

# The Addiction on Technological Devices: Its Influence on the Academic Performance of Grade 10 Learners

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**Abstract**— The study was conducted to understand the addiction on technological devices and its influence on the academic performance of the grade 10 learners at MSU Lanao National College of Arts and Trades during the school year 2023-2024. Among the one hundred fifteen (115) learners enrolled, a total of one hundred six (106) respondents of grade 10 learner-respondents participated on the study because some learners were drop-out and transferred. The study used descriptive research method using a survey-questionnaire and it is delimited to answer the following queries: first, the demographic profile of the respondents in terms of their age, sex, parents' occupation and monthly income and learner-respondents' grade point average; second, to the factors leading to technological devices addiction in terms of: academic activities, social connectedness and accessibility. In addition, the study used frequency and percentage, weighted mean and rank as statistical tools, with the aid of SPSS application for the accurate computation of the results and statistician, for the proper interpretation of the study. The results revealed that the enumerated factors that influence learners-respondents in using technology was rated to 2.2925 general weighted average mean, which descriptively define as "frequently". The results commend that excessive using of technological gadgets contributed to the poor academic performance and it also leads to problems and distress among the learner-respondents.

**Index Terms**—Addiction, Academic Performance and Technological Devices.

## 1. Introduction

Technology is necessary nowadays especially in education, to organize, assess and facilitate the use of learning tools that provide positive feedback in learning. Using technological gadgets are advantage both to teachers and learners if and only if was used properly.

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They were several advantages of using gadgets for both teachers and learners like, it facilitates communication between teachers and students and helping in searching for information, and become a tool to make learning easier according to Wang, W., et. al. (2023). Most gadgets used by learners are smartphones, tablets and computers which contain applications that help learning. Learners were able to collaborate with peers using digital platforms, explore creativity through technological features, engage in higher-order thinking and helps learners develop digital literacy and when technology was used properly, it can be use by the teachers as productivity tools and can collaborate online and communicate effectively. Whenever technological devices used, there is an advantage to increase the learning ability but some young adults addicted to technological devices. In today's era, due to the fast changing of technology, more learners were addicted on using technological gadgets that may leads to minimized their attention in schooling and resulted to low academic performance. According to Mally (2023), technology addiction is the obsessive behavior related to technology, whether gaming, social media, video watching or anything involving technology.

Moreover, the disadvantage for the learners for always using technological devices, it kills creativity and individual skills are affected by technology, likewise, technology gadgets distract students' attention like when they are outside the classroom, they give less attention in giving time doing their school requirements such are activities nor assignments, instead, they will stop and check their phones multiple times because they assumed that scrolling on their technological devices while doing their school work can be done at the same time, little they know that it makes harder for them to focus which leads to a decrease in learning interest. The researcher opts to investigate the factors influencing the addiction of grade 10 learners on technological devices and its effect into their academic performance.

## 2. Methodology

The study was conducted at MSU Lanao National College of Arts and Trades during the school year 2023-2024 to the one hundred fifteen (115) grade 10 learners enrolled but only one hundred six (106) participated on the study. The method used in the study is a descriptive research method. This method is a way of collecting data that can be tested through survey-questionnaire as the main instrument of the study. The survey-questionnaire has two-parts; part 1, the demographic profile of the respondents; and part 2, the factors leading to technological devices addiction, which will be answered through four-point Likert scale. The instrument was distributed personally to the respondents. After administering the questionnaire, it was retrieved directly. The results of data obtained was collected and later was process using SPSS application. With the help of an expert statistician, data was tabulated and interpreted accordingly using frequency, percentage, weighted mean and rank as statistical tools.

## 3. Results And Discussion

The problem on demographic profile of the learner-respondents, the results revealed that majority or about 65.09%, of the respondents ranged from 16-17 years old and 16.98% ranged 14-15 years old and 17.93% was 19 years old and above and 63.21% from the total respondents was female. The results implied that respondents have reached the puberty stage where they become more adventurers this time. They are fond of using technological gadgets most of the time, this technological dependency mostly affecting their academic performance. On the other hand, the results disclosed that 56.60% of the respondents' fathers' occupation was self-employed, likewise on the respondents' mothers' occupation 59.43%. The results conveyed that parents were having a financial instability. Self-employed does not mean they have a sufficient financial income to support the addiction of their children on technological devices. Most of the parents were self-employed and need to stay focused and intrinsically motivated on their own and solely responsible for their business' success, but the results also revealed that 39.62% earned at least Php 3,000.00, which it also connotes that it is a survival of the fittest practiced. The monthly income cannot sustain the basic needs of a family with three or more members. At least 11.32% earned a Php 15,000.00 a month. The results conveyed that most of the learners were living into poor families.

In addition, 45.28% earned a grade point average of 85 % to 90% GPA and none got 75% or below GPA. At least 36.79 % earned 76% to 80% GPA and 17.93% earned 95% and above GPA. This signifies that in spite the socio-economic of the learner-respondents, some trying their best to earned better grades. The results also implied that the educational disparity between rural and urban areas in Philippines is gradually narrowing, thus support policies for learners from the

impoverished families in higher education institutions are showing effectiveness as such, the learners enjoyed free tuition and other privileges. The educational environment can indirectly influence their psychological state, and impacting their academic performance during their school years.

Table.1.  
Weighted Mean Rating Value on The Factors Leading to Technological Devices Addiction on Respondents' Academic Activities

Indicators	Weighted Mean	Literal Description	Rank
1) I prepared to use my mobile phone than doing my classroom activities.	2.15	Rarely	5
2) My smartphones assist me doing my school activities.	2.50	Often	2
3) I prefer using my mobile phone than studying.	2.60	Often	1
4) I forgot doing my assignments whenever I used my technological device/s.	2.38	Rarely	3
5) I always check on my mobile phone whenever I had a quiz and I do not know the answer/s.	2.22	Rarely	4
Average	2.37	Rarely	

*Legend: 1-1.44 Never; 1.45-2.44; Rarely; 2.45-3.44 Often; and 3.45-4.00 Always*

On the other hand, the problem number two on the factors leading to technological devices addiction, the table 1 presents its effects on the academic activities of the learner-respondents.

As shown from the results, the respondents perceived technological devices addiction affects their performance in academic activities, with a general average of 2.37 or descriptively define as "rarely". The researcher indicates that technological gadgets like mobile phones and tablets can have both positive and negative effects on learners' academic performance. While it is convincing that that learners using technological devices enhanced their learning capabilities and contribute to academic performance positively but excessive usage can lead to distractions, and negative impacts on their

academic achievement. Surprisingly, the results revealed that respondents were using their technological device/s rarely. It connotes that they use their technological gadgets whenever it is necessary, maybe due to the limited financial resources, that they cannot always connect to internet otherwise, they have no technological devices. The indicator, “I prefer using my mobile phone than studying”, ranked one, this conveyed that learners cannot successfully do multi-tasking in using their technological gadgets while they are studying. It easily distracts their attention on studying because gadgets offer quick access to information and entertainments. While indicator, “I prepared to use my mobile phone than doing my classroom activities”, plays ranked five. Mobile phone can be used as a learning tool and only for that purpose, but excessive use affects respondents’ participation on classroom activities. At “rarely” times, respondents doing it so whenever they do not feel the activities to be done. The results support by Murad, M., et. al. (2019), that technology-based education has been proved to be perceived usefulness. Making use of technology in learning attributed to students to create and innovate when they use technological facilities in their lessons, but using these will always encourage students to be techno-dependent.

Likewise, on the technological device’s addiction influence on respondents’ social connectedness, it is known that learners who spend more time on technology faced challenges with their academic achievement and socialization. According to Mally (2023), the modern world is characterized by increasing connectivity and technology use and some teens and young adults cross from normal use into a realm in which technology use is having negative impact on school, work, family and social life.

The table 2 showed the general average weighted mean on the factors leading to technological devices addiction on respondents’ social connectedness is 2.30, defined as “rarely” as perceived by the respondents. Surprisingly, all the indicators were perceived to “rarely”, this is clearly defined that technological devices have led to important advancements in their social connectedness. If ones believed that one may be struggling with a technology addiction, commonly isolate themselves and spend a lot of time alone.

On one note, respondents perceived that technological addiction can often have minimum interest in things that do not involved technology like doing household chores, participating in school group activities and while on conversation with peers. The results are supported by Chasanah, A., et. al. (2017), that addiction to gadget has lower family functioning dimensions and if the family is functioning well, its members may learn and understand what behaviors are most appropriate to deal with these situations. The respondents also perceived that indicator, “I spend time texting / chatting on my smartphone while dealing with my peers” into “rarely”, it conveyed that when overuse of mobile phone, this will act as barrier to quality conversation with peers leading to decreased satisfaction and of being

disconnected to peers. Moreover, technological devices addiction has also negative impact on one’s life by increasing loneliness and depression. While it may seem that losing yourself online will temporarily make feelings such as loneliness, depression, and boredom, according to Robinson, L., et. al. (2024).

Table.2.  
Weighted Mean Rating Value on The Factors Leading to Technological Devices Addiction on Respondents’ Social Connectedness

Indicators	Weighted Mean	Literal Description	Rank
1) I used my technological devices during school days because most of my classmates used theirs.	2.41	Rarely	1.5
2) I find it difficult to concentrate on my school group activities whenever my mobile phone is available.	2.41	Rarely	1.5
3) I cannot helped doing household chores whenever am using my technological device/s at home and it caused prompted disagreement between me and member of the family.	2.32	Rarely	3
4) Using my smartphone always distract my attention to my peers.	2.25	Rarely	4
5) I spend time texting / chatting on my smartphone while dealing with my peers.	2.12	Rarely	5
Average	2.30	Rarely	

Legend: 1-1.44 Never; 1.45-2.44; Rarely; 2.45-3.44 Often; and 3.45-4.00 Always

The indicators, “I used my technological devices during school days because most of my classmates used theirs” and “I find it difficult to concentrate on my school group activities whenever my mobile phone is available”, both ranked 1.5. The results suggested that peer influence the academic performance and behavior of the learners because peers provide emotional support and reducing stress, but negative peer relationships can hinder learners’ academic progress. While technological gadget is available also, it suggests that at rarely times, respondents chose to play on their gadgets rather participating on their group activities, it rarely happened when they find the activity boring.

The table 3 showed the technological devices addiction of respondents that influence their connectivity. While technological addiction turns to inability to control the amount of time spent on technology. The results implied that connectivity acts as important role in using mobile phones and most of the respondents have getting control over their technological gadget/s and internet use, as can be observed, the average weighted mean is only 2.48 which defined as “often”. The technological device/s addiction and internet addiction has distinct separate definition also in the study. In this study, the table 3 showed that indicators, “I spent more money to access internet”, ranked 5 and “I go to some place where internet connection is faster”, ranked 2. These two indicators refer to the internet addiction of the respondents, of which they assessed to “rarely”, these may be considered as internet use disorder. It is an obsessive behavior using technology. Surprisingly, these indicators were rarely practiced by the respondents.

Table.3.

Weighted Mean Rating Value on The Factors Leading to Technological Devices Addiction on Respondents’ Accessibility

Indicators	Weighted Mean	Literal Description	Rank
1) I spent more money to access internet.	2.10	Rarely	5
2) I feel irritated when internet connection is slow.	2.50	Rarely	3
3) I go to some place where internet connection is faster.	2.65	Often	2
4) I have an internet access on my technological device/s.	2.67	Often	1
5) My parents allowed me to use my technological	2.46	Often	4

devices anytime.			
Average	2.48	Often	

*Legend: 1-1.44 Never; 1.45-2.4; Rarely; 2.45-3.44 Often; and 3.45-4.00 Always*

This connotes that the respondents are not internet dependence. The results also influenced by the socio-economic status of the respondents, were financial instability occurred. Once financial is not stable, then, all the matters concerning money, like internet connection can be limited, likewise, indicator, “I have an internet access on my technological device/s”, though it ranked one, the availability of internet connection is limited too, due to financial instability. Moreover, indicator, “My parents allowed me to use my technological devices anytime”, was perceived to “often”, because there is an available technological gadget that is ready to use and parents were open to let their child use the gadget into a limited time.

Over all, the obtained results of the study, it conveyed that impact of dependence technological gadgets has indeed huge influence on learners’ focus in learning and concentration that truly affect their academic performance. However, if the use of technological gadgets can be utilized properly, the resulting negative impact on learners’ concentration and academic performance will be less.

#### 4. Conclusions

The technological devices have become an additional feature of education globally, but addiction on technological device/s has greatly affects learners’ academic performance. Their addiction influenced by psychological factors, environmental influences and peer pressure. Thus, its effects include social isolation, health risks, poor academic performance and impaired family and peers’ relationships. Based on the results, it suggests, that the learners should set boundaries using technological devices, limit screen time and engage in school activities and household chores. The parental guidance is also necessary to avoid future problem regarding learners’ academic performance and into their health. The findings of the study can be used as a basis for future research about the relationships of technological devices and the effective educational outcomes.

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