

# Use of Smartphones in High School Education

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**ABSTRACT:** *This paper analyses the interaction between smartphones and social networks in the 21st century as compatible innovations for the pedagogical needs of the classroom. There are several difficulties imposed by their own dynamics in the classroom, these studies seek to illustrate the capacity of efficiency in teaching and learning and the contribution of these innovations is based on information development. The knowledge contextualized in this research reflects on the basis of the thesis and the target and was obtained from a public high school in Palmas, the state capital of Tocantins, Brazil. 212 students and 27 teachers engaged in this research. The findings confirm the need to move from conventional to curricular incorporation of information and communication technology (ICT) teaching to work, taking into account the intense relationship and time of students and teachers with the virtual world. The popularization and diffusion of mobile devices and the significance attached to social networks in the field of social relations are intensifying this relationship.*

**KEYWORDS:** *Information and Communication Technologies (ICT), Global System for Mobile Association (GSMA), Classroom, e-Classes, Online education.*

## INTRODUCTION

A landmark in contemporary culture, the so-called 'intelligence society' in Castells' conceptions, has been characterized by the advancement of science and technology in the last decades. The presence of a modern time in communications consolidated these phenomena. In this case, ICT (Information and Communication Technology) plays an enormous role in the global context in which knowledge produces and enhances new technologies and, in a continuous process, leads to the development of new knowledge [1]. In this context, the Educational, Science and Cultural Organisation of the United Nations gives prominence to mobile technology, defined by the use of tablets, ipads, portable book devices, game consoles, and particularly smartphones, describing mobile devices as: "digital, easily portable, owned and controlled by an individual rather than an institution, with internet access and multimedia." This situation affects and leads to the shifts in social ties seen by the use of multiple forms of media, primarily due to internet relationships.

With any feature, thing, or attribute, these technologies are reinvented and reinvented; inventions, modifications, and discoveries succeed, overlap, interconnect, and supplement each other in a linear, bidirectional, and/or multidirectional context, characterizing the social architecture flow spaces [2]. According to this technosociocultural panorama, the power and effect of social networks in people's lives can be visualized and checked, as well as the ease of connectivity to various social classes, based on the accessibility and portability phenomena, marked by the presence of mobile devices, in particular the popularization of smartphones. Combined with the growing speed of access to information, the competition of mobile device manufacturing is intensifying, allowing consumers to access all forms of resources and desires. This pervasive characterization allows for the development of social networks on which people, whether customers or content creators, may exercise any form of business interest [3].

In this case, it should be remembered that a lot of content is generated, circulated and absorbed by young people who are linked to the Internet and social networks. This fact has created growing demands in relation to the number of consumers that are increasingly becoming involved in modern mobile technologies with the capacity to manufacture and deliver material for the most varied purposes [4]. The popularization of smartphones,

connected to the facilities and characteristics of ICT, has provided the youth of the 21st century a new identity, irrespective of the social status of which they belong. Thus, in Brazilian public schools, ICT exerts pressure on the industrial, economic and social development systems, and educational policies often refer to their respective didactic-pedagogical processes. This methodology will be outlined in five parts for greater contextualization. In the introduction, the theme and its progression will be visualized in combination with smartphones, social networks, and teaching and learning. The interaction between smartphones and social networks is discussed in greater detail in the second section, based on several scholars [5]. The Brazilian Institute of Geography and Statistics (IBGE), the National Agency for Telecommunications (ANATEL), the Global Framework for Mobile Association (GSMA) and the Educational, Science and Cultural Organisation of the United Nations provide statistical data.

## SMARTPHONES AND SOCIAL NETWORKS

The cellular system went through a period of evolution that marked the development of telecommunications from the first mobile call that took place in April 1973 until the present. Smartphones have appeared since 2007, with the introduction of the iPhone by Apple, and have taken a leading role in the world. The complexities of this growth, both in its anatomical and functional nature and in the fact that it becomes an omnipresent and ubiquitous phenomenon, are present from the cellular apparatus to the smartphones [6]. Part of its popularization is due to the integration of technologies open to the most varied categories of consumers and facilities, as well as the enhancement of image format, weight and consistency. In the view of these features, it is described as a kind of "handyman." As new models are launched to the market, smartphones introduce more features in an effort to resolve previous versions and rivals' version to satisfy consumer requirements. In addition, these mobile devices benefit from the mobility and portability qualities and facilities.

Conceptually, the versatility property can be understood as the probability of utilizing wired mobile devices during displacement. Portability, on the other hand, is the ability provided to fixed and mobile telephony customers to carry their lines to the operators that better serve them. According to Anatel, the National Telecommunications Regulator, numeric portability is "a facility that enables the fixed and mobile telephony services customer to maintain the telephone number (access code) assigned to it." In order to meet the requirements of an emerging market and a changing user model, this property now demands greater investment from telephony firms. Brazil has more than 207 million inhabitants, according to an estimation made by IBGE, the Brazilian Institute of Geography and Statistics. With 234.6 million smartphones connecting to the Internet, it is the best-placed Latin American country in terms of mobile use (2017).

According to a study by the GSMA Corporation, responsible for GSM technology, of this number, 73 percent use 4G technology. It is important to take into account that accessibility indices are improving the evolution of Internet access networks in Brazil. 3G technology, exceeding the target for 2017, has now entered more than 5,000 Brazilian municipalities, according to the Digital Integration agency, published in November 2017. In more than 3,000 municipalities, the 4G network is now present. By August 2017, there were more than 88.5 million connections. With the introduction of 5G technologies, expected for the market in 2019, this field is expanding [7]. The platform appears to be much superior to the previous 4G technology. Brazil has more than 241 million lines in service and a density of 116.96 cells per 100 people, according to a report published in November/2017 by the National Telecommunications Agency (ANATEL). This background and the advancement of the standard of data delivery to users make it increasingly possible to access information at any time through mobile devices.

In this scenario, alongside the various mobile device apps, the use of social networks through the smartphone is important to highlight. Social networks are environments that rely on getting users together to display their

profile with material such as personal images, emails, notes and videos, and communicating with other participants, building friend and group lists. In addition, this practice targets most young people who often contribute to enhancing the ability to exploit the mobile resource [8]. This partnership can be seen as a possible benefit for the composition of methodological acts that lead to the quality of teaching and learning, especially young students' learning. Teaching and learning systems that are alienated from the technical capabilities of contemporary society should no longer be accepted. The possibility of deterioration is not current. On the opposite, there is a global pattern that is constantly consistent, a panorama in which the physical and the virtual world meet, total and intertwined [9].

A situation of familiar areas for the internet of things, identities, virtual reality, networks, smart devices and other innovations known as digital technologies of the 21st century. Immersed in this world of cutting-edge technology, the smartphone has become an object of important personal use in the lives of people, particularly in the lives of young people who, as part of this sense, feel relaxed. "In this new spatial logic there is a social pressure that demands the necessity of belonging, awakens in individuals a greater need for consumption of goods that identifies them with groups they want to contact." In this context, the aim of this study is to understand the importance of the use of social networks and smartphones in the teaching and learning process of public school students in Palmas, Tocantins Province, Brazil, enabling the extension of possibilities for the development of knowledge [10]. It is important to recognize that "it is necessary to extrapolate the classroom, to participate in the daily life, to dare." By allowing and initiating the practice of awareness creation by students in public schools, it is therefore possible to add to the complexities of the classroom. Instead of the conventional knowledge consumption method where "students and teachers close themselves between the four walls of the classroom, as in a vial, without communicating and establishing relations with the external context"

## CONCLUSION

This study looks at many schools in Brazilian federal states where students, like the Tocantins schools, are constitutionally barred from using mobile phones in class. "It is forbidden to the student, in the school premises: II - to use a cellular device, smartphones, tablets cameras, headphones and any other sound system in the classrooms, except when contemplated in school planning "The use of a cellular device, smartphones, tablet cameras, headphones and any other sound system in the classroom is banned for students in the school premises: II, except when contemplated in school planning. In this way, it is considered that the translation of ICT tools into pedagogical behavior in the classroom is still more complex. When, on the one hand, the institutional agency itself applies limitations, it legalizes the absence of expertise to cope with technology in an innovative and efficient way. In the other hand, in the modern world, there is a need for practitioners without training in the area of new technology. The analysis of the answers given by teachers and students in the questionnaires, which indicated the urgency of pedagogical actions using ICT resources in the school's universe, can verify this context. The fact investigated is just a cut in ordinary conditions encountered in classrooms, but indicative of the educational universe in Brazil. The need for improvements in school preparation, in the context of using social networks in the school's pedagogical proposal, in the projects and actions created, has been confirmed. For example, the use of the Facebook site and the WhatsApp tool will offer teaching and learning benefits. Both teachers and students make good use of social networks in their everyday life in individual activities, making it easier to produce meaningful outcomes with respect to the incorporation of technology into school practices.

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