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HOW TO PREVENT THE CELL PHONE FROM BEING A DISTRACTION IN EDUCATION

**CÓMO EVITAR QUE EL MÓVIL SEA UNA
DISTRACCIÓN EN LA EDUCACIÓN**

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How to Prevent the Cell Phone From Being a Distraction in Education

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ABSTRACT

The use of cell phones in schools is a matter of debate among educators, parents and legislators. The objective of this article is to relate the use of cell phones with the academic performance of students of the "Juan Montalvo" and "23 de junio" Educational Units of the Babahoyo canton in Ecuador; in addition to providing some strategies to prevent this device from being a distraction. An explanatory research was carried out, with a sample of 611 adolescents and young people with similar particularities of age, academic grade and number of hours spent in school. First, a documentary analysis was carried out and then 4 surveys were applied during the 2023 academic period; the data were analyzed using the SPSS statistical program (version 14.0), descriptive statistics and analysis of variance for one factor (ANOVA). The results show that 95.0% of students have been using mobile phones for more than 3 years and that 25.0% admit that this device distances them from their significance in the educational process. On the other hand, the students who use the cell phone the most during classes have the lowest average average; In addition, 100% of parents agree that strategies should be applied within the school so that academic performance is not affected by the excessive use of this device. With this, it is concluded that the families of the two educational institutions assume the responsibilities and the following mechanisms are conferred so that adolescents make adequate use of the cell phone in the educational process: Clear regulations, cell phone free zones, technology-free hours, rewards for compliance with the regulations, punctual follow-up of incidents.

Keywords: education, cell phone use, mechanisms

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Cómo Evitar que el Móvil sea una Distracción en la Educación

RESUMEN

El uso de teléfonos móviles en las escuelas es un tema de debate entre educadores, padres y legisladores. El objetivo de este artículo es relacionar el uso del teléfono celular con el rendimiento académico de los estudiantes de las Unidades Educativas “Juan Montalvo” y “23 de junio” del cantón Babahoyo en Ecuador; además de brindar algunas estrategias para evitar que este dispositivo sea una distracción. Se realizó una investigación explicativa, con una muestra de 611 adolescentes y jóvenes con similares particularidades de edad, grado académico y número de horas de escolarización. Primero se realizó un análisis documental y luego se aplicaron 4 encuestas durante el periodo académico 2023; los datos fueron analizados mediante el programa estadístico SPSS (versión 14.0), estadística descriptiva y análisis de varianza para un factor (ANOVA). Los resultados muestran que el 95,0% de los estudiantes utiliza el teléfono móvil desde hace más de 3 años y que el 25,0% admite que este dispositivo los aleja de su importancia en el proceso educativo. Por otro lado, los estudiantes que más utilizan el celular durante las clases tienen el promedio más bajo; Además, el 100% de los padres coincide en que se deben aplicar estrategias dentro del colegio para que el rendimiento académico no se vea afectado por el uso excesivo de este dispositivo. Con esto se concluye que las familias de las dos instituciones educativas asumen las responsabilidades y se confieren los siguientes mecanismos para que los adolescentes hagan un uso adecuado del celular en el proceso educativo: Normatividad clara, zonas libres de celular, horarios libres de tecnología, recompensas por el cumplimiento de la normativa, seguimiento puntual de incidencias.

Palabras clave: educación, uso del celular, mecanismos

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INTRODUCTION

The use of mobile devices, particularly cell phones, has increased exponentially in the last decade, becoming an integral part of everyday life, especially among adolescents; data indicate that on average cell phone use reaches six hours a day by students between 12 and 19 years of age (Statista, 2023).

This phenomenon cannot be alien to the educational environment, where the use of cell phones by adolescents has generated a wide debate among educators, parents and legislators. While some argue that mobile phones can be valuable tools for learning, facilitating access to information and educational resources, others point to the negative effects associated with their overuse in academic contexts.

Various studies (Sunday, 2021; Kuznecoff, 2015; Ames, 2020; UNESCO, 2023) have shown that the excessive use of cell phones in schools can interfere with the teaching-learning process, distracting students, decreasing their academic performance, and affecting their ability to concentrate (Martínez, 2021). In addition, uninterrupted access to these devices has been linked to behavioral problems, such as increased anxiety and decreased time spent in face-to-face social interaction.

For example, in Spain, according to Moral and Suarez (2016) who cite the Ministry of the Interior (2014) in a survey carried out on internet use and security habits in 10 young people, it indicates that 60% of those interviewed connected to the Internet every day (p. 71). However, excessive use of mobile phones becomes a real problem in adolescence due to the lack of guidance in their use (Beranuy et al., 2009). This causes problems in many contexts of their lives, such as at the family and school level, leaving aside routine activities that do not allow the proper development of their adolescence (Díaz, 2019).

Some of the factors that accompany this technological dependence are: loss of time for other activities, behavioral alterations, mood alterations, changes in sleep rhythms, loss of control, isolation, impoverishment of social relationships, family conflicts" (Díaz, 2019, p. 1). On the other hand, for Castillo and Ruiz (2019), the excessive and addictive use of cell phones can bring, in addition to the aforementioned consequences, also problems with school and college due to the fact that there is little interest in the subjects and in the performance of the activities proposed by teachers.

Low academic performance can lead to school failure, which in contexts of social inequality and lack of economic resources will cause the adolescent to drop out of school, further separating the social gap.



In this context, it is crucial to examine the impact of excessive use of cell phones on school dynamics and on students' cognitive and emotional development.

This article aims to critically analyze the relationship between the excessive use of cell phones and adverse effects on the school environment, with some strategies so that this does not have a negative impact on academic performance, improves socialization and the psychological well-being of students.

This study is distinguished by its focus on the direct relationship between the excessive use of cell phones and the specific pedagogical aspects of the school environment, an area that, although it has been addressed in previous studies, lacks a comprehensive analysis in the Educational Units of Ecuador. The relevance of this research lies in the urgent need to develop educational policies and intervention strategies that respond to the challenges posed by the integration of mobile technology in schools.

This research is related to studies in educational psychology, neuroscience and pedagogy, which explore the effects of technology on the cognitive and socio-emotional development of adolescents. In addition, it connects with research in educational policies that examine the regulation of the use of electronic devices in school contexts. By articulating these approaches, this article aims to contribute to existing knowledge and offer a holistic perspective on the phenomenon in question.

MATERIALS AND METHODS

The research that was carried out was explanatory because it sought to respond to the events that arose in a clear and precise manner; as he considers it (Hernández Sampieri, 2014) is aimed at answering for the causes of physical or social events and phenomena as is the case. It focuses on explaining why a phenomenon occurs and under what conditions it manifests itself, or why two or more variables are related, characterized by the use of cell phones and the academic performance of each of the individuals investigated.

Structured surveys were the main data collection tool, they were applied to the intended sample of 611 students, distributed as follows:

230 adolescents, and 100 young people from the E.U. "June 23 of the Baba canton

190 adolescents and 91 young people from the E.U. "Juan Montalvo of the Baba canton

The aim was to ensure equitable representation in terms of gender, age and socioeconomic status. All participants owned a mobile phone.



The ages ranged from 13 to 15 years (adolescents) and 16-20 years (young people), with the mean being 15.28 for adolescents and 20.27 for young people. The most frequent age is 13 for adolescents and 19 for young people. In terms of gender, 52.5% of adolescents were female and 47.5% male, and 83% of young people were female and 17% male.

After a bibliographic search on the use and management of mobile phones, ICT and TAC, it was decided to select the Internet-Related Problems (PRI) questionnaire by Gracia et al. (2002) as the basis for developing the instruments, since it was translated into Spanish and had a high internal reliability (Cronbach alpha = 0.91).

In order to reduce as much as possible the errors that affect the internal validity (quality of the questionnaires), an initial pilot test was carried out with 29 students that evaluated: the intelligibility of the items, the instructions and the answer categories, the sequence of the questions and the order of the aspects covered in the questionnaire and the time of its applicability.

Finally, after analyzing the results of the initial test, the final version of the questionnaires was developed. 4 questionnaires were applied during school hours, in scheduled sessions, under the supervision of a researcher and a teacher from each participating institution. Students completed the surveys in digital format, using computers provided by the school to ensure uniformity in data collection. The estimated time to complete each survey was 15 to 20 minutes.

Data were analyzed using the SPSS statistical program (version 14.0). Descriptive statistics and analysis of variance for one factor (ANOVA) were used. Informed consent was obtained from the parents or legal guardians of all participants, as well as the assent of the students. We ensured the confidentiality and anonymity of the responses, and explained to participants that their participation was voluntary and that they could withdraw from the study at any time without repercussions. The study was approved by the educational authorities of both institutions.

RESULTS.

The following was found by taking characteristic references such as:

How long the mobile phone has been used. It was evidenced that 95.0% of the respondents have been using the mobile phone for more than 3 years, while 25.0% of the adolescent users have been using it for less than 2 years (Table 1).



The difference in time of use between the two age groups is highly significant ($F(1,637) 84.277$; $p=0.000$).

Table 1. Time spent on mobile

Usage Time	Adolescents		Young people	
	N	%	N	%
More than 3 years	270	67,5	200	95,0
From 2 to 1 year old	100	25,0	5	2,2
6 months to 1 year	20	5,0	3	1,4
less than 6 months	10	2,5	3	1,4

Mobile services

Calls are more used by teenagers while SMS is the most used service by young people, games are less used by both groups.

Of the most widely used mobile service, SMS, the tendency is to send at least 5 messages a day (Table 2)

Table 2. Daily SMS

Daily SMS	Adolescents		Young people	
	N	%	N	%
from 0 to 5	303	75,75	179	84,84
from 6 to 10	65	16,25	30	14,22
from 11 a.m. to 5 p.m.	13	3,25	1	0,47
more than 17 to 20	19	4,75	1	0,47

The negative consequences of excessive use of mobile phones were observed (Table 3).

Table 3. Negative effects

Consequence	Population	ALWAYS		ALMOST ALWAYS		SELDOM		NEVER	
		N	%	N	%	N	%	N	%
Limit mobile phone use because they are excessive	Adolescents	100	25	150	37,5	18	4,5	11	2,75
	Young people	130	61,61	100	47,39	14	6,64	12	5,69
Loss of track of time when speaking	Adolescents	200	50	100	25	200	50	180	45
	Young people	50	23,7	86	40,76	100	47,39	80	37,91
Feeling guilty about investing a long time	Adolescents	100	25	80	20	82	20,5	200	50
	Young people	20	9,48	11	5,22	36	17,07	8	3,8
Loss of academic time due to the mobile phone	Adolescents	100	25	70	17,5	100	25	9	2,25
	Young people	11	5,21	14	6,63	61	28,90	111	52,60

The results show that 95.0% of young people have been using mobile phones for more than 3 years, and 25.0% admit that this device distances them from its significance in the educational process.



The students who use the cell phone the most during classes have the lowest average average, and 100% of parents agree that strategies should be applied within the school so that academic performance is not affected by the excessive use of this device.

DISCUSSION

The results of this study reveal a worrying picture of cell phone use among adolescents in the school environment and its impact on academic performance and the quality of the educational process. A noteworthy finding is that 95.0% of the young participants have been using cell phones for more than three years, indicating a deep integration of these devices into their daily lives. This data is consistent with global trends, where early access to mobile technology has normalized its use from an early age.

Cell phone use and overuse increases significantly with age. This was to be expected since over the years users buy their own mobiles or parents end up giving them as a reward whether they deserve it or not. The use of SMS and calls also increases with age while the use of the Internet, games and chats from mobile decreases. This could indicate that as the time of possession of the mobile phone increases (which we have already seen increases with age) its use becomes normalized, that is, it goes from being used as a tool for laziness to being instrumentalized as a tool that serves to generate new knowledge.

However, a quarter of students (25.0%) recognize that the cell phone distances them from their significance in the educational process. Among the negative consequences that young people maintain, 40.76% loss of track of time when talking while adolescents reach 50% In addition, we expected to find that the subjective perception of addiction decreased with age (since this is related to a longer time of possession and normalization of use) and this has not been the case. Students' perception of the negative impact of cell phones on their education is a key indicator of the urgent need to address this issue.

In addition, the data show a negative correlation between cell phone use during classes and academic performance. Students who use cell phones more frequently in the classroom tend to have lower GPAs compared to those who limit their use. This result is consistent with the existing literature, which has documented how distractions caused by cell phone use can reduce students' ability to assimilate information and actively participate in the learning process. The decline in academic performance associated with excessive cell phone use highlights the need to implement effective measures to manage this problem in schools.



There are some cases (34 participants) in which psychological or psychoeducational intervention is necessary beyond prevention since they suffer from maladaptive problematic use due to the misuse of their phone and excessive use of it as expected, the general use of the mobile increases significantly with age, that is, over the years the use of mobile phones is implemented.

A notable aspect of the study is the consensus among parents: 100% of respondents agree that strategies should be implemented within the school to mitigate the negative impact of excessive cell phone use on their children's academic performance. This unanimous support reflects a concern shared by the educational community and reinforces the legitimacy of developing and implementing school policies aimed at regulating the use of cell phones. Collaboration between parents, teachers and school authorities will be essential to ensure that these strategies are effective and sustainable in the long term.

The implication of these findings suggests that, although cell phones are an integral part of adolescents' lives, their use within the school environment must be carefully regulated to avoid interference with learning.

CONCLUSIONS

In conclusion, this study provides significant evidence on the relationship between excessive cell phone use and adolescent academic performance, and underscores the importance of developing educational strategies to manage the use of these devices in schools.

These actions are

Implementation of Clear Regulations that regulate the use of cell phones in school; define when and where it is allowed to use the cell phone and establish specific consequences for inappropriate use. An example could be allowing cell phone use only during breaks and before/after school.

Incorporating Controlled Technology, instead of completely banning cell phones, can be integrated into controlled educational activities, such as quick information searches, interactive quizzes, or educational apps. This allows students to see their devices as learning tools, not just entertainment.

Foster digital culture with trainings where students are actively involved are less likely to be distracted by their cell phones. Technology-Free Zones designate certain areas of the school as libraries, classrooms, and study areas. These areas will be exclusively for academic and reading activities, promoting an environment of concentration and respect for learning.



Parents trained in Technology to help their children manage cell phone use outside of school hours.

Incentives to create a system that rewards students for complying with cell phone use rules. This could include special privileges, recognition, or additional points in certain academic activities.

Timely incident tracking to analyze data on distraction and compliance incidents to identify areas for improvement and adapt strategies as needed.

After analyzing the issue of cell phone use in two educational institutions in Ecuador, it is concluded that although as in other parts of the world, in Ecuador cell phones are distracting at school if they do not have clear regulations regarding their use. If families assume responsibilities and mechanisms are conferred such as: clear regulations, cell phone-free zones, technology-free hours, rewards for compliance with regulations, punctual follow-up to incidents, it will be possible to improve the quality of education without a distraction such as the cell phone.

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- (Sunday, 2021; Kuznecoff, 2015; Ames, 2020;
- "The Impact of Mobile Phone Use on Student Learning Outcomes in Higher Education"** This study looks at how mobile phone use affects the academic performance of college students, exploring both positive and negative effects.
- "Smartphones in the Classroom: Examining the Effects of Texting, Twitter, and Message Content on Student Learning"** Research how smartphone use during classes, especially for non-learning activities, affects attention and information retention.



"Mobile Phone Use and Academic Performance: A Preliminary Study on Undergraduate Students" It examines the correlation between mobile phone use and academic performance in undergraduate students, highlighting the distractions generated by these devices.

