

Analysis of the use of the cell phone in the learning process of the students of The Superior Technique in Industrial Processes of the UTNA

Análisis del uso del celular en el proceso de aprendizaje de los estudiantes de Técnico Superior en Procesos Industriales de la UTNA

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Abstract

The present study is an analysis of the uses that the cell phone has for the support of the students of the career of TSU Industrial Processes Manufacturing Area of the Technological University of the North of Aguascalientes that seeks to show an overview of the situation of the students in this area. This analysis allows us to observe what are the resources that students take as support to improve their learning in the different subjects they take. The sections that are analyzed in the following pages offer teachers and students a topic for reflection on the significant progress that the use of cell phones has had in the educational field with the students of these careers.

Education, Technology, UTNA, Quality, Cellphone

Resumen

El presente estudio es un análisis de los usos que tiene el celular para el apoyo de los alumnos de la carrera de TSU Procesos Industriales Area Manufactura de la Universidad Tecnológica del Norte de Aguascalientes que busca mostrar un panorama de la situación de los alumnos en este rubro. Este análisis permite observar cuales son los recursos que los alumnos toman como apoyo para mejorar su aprendizaje en las diferentes materias que cursan. Los apartados que se analizan en las siguientes páginas ofrecen a los profesores y alumnos un tema de reflexión, sobre el avance significativo que ha tenido el uso del celular en el ámbito educativo con los alumnos de estas carreras.

Educación, Tecnología, UTNA, Calidad, celular

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Introduction

This report presents an Analysis of the use of the cell phone in the learning process of the students of the Superior Technique in Industrial Processes of the Universidad Tecnológica del Norte de Aguascalientes.

A survey was conducted to determine the most important parameters to measure on the information of students of the Superior Technique in Industrial Processes.

The results of the survey applied to a sample of 45 students from the generation 2020-2022 are shown below.

This project benefits the Universidad Tecnológica del Norte de Aguascalientes since it allows it to know the most important information about its students in this entry.

Methodology

According to Hernández Sampieri (2010), the study that was applied was a “Quantitative Exploratory” study where a survey-type data recovery tool was used where a series of questions about Superior Technique in Industrial Processes in the use of cellphone, this question were specified and the survey was applied to a large number of our alumni in order to gather data or to detect public opinion on a given matter.

The objective is to evaluate the impact of cell phone use on the learning conditions that students had during the transition from the pandemic, hybrid classes and later face-to-face classes.

Sampling

The type of sampling that was carried out was stratified. The advantage of this type of sampling is that it tends to ensure that the sample adequately represents the population based on selected variables. It also allows more precise estimates to be obtained and its objective is to obtain a sample as similar as possible to the population in terms of the stratified variable (s).

The results of the survey applied to a sample of 45 students from the generation 2020-2022. The survey was applied from June to September 2021.

Background

The human being can be considered as a permanent learner, taking into account that even in the activities of less intellectual demand, he requires training, or training, that he had to acquire and develop. It must be taken into account that in this elementary type of learning, it is carried out almost always unconsciously by the subject who performs it. Intellectual learning in human beings previously requires adequate psychobiological and neurophysiological maturation on the part of the student or scholar. It can be stated that if the individual is not prepared to learn, that is, they do not have the necessary maturity, they will have difficulties during learning.

Once the individual meets the conditions for the development of intellectual work, their ability to learn should no longer have any type of intellectual limitation. Moreover, it is in a position to demand the right to access the goods of education and culture. UNESCO has been advocating for years for continuous learning throughout life, with no limitations other than personal interest or motivation. In a society that is constantly changing, it no longer makes sense to speak of an age of learning that ended with university graduation. Permanent learning is essential, either to acquire the training and learning of the times that you demand, or to satisfy the innate desire to learn, even if it is a compensatory way in adulthood.

Applied learning

There is a clear relationship between learning and application or realization, considering that it is as compliance and verification of what has been learned, rather than as a personal achievement of a series of attitudes and values that the subject develops.

The application or realization is considered here as an evaluation of the learning achieved before a specific proposal. Precisely the implementation of a change of attitude is, in some way, the evaluation of it, although without considering the conditions that affect learning: forgetfulness, fatigue, etc., or aspects such as attitudes, ideals or interests.

Another consideration to be made is the relationship between learning and the context in which it takes place; it is the undeniable social condition of the individual that involves a series of conditions of all kinds with the environment in which they are immersed.

From childhood, the citizen has to accommodate their behaviors to various conventional forms that are, more or less, dictated by the family and social environment that have to do with the personal or the subjective. Society, in short, will evaluate them and the result of this evaluation will result in the qualification of accepted or rejected, the consequence of this last qualification being the marginalization of the individual, from which they will be given the opportunity to change, but always having taking into account the objectives set by the company. It is about the permanent interaction between the individual and the community, or between the person and society: we are, in part, what our circumstances are.

Purposes of human learning

The great purposes of education can be explained around three fundamental areas of every human being: personal environment, cultural environment and social environment.

1. Personal sphere: knowing oneself, one's own capacities, the way of adapting and fitting into society, the way of satisfying one's own needs within the socially established framework, the development of one's potentialities and aspirations, etc.
2. Cultural field: learning to function, not only in the physical environment, but especially in the part of the environment made by him through knowledge of language, numbers, technology, customs and traditions.
3. Social sphere: know how society works in its great manifestations of economy, politics, governments, religion, coexistence and tolerance, democracies and human rights, constitutional values of citizenship, etc.

These fundamental objectives can be explained with the acquisition of knowledge, skills and attitudes in relation to all branches of knowledge.

Levels of Bloom's Taxonomy

According to the six fundamental levels of Bloom's Taxonomy.

The first level is the knowledge that allows the student to record, memorize, recognize and recover.

The second level is understanding which allows the student to interpret, translate from one medium to another, describe with one's own words.

The third level is the application that allows you to solve problems, apply information to produce some result.

The fourth level is analysis by breaking something down to show how its parts come together, find the underlying structure of a communication or message, identify motives. The fifth level is synthesis to create a unique and original product either in verbal form or as a physical object.

The sixth level is the evaluation to make value decisions about different issues, resolve controversies or differences of opinion.

Analysis of tasks for knowledge and thought processes. Orlich, D.

Level 1. Facts. It is an event or occurrences that happen only once and can be observed but has no predictive value.

Level 2. Concepts. It is a class of stimuli that have common characteristics. It is developed in the processes of observation and inference (categorization)

Level 3. Generalization. It is a proposition of a relationship between two or more concepts that generally meet specific conditions. This proposition is developed through the process of observation and inference.

The student must learn from the simple, then the concrete, then the complex, and finally the abstract.

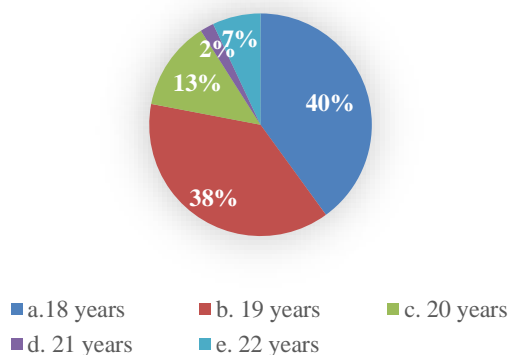
Results

The results of the survey applied to a sample of 45 students of the 2020-2022 generation on the use of cell phones in the educational process during the pandemic and the hybrid classes and later the face-to-face classes are shown below.

Results and discussion

1. Age

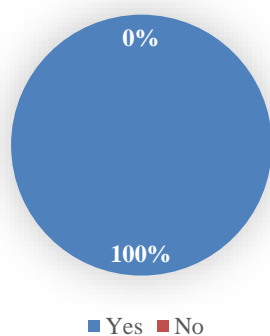
The age of the surveyed students ranges between 18 and 22 years.



Graphic 1 Age of the surveyed students

2. Do you use the cell phone as a support in your studies?

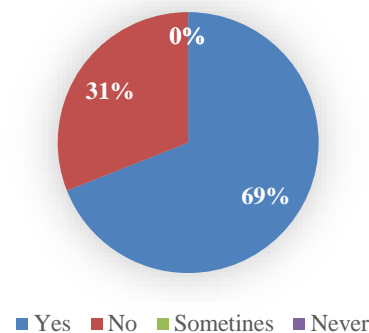
In the survey of students of business careers, 100% of those surveyed answered that they use the cell phone as support in their studies.



Graphic 2 Use the cell phone as a support in your studies

3. Do you consider that the cell phone facilitates your study?

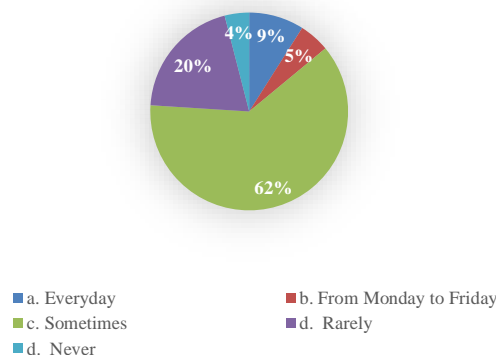
Regarding the question of whether the student considers that the cell phone facilitates their studies, 69% of the students surveyed answered that it does facilitate their studies, 31% answered not.



Graphic 3 Percentage of students consider that the cell phone makes their studies easier

4. Do you use the cell phone for "Comprehension reading of some of your classes"?

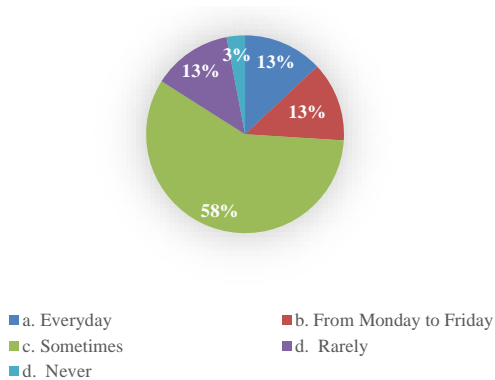
During the survey, students reported that 62% sometimes use the cell phone for reading comprehension in some of their classes. 5% say that if they use it from Monday to Friday, 20% reported rarely, 9% said daily, and 4% reported never.



Graphic 4 Use of cell phone for Comprehension reading of some of the classes

5. Do you use the cell phone to "process any of your work in class"?

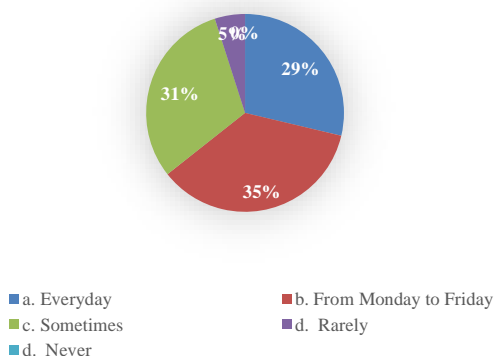
58% of the students answered that they sometimes use the cell phone to process some work in class. While 13% of the students answered that they rarely used it.



Graphic 5 Use of cell phone for process any work in class

6. *Do you use the cell phone for the "investigation of a specific topic that one of your teachers left you"?*

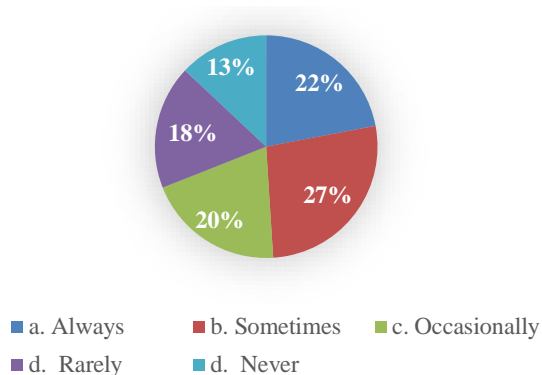
In this question, 29% of the students surveyed commented that they use the cell phone daily for research on a specific topic. In contrast to 31% who said that they sometimes use it, while 35% mention that they only rely on the cell phone to investigate from Monday to Friday.



Graphic 6 Use of cell phone for investigation of a specific topic that one of the teachers left them

7. *Do you use the cell phone for "support in any of your school presentations"?*

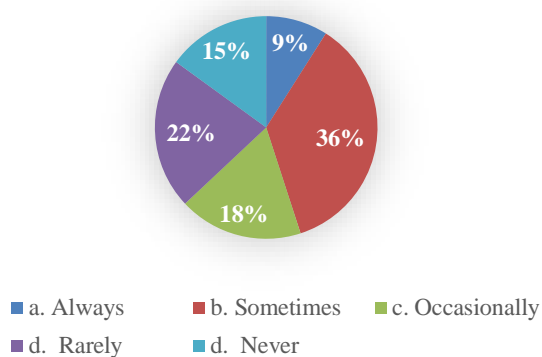
A very common case today is that students make their presentations with the support of the cell phone, reading the key information of the cell phone presentation. For this answer, the students answered that 22% always use the support cell phone during their presentations, 27% answered that sometimes, 18% answered that rarely, 22% answered that occasionally, while only 13% answered that they are never.



Graphic 7 Use of cell phone in support in some school presentations

8. *Do you use the cell phone to "perform some mathematical calculations on a specific problem."?*

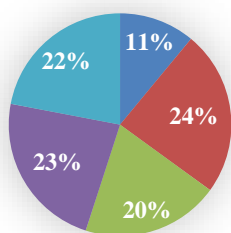
Another use that students give to the cell phone for support during their classes is to perform mathematical calculations for the subjects that require it. To this question, the students responded that 9% always use their cell phones for this operation, while 22% said rarely, 18% said occasionally, 36% sometimes and 4% said they never use it. to do mathematical calculations.



Graphic 8 Use of cell phone for perform some mathematical calculations on a specific problem

9. *Do you use the cell phone for the "see classes that have already passed"?*

The students surveyed mentioned that only 22% use the cell phone to see classes that have already passed, while 23% answered that they rarely carried out this activity, 24% mentioned that sometimes, 20% said that occasionally, while 22% of the students surveyed mentioned never.

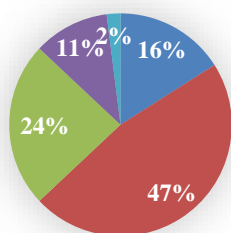


■ a. Always ■ b. Sometimes ■ c. Occasionally
 ■ d. Rarely ■ d. Never

Graphic 9 Use the cell phone for the "see classes that have already passed"

10. Do you use the cell phone for the "Watch videos to study for your classes"?

Another use of the cell phone that the students surveyed were asked is that, if they used this device to watch study videos for their classes, to which the students answered that 16% always do it, 47% answered that sometimes, 24% answered occasionally, while 11% answered rarely and 2% said never.

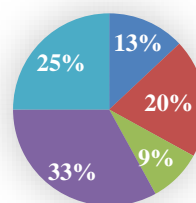


■ a. Always ■ b. Sometimes ■ c. Occasionally
 ■ d. Rarely ■ d. Never

Graphic 10 Use the cell phone for the "Watch videos to study for the classes"

11. Do you use the cell phone for the "Participate in conferences"?

The students responded to the question of the use of the cell phone to participate in conferences that 13% always do it, while 20% sometimes do it, 9% do it occasionally, 33% rarely, and 25% never.

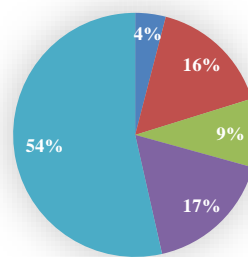


■ a. Always ■ b. Sometimes ■ c. Occasionally
 ■ d. Rarely ■ d. Never

Graphic 11 Use the cell phone for the Participate in conferences

12. Do you use the cell phone for "Support during exams"?

Another question that was also asked of the students surveyed is if they used the cell phone as a support during the exams, to which the students responded by 4% always, 16% sometimes, 9% occasionally, 17% rarely, and 54% never.

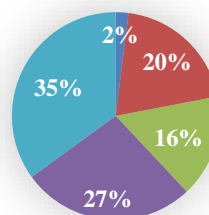


■ a. Always ■ b. Sometimes ■ c. Occasionally ■ d. Rarely ■ d. Never

Graphic 12 Use the cell phone for Support during exams

13. Do you use the cell phone to study with educational games?

The students responded to the question of using the cell phone to study with educational games that 27% always do it, 20% sometimes, 16% occasionally, 27% rarely and 2% never.

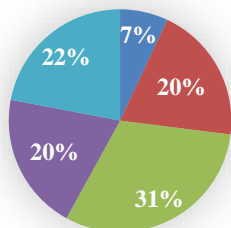


■ a. Always ■ b. Sometimes ■ c. Occasionally
 ■ d. Rarely ■ d. Never

Graphic 13 Use the cell phone to study with educational games

14. Do you use the cell phone to take quizzes or some other type of exam?

In this question, the students surveyed answered that they use the cell phone in 7% to take quizzes or some other type of exam, while 20% answered that sometimes, 31% answered that occasionally, 20% said that rarely, and 22% mention never.

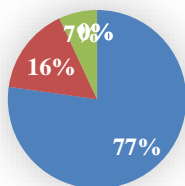


a. Always b. Sometimes c. Occasionally
d. Rarely e. Never

Graphic 14 Use the cell phone to take quizzes or some other type of exam

15. Do you use your cell phone to communicate with your classmates?

Another use that students are asked about the use of the cell phone was if they use this device to communicate with their classmates, for which they answered, 77% always do it, 16% sometimes, in a 7% occasionally.

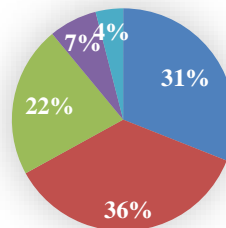


a. Always b. Sometimes
c. Occasionally d. Rarely

Graphic 15 Use of cell phone to communicate with the classmates

16. Do you use your cell phone to communicate with your class teachers?

The students were also asked about the use of cell phones to communicate with their teachers, for which 31% responded that they always do so, 36% sometimes, 22% occasionally, 7% rarely, the 4%. never

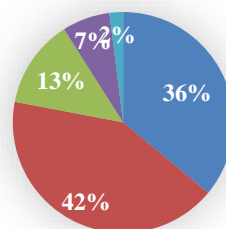


a. Always b. Sometimes c. Occasionally
d. Rarely e. Never

Graphic 16 Use of cell phone to communicate with class teachers

17. Do you use your cell phone to share class material " "?

Another use that the students were asked was if they used the cell phone to share class material, for which the students answered that 36% always, 42% sometimes, 13% occasionally, 7% rarely and 2% never.

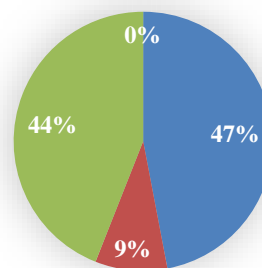


a. Always b. Sometimes c. Occasionally
d. Rarely e. Never

Graphic 17 Use of cell phone to share class material

18. Do you think you learn by using your cell phone?

The students responded to the question of whether they learned using the cell phone, 47% yes, 9% no, 44% maybe.

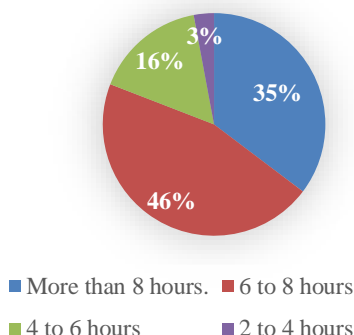


Yes No Maybe Never

Graphic 18 Learning by using your cell phone

19. How many hours a day do you estimate that you use the cell phone?

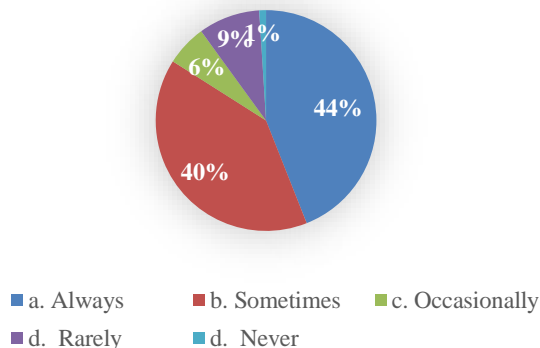
In students regarding the use that is given to the cell phone daily for hours, the respondents answered in 35% that they use it more than 8 hours a day, 46% answered that they use it from 6 to 8 hours, 16% said that they use it used 4 to 6 hours and 3% of the contest that between 2 and 4 hours.



Graphic 19 Estimated hours per day of cell phone use

20. During your stay in the Pandemic while you were at home, do you use your cell phone to take your classes??

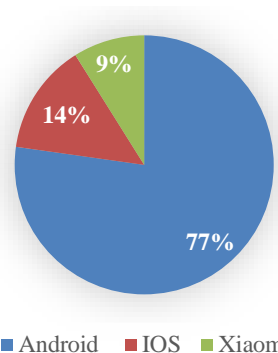
When asked if you used your cell phone to take classes during the pandemic, the students answered that 44% always, 40% sometimes, 6% occasionally, 9% rarely and 1% never.



Graphic 20 Use of cell phone to take the classes during the Pandemic

21. What operating system does your cell phone use?

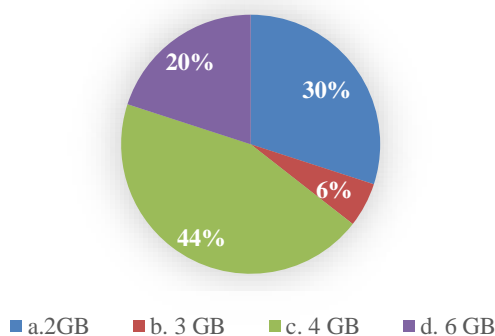
The operating systems that the students have are Android with 77%, IOS with 14% and Xiaomi with 9%.



Graphic 21 Operating system's cell phone

22. What RAM memory does your cell phone have?

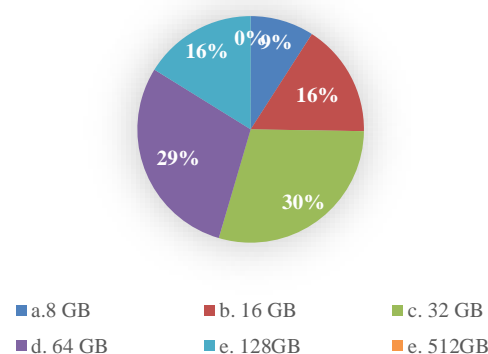
The capacity of the cell phones used by the students is diverse, the characteristics are shown in the following graph, however, the 4 GB capacity stands out over the others.



Graphic 22 RAM memory

23. What capacity does your cell phone have?

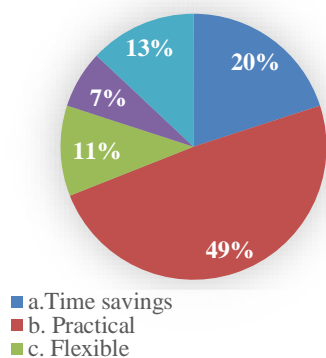
The capacity of the cell phones used by the students is diverse, the characteristics are shown in the following graph, however, the 32 GB capacity stands out over the others.



Graphic 23 Cell phone capacity

24. *What is the main benefit that you consider your cell phone brings you in your studies?*

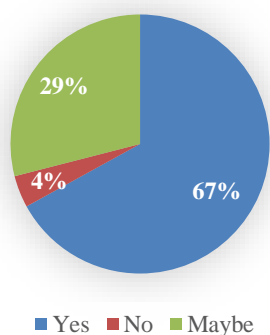
The students responded that the main benefit of the cell phone in their studies was 20%-time savings, 49% practical, 11% flexible, 7% dynamic, 13% immediate communication



Graphic 24 Benefit cell phone

25. *Do you consider that it is necessary to carry out a practice after leaning on the cell phone to reinforce your knowledge?*

The students responded to the question that if they consider it necessary to carry out a practice after relying on the cell phone to reinforce their knowledge, 67% said yes, 29% maybe, and 4% no.



Graphic 25 Practice after leaning on the cell phone

Conclusions

Currently, it can be said that 100% of our students use cell phones to support and develop their classes, which is very important because it allows the student to continue to be motivated during their studies.

As can be seen in this investigation, the use of cell phones is very important since it allows students to speed up learning through various applications such as Word, Excel, Power Point, Socrates, Kahoot, Zoom, YouTube, Meet.

Also, the use of cell phones in education has multiple benefits for them as it is more practical, saves time, is flexible, and allows instant communication between students, groups of students and teachers.

Currently, students can search for information, enter classes, watch videos, take exams, etc. This allows students to acquire knowledge while using the cell phone.

In general, it can be concluded that the cell phone is of vital importance for the studies of the students.

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