# EDUCATIONAL ASPECTS OF THE USE OF MOBILE PHONES IN UPPER SECONDARY SCHOOL

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*Abstract: This article presents the results of a diagnostic survey conducted among upper secondary school teachers concerning the use of mobile phones at school. The diagnosis presented hereafter is a point of reference for educators who wish to adapt more modern educational practices in regard to the use of information and communication technologies (ICT) in school.*

**Keywords:** mobile phone, mobile learning, teacher, upper secondary school

## INTRODUCTION

Mobile phones and compatible information-communication technologies are important factors affecting the emergence of new social relationships. We are witness to the creation of next-generation devices which, owing to their small dimensions, provide convenient access to information on the move (Peters 2007). Mobile phones have become an attribute of people living in an information-based society. They are kept close – in bags, on laps and in pockets – and their screens are easy to hide away from prying eyes. Mobile devices supplement human senses in the process of acquiring and storing information, and the creation of new structures. (Alexander 2004). The mobile phone market at present is designed for a wide range of consumers, each having their own lifestyle and interests. Some phones are small and discreet, some are chosen for their fashionable appearance and some offer only basic functions, while others provide a wide range of services.(Attewell 2005). These features have allowed for the adoption of these devices for mobile learning – that is to say, devices with an operating system conducive to realizing educational goals.

Mobile technology is becoming increasingly common in the process of learning (such as children developing new language skills via mobile devices) and teaching. New mobile technologies provide more opportunities for educational services, as

well as media relevant to the students' interests. (Sharples, Taylor, Vavoula 2010).

Mobile learning is a ripe platform for innovation, but it's important to realize that success – the appropriate use of a device – is dependent on the human element. (Kukulska-Hulme 2007). Such actions need to be suitably planned, with the teacher having the relevant competency and experience necessary. The fulfilment of these conditions will enable the use of mobile phones as devices allowing the student to contribute to the process of learning through sharing ideas, discoveries, research, experiments, and discussions. (Laurillard 2007). An effect of these kinds of activities, while learning at school, is the 'activation' of each student with a mobile phone.

## 1. PURPOSE, JUSTIFICATION OF RESEARCH AND RESEARCH PROBLEMS

The fact that mobile phones result in unintended consequences does not mean that we cannot plan effectively and improve their integration within the process of education. Enhancing the quality of education and adapting methods of learning and teaching to new opportunities that mobile devices provide is a challenge for teachers. Firstly, one should determine the opinion of teachers on the use of mobile phones in education. This research design focuses on upper secondary school teachers who are responsible for the education of people about to begin an adult and independent life. Young people – between the ages of 16 and 20 – attend this form of school. The purpose of this research is to describe situations concerning the use of mobile phones in upper secondary schools, as well as the characteristics of teachers' attitudes towards this medium.

Based on the purpose above, the following research problems were formulated:

- – Are students of the surveyed teachers using mobile phones during breaks and during lessons?

- – What are the possibilities of using mobile phones by students in the process of education in the opinions of the surveyed teachers?

- – What are the dangers of using mobile phones by students in the process of education in the opinions of the surveyed teachers?

## 2. METHOD OF RESEARCH

The primary research method used was a diagnostic survey, in which a questionnaire – aimed at upper secondary school teachers – was used (Palka 2006). The most important information which was analyzed was obtained in the course of carrying out this survey. In the period from April to May 2012, the questionnaire form was completed by 72 teachers from four provinces situated in Poland.

## 3. RESULTS OF RESEARCH

The popularity and functionality of mobile phones result in them being used by students not only at home, or in their free time, but also during school hours. This is confirmed by upper secondary schools teachers, indicating that 97% of students use mobile phones during breaks (Figure 1).
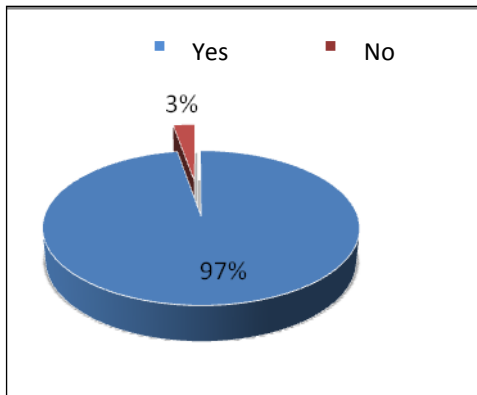


**Figure 1.** The use of mobile phones by students during school breaks between lessons N=72

*Source: Own research*
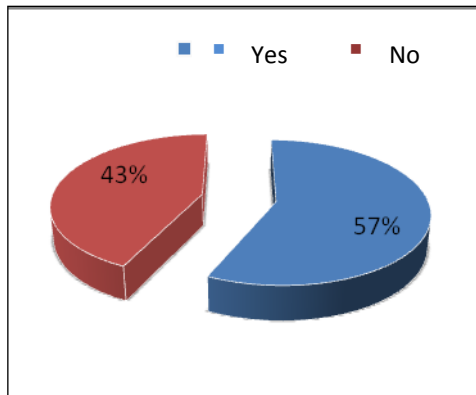


**Figure 2.** The use of mobile phones during lessons at school, N=72

*Source: Own research*

Students also tend to use their mobile phones during lessons. In the survey, observing such a situation was confirmed by 57% of teachers (Figure 2). This situation is not usually acceptable, since 54% of surveyed teachers confirmed that they caught students copying assignments from mobile phones during tests. A negative attitude from teachers towards exploiting this medium is confirmed by the statements of respondents; those surveyed (100%) are in favour of proposing regulations that prohibit the use of mobile phones on school grounds. However, introducing such regulations prevents the implementation of the school curriculum on this medium; this perhaps indicates a lack of knowledge from teachers regarding the educational potential of mobile devices.

It is worthwhile mentioning that the legislation in school concerning the use of mobile phones within the facility is also disobeyed by teachers. Findings indicate that 31% of surveyed teachers admitted to using mobile phone during lessons. This situation affects the image of teachers who enforce provisions of the rules which they are not obeying and are, in fact, breaking them during lessons in the presence of students.

There is no doubt that one of the most important advantages of mobile phones is the ability to contact another person anywhere within the reach of a given network. This attribute is being used by teachers for contacts in teaching and educational matters with both students and their parents. Research has shown that 89% of the teachers

surveyed contact parents and students for educational matters equally often.. Mobile phones, due to their mobility, naturally fulfilled the need of being able to immediately contact parents or students for a variety of reasons. The mobility of phones enables a direct conversation with a parent immediately after an incident of an alarming nature. At Polish schools, contact between teachers and parents most frequently concerns the behaviour of the student during school hours, their educational achievements, matters associated with treating the student, and organizational issues.

In the survey, a question concerning ways of using mobile phones at school was posed to teachers. Out of specific possibilities, respondents chose the ones which, in their view, are most appropriate in achieving the objectives of education. The results obtained (Table 1) indicate that the most useful feature of mobile phones – as indicated by 60% of the respondents – is the ability to take photographs, and record videos and sounds related to the subject matter.

Multimedia devices, such as digital cameras or voice recorders, have become basic functions of mobile phones. Therefore, teachers conducting field or classroom activities do not require the school to supply them with such devices, since the vast majority of mobile phones are already equipped with them. What students hear or see can be stored not only in their own memory, but also in the memory of their mobile phone. Material captured by the student can be developed in detail and it is possible to connect it with material from another student, generating new information and new ideas (Huk 2008).

**Table 1.**

**Possibilities of using mobiles in the education process**

| Possibilities | Teachers % | N |
|---|---|---|
| Sending homework to students' mobile phones | 14% | 10 |
| Informing students about evaluations | 28% | 20 |
| Seeking information on the Internet via mobile phone by students | 50% | 36 |
| Using educational applications for teaching specific subjects | 26% | 19 |
| Taking photographs, and recording videos and sounds related to the subject matter | 60% | 43 |
| Reading electronic versions of books | 29% | 21 |
| Creating short notes during classes | 19% | 14 |

| Online contact with an expert from the specific subject | 33% | 24 |
|---|---|---|
| Recording the lesson onto the mobile phone | 13% | 9 |

*Source: Own research*

Apart from multimedia possibilities, mobile phones are equipped with devices allowing them to connect to the Internet. This function of the mobile phone was the second most commonly selected by teachers (50%) since it enables pupils to seek information on the Internet in any place within the reach of the mobile operator or a wireless network. Mobile phones with the ability to browse through the Internet create new didactic situations characterized by obtaining information outside the school building. This feature is especially useful during teaching trips, when students can compare and expand information and places with information from the Internet. It should be noted that monuments and contemporary places of culture often feature QR Code systems (Quick Response), enabling mobile phones to obtain all the relevant information by scanning the codes. The possibility of students and teachers being able to connect to the Internet via mobile devices is a giant step in the direction of modern education.

Thirdly, teachers (33% of the respondents), for using mobile phones in the process of education, consider the possibility of online contact with experts in a particular subject as a way of gaining new information. The purpose of this method is not only obtaining information from a trusted source, but also the development of skills in formulating questions and having discussions.

Mobile phones also provide the possibility of reading electronic books. Out of the respondents, this possibility was selected by 29% of teachers. The fifth most considered option is the ability for teachers to inform students about their evaluations (28%).

In sixth place (26% of the respondents), is the function of using educational applications for teaching specific subjects. Contemporary mobile devices offer the possibility of installing different educational applications: e-books, foreign language learning, logical, mathematical, natural, musical, plastic, chemical, physical games, and a lot of others. Teachers very often do not know about applications dedicated for mobile phones and so are not able to use them in the implementation of educational objectives. The costs of such applications and their incompatibility with different operating systems are also an obstacle.

The next choice – as indicated by 19% of teachers surveyed – was the category concerning the creation of short notes during lessons. Achieved results indicate that this function of the phone does not have the widest spectrum of applications in educational actions. Contemporary Polish schools are still based on writing information on a sheet of paper, since this is more comfortable and cheaper for both the students and the teachers.

For 14% of surveyed teachers, sending homework via mobile phone constitutes one of the forms, thanks to which, educational objectives can be fulfilled. Using mobile phones in this way is, unfortunately, expensive and requires the preparation of a suitable educational platform adapted to mobile learning. Teachers fear that sending homework contents en masse from their phones to students would incur significant connection costs. Moreover, the physical absence of the teacher causes the need for other ways of raising the level of students' motivation. The anonymity of handing over tasks by mobile network requires placing a stronger emphasis on the content. Therefore, the dialogue of the teacher with the student in communication via mobile phone must be adequate to meet the needs of students to ensure their understanding (S. Juszczyk 2003).

The last chosen category by teachers concerned recording lessons onto mobile phones – 13%. The small number of teachers selecting this category is caused by teachers' anxieties concerning the improper use of recorded materials. Classes recorded by a student on a mobile phone could be processed and posted on the Internet, ridiculing the teachers.

**Table 2.**

**Threats of using mobile phones in the education process**

| Threats | Teachers % | N=72 |
|---|---|---|
| Thefts of mobile phones | 40% | 29 |
| Using mobile phones for copying e.g. during tests | 88% | 63 |
| Recording the lesson without the permission of the teacher | 76% | 55 |
| Using mobile phones for filming people without their consent | 86% | 62 |
| Using mobile phones for photographing people without their consent | 79% | 57 |
| Using phones during the lesson without the permission of the teacher | 69% | 50 |
| Distraction of students during the lesson | 76% | 55 |
| Discrimination against students who do not have a mobile phone or have an older model. | 35% | 25 |

| Overloading the school wireless network | 13% | 9 |
|---|---|---|

*Source: Own research*

Using mobile communications in the education process provides not only a lot of opportunities but also many risks that are noticed by teachers participating in the research, more clearly so than the possibilities. 88% – the largest selection – of teachers think that the main threat is using mobile phones to copy tasks during tests. Thanks to calculators, web browsers, and receiving short text and image information (SMS & MMS), students solve tests in a dishonest way, blurring the real image of the pedagogic diagnosis. The second most commonly selected answer by teachers is threat concerned with using mobile phones for filming people without their consent – 86%. Another threat is using mobile phones for photographing people without their consent – 79%.

Teachers are also afraid of students recording lessons on their mobile phones without the teachers' permission- 76% of respondents. In talks conducted in the course of the research, teachers admit that such situations are happening. Lessons recorded by pupils are being processed in special computer programs in order to ridicule the given teacher, and are then being posted on the Internet.

Students having mobile phones can use them during the lesson not only for the aforementioned situations, but also to communicate with their parents or peers. Conducted research shows, in this respect, that the frequency of students' contact with parents through mobile phone is changing along with age; older children are more likely to contact their peers than parents (Huk 2010: 215). The unexpected sound of a phone ringing during the lesson disrupts its continuity, and distracts students- as is confirmed by 76% of respondents. Among the surveyed teachers, 69% are afraid of students using their phones without their permission. Next, 40% of teachers fear a theft of mobile phone on school grounds. These situations are not conducive to building a sense of security among pupils

Processes occurring in the school community are a reflection of what is happening outside the school building. The kind of mobile phones held by a pupil sharpens divisions between wealthy students and the poor. Wealthier pupils are placed higher in the peer hierarchy than poorer pupils. The discrimination against students who do not have a mobile phone or have a worse model is another threat, which was confirmed by 35% of surveyed teachers. The fear most rarely chosen by teachers concerned overloading the school wireless network – 13%.

## CONCLUSION

The surveys enabled us to make a diagnosis concerning the use of mobile phones in upper secondary schools, as well as teachers' attitudes towards this medium.

At Polish upper secondary school, the vast majority of pupils use mobile phones during breaks between classes. More than half of the surveyed teachers believe that students also use phones during lessons. Using this media both during breaks and during lessons is forbidden in the school regulations of all respondents.

Nearly 1/3 of teachers admitted to using a mobile phone during lessons, which is not in accordance with school regulations.

In the teaching process, teachers most often use mobile phones for taking photographs, and recording videos and sounds concerning subject matter. Teachers are occasionally using educational applications dedicated for phones.

For surveyed teachers, the main threat associated with mobile phones is using these devices for copying during tests.

Mobile education is not popular in the Polish educational system. The model of the learning process, in which tablets or mobile phones are being used, is not attainable for a state school at present. Introducing such a model of teaching, supporting the process of developing the competences, requires a large financial outlay to provide the educational platform, training of teachers, equipping schools with adequate teaching means and a change in the attitudes of teachers (Huk 2012). Thus, there appears a challenge for institutions dealing with teacher education, which would confirm the words that mobile phones are lending wisdom to the world. Just like a magic wand, in the blink of an eye, it means every place in which we will find ourselves with our mobile phone would become intelligent. The ability to connect to the Internet, even when the sun is shining in our face, shows us that information is finally in the right; it is a part of life, a part of the world, and we can get it by being in the real world, rather than isolation (Levinson 2006).

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