked locations of the telepresence system in Romania

For viewing, I captured 3 moments during a real lesson (Fig. 4). It is a mathematics class, and the teacher is situated in Tulcea, Romania. As seen in the monitor near the touchscreen (shown in Fig. 3), the participants are not only the students from the classroom, but also other students who attend the lesson from Mahmudia, which is situated at 32.4 km from Tulcea, according to the map below.

Fig. 3

But here are the sequences: the teacher teaches the lesson, and the lesson appears simultaneously at each location on the touchscreen, so the student and the teacher can work simultaneously on the same exercise.

Fig. 4. Three moments during a real lesson

Athletes use video to be top performers, surgeons use video to perfect their professional development, business people use video for a better business environment. Why would not teachers do the same?