

# The Sequela of Smartphone Usage in the Learning Environment

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## Abstract

This paper is to determine the sequela of smartphone usage in the learning environment among school students in Malaysia. The sample size of the study was 150 (n=150). The result demonstrated that smartphone usage increases sympathetic education, understudy commitment, and the upgrade of the student's intellectual limit as well as an inspired concentration in both formal and casual settings. Also, self-governance and certainty assisted with the advancement of customized learning in helping low-accomplishing students to achieve academic excellence. The suggestions confirmed that smartphone usage in the classroom brings about a compelling and legitimate procedure in the learning environment.

Keywords: Smartphone Usage; Learning Environment, Student Engagement

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## 1.0 Introduction

The smartphone has its uses aside from communication. With the current situation of lockdowns because of Covid-19, the smartphone plays a crucial role in e-education. In describing the smartphone, the device is a class of cell phones with advanced, multi-processing features. The smartphones have more grounded equipment abilities, versatile working frameworks, extensive programming, web, and sight, and sound usefulness, etcetera (Rahim, Zaharah, Kuan, Abas, & Meriam, 2016). Furthermore, the smartphone allows many functions that can be accessed anytime and anywhere. The smartphone can make calls, send emails, watch and share photos and videos, play video games and music, track appointments and contacts, surf the Internet, use voice search, check news and weather, a use chat app for voice calls and text (for instance, Whatsapp) and interacting on social networks (Instagram, Facebook) (Rahim et al., 2016). The smartphone is an integral part of the lives of all ages around the world, and people feel inseparable from their smartphones (Alghamdi, Karpinski, Lepp, & Barkley, 2020). Besides, new technologies nominated from the *smartphone preferred many apps that people use to get the word out, and people think these tools are empowering people in the world to help make revolutions happen and help such things to be better* (Rizki, Supriyati, & Akbar, 2020). In the era of this unlimited telecommunications and multimedia technology revolution, the smartphone is widely used among the people (Alhassan et al., 2018). The scholars revealed that it is not an uncommon sight to watch students' working with smartphones nowadays.

The number of smartphone users in Malaysia is estimated to reach 18.4 million.<sup>1</sup> Malaysia is one of the few countries with the highest number of smartphone users and ranks 10th in the world.<sup>2</sup> Based on a Pew Research Center firm's survey, Malaysia is one of the highest smartphone users with a penetration rate of 65 percent Aanuazulkifli (2018). The scholar revealed that survey results found that there were about 24,572,446 Internet users in Malaysia. Besides, on that basis, 78.7 percent of Malaysians are Internet users. Furthermore, the survey of an international brand of branding and marketing, GFluence, found that social media and digital entertainment craze were a major contributing factor to Malaysians' addictions to smartphones. Based on statistics, Malaysians are one of the highest smartphone users in the world. This study aims to determine the influence of smartphone usage in the learning environment among secondary school students in Malaysia. Therefore, good comprehension, a study needs to be implemented to answer the objective and the findings that contribute to new knowledge and guidelines in the field of academics in administrative science and policy studies, government, ministry, policymakers, society, parents, and students. Thus, this paper concentrate on three main objectives:

- 1.1 To examine the behavior responses on smartphone usage among students.
- 1.2 To examine the influence of the environment, personal on smartphone usage in the learning environment.

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<sup>1</sup> Statista (2017) Number of smartphone users worldwide from 2014 to 2020. Available at: <https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/>

<sup>2</sup> Statista (2019) Number of smartphone users worldwide from 2017 to 2023. Available at: <https://www.statista.com/statistics/625418/smartphone-user-penetration-in-malaysia/>

1.3 To examine the relationship between smartphone usage and students' behavior through the mediating effect of environment and personal.

## **2.0 Literature Review**

Nowadays, people have entered a period of different mechanical advancement that is drastically changing being human. Furthermore, the advantages of innovation use can briefly be taken into fulfilling human needs as far as exercises in their social framework. The usage of a smartphone as a learning stage shows the extraordinary effect, for example, enhancements of learning commitment, increment students' inspirations, decrease students' tension in language learning and innovation serve fun learning stages instead of the conventional classroom (Kumi Yeboah & Smith, 2016; Redmond, Heffernan, Abawi, Brown, & Henderson, 2018; Yeh et al., 2019). All smartphones are prepared or prepared for social media applications like Facebook, Twitter, Wikipedia, YouTube, WhatsApp, Telegram, and Instagram (Alosaimi, Alyahya, Alshahwan, Al Mahyijari, & Shaik, 2016). These applications are portrayed by social cooperation, content sharing, and aggregate knowledge. Numerous studies, for instance, (Gleason & Greenhow, 2017; Razzaq, Samiha, & Anshari, 2018; Redmond, Heffernan, Abawi, Brown, & Henderson, 2018) have been led on surveying the usage and impacts of smartphones particularly for learning purposes. For instance, Anshari et al. (2017) and Investigated the idea of students' usage of smartphones, just as their frames of mind towards using smartphones for educational use. Smartphones have different sequela for a learning technique (Chan, Walker, & Gleaves, 2015; Ramadiani, Azainil, Haryaka, Agus, & Kridalaksana, 2017). Furthermore, there has been taken a shot at how smartphones are being utilized in advanced education; the extraordinary spotlight was given on students' points of view.

### **2.1 Smartphone usage in the learning environment**

Smartphones have turned into a well-known and alluring device with the assistance of mobile users (Allabouche, Diouri, Gaga, & El Amrani El Idrissi, 2016). School students are between the ages ranging from six to twelve and are most focused on communication technologies (Nishad & Rana, 2016). Furthermore, they are additionally the keenest on having smartphones on which they invest energy and commit quite a bit of their reasoning. The challenge between cell phone organizations to create low estimated keen smartphones has prompted a critical increment in the number of students having smartphones, which, thus, improves the probability of cell phone expansion among students (Kaplan & Norton, 2015). The constructive outcomes of smartphones incorporate encouraging and improving communication and data sharing among researchers and students just as the sharing of significant encounters among nations through the different applications that they incorporate (Arefin, Islam, Mustafi, Afrin, & Islam, 2017). As expressed in (Throuvala, Griffiths, Rennoldson, & Kuss, 2019), social media destinations, for instance, Facebook and Twitter, have kept on picking up ubiquity among students on the grounds. Students regularly utilized their smartphones to get to the locals (Throuvala et al., 2019). These social media locales enable students and educators to share and convey in a specific theme. The

smartphone is connected to education either as a student or a teacher (Razzaq et al., 2018). The smartphone usage them as a showing apparatus, strategies, and instrument to spread data quickly and effectively. While on students' points of view, it is undoubtedly significant assistance to assemble data directly at the tip of their finger (Samaha & Hawi, 2016). Students are presented with various methods for learning through the internet (Ramadiani et al., 2017). Furthermore, they can get to a ton of assortment of data inside a brief timeframe anyplace and whenever making learning significantly simpler. ICT, by and significant ICT, has a decent side in learning (Allabouche et al., 2016). In particular, it sets aside such a considerable amount of time recorded as a hard copy by looking at composing an article on a paper and making one utilizing the word application. Composing on paper is tiring, even a solitary word may take up 3 seconds of the time while on the console its solitary like 1.5 seconds. Another best thing would be how helpful word application is for featuring incorrect spellings, however, on paper, we need to edit, even with odds of missing the wrong spellings which equivalents to losing marks (Anshari et al., 2017). Smartphones can be utilized as account addresses, which helps in educational instructing and learning as in introductions or addresses can be recorded utilizing a video recorder (Gleason & Greenhow, 2017). The recorded addresses would then be able to be utilized as a students' direction just as a reference for their assignments or homework. What the study can uncover that the outcomes students invest more energy on the Internet through a smartphone. Students additionally will, in general, be the further developed users of smartphones (Anshari et al., 2017). As far as exercises are done utilizing smartphones, students are progressively dynamic on social systems administration and use the device for mobile learning (Al Fawareh & Jusoh, 2017).

## **2.2 Behaviour toward the learning environment**

Joosten, Cusatis, & Harness (2019) state that several previous authors have employed concepts similar or identical to those included in the parametric analysis of behavior. Furthermore, while all of these authors were primarily concerned with empirically establishing how persons explain behavior, along the way, each had something to say conceptually about the behavior itself. Reports of students' collaborations can represent the structure affecting such attitudes and behaviors Joosten, Cusatis, & Harness (2019). As recently depicted, these segments were distinguished as essential to online course quality through a survey of the writing and existing course quality apparatuses and pointers. The scholars state that through this exploration, the parts can be distinguished as viable or inadequate depending on their connections to understudy results (learning, fulfillment, and scholarly execution). Those parts recognized as successful can, thus, be utilized to grow new practices to be actualized into proficient advancement programs for online course plan and teacher arrangement. A longitudinal study would have given a superior comprehension of the potential causal impacts over the variables analyzed (Yeh et al., 2019). Also, future research could utilize techniques other than self-report to accumulate information about various accomplishment objectives and their relationship with web-based learning behavior. For instance, Yeh et al. (2019), we could additionally utilize subjective strategies to all the more completely investigate the importance of the distinctive accomplishment

objectives for students with different attributes and in various online instructive settings.

### **2.3 Personal characteristics of the learning environment**

The usage of e-learning, also known as a web-based learning system, has been growing steadily during the last two decades (Tarhini, Hone, & Liu, 2015). The scholars revealed that this growth is due to the increased competition among high educational institutions to attract students and meet their educational needs and goals. However, prior studies have indicated that web-based learning is not just an innovative arrangement but the procedure of various variables, for instance, social factors, authoritative, case in point, encouraging conditions and individual factors, case in point, PC adequacy, behavior, and cultural factors. Such a central point assumes a significant job in how the framework is created and utilized. The need to comprehend the acknowledgment and selection of technology by students with regards to creating and created nations features the significance of researching the variables that impact the students' acceptance of the technology (Fernandez-Montalvo, Penalva-Velez, & Irazabal, 2015). The difficulties in effectively executing mixed guidance are that social nearness, or understudies' capacity to extend their characteristics into the learning space, is diminished with potential negative impacts on understudy commitment, determination, and scholarly accomplishment (Gleason & Greenhow, 2017). Furthermore, teachers are trying different things with robot mediated communication (RMC) to address these difficulties. Results from an investigation of RMC at an enormous state-funded college recommend that it offers focal points over generally utilized videoconferencing, remembering affordances for encouraging understudies' exemplification for the study hall, their sentiments of having a place and trust, and their capacity to contribute thoughts invalid manners.

### **2.4 Social cognitive theory in the learning environment**

As indicated by social cognitive theory, a subjective instrument controls singular encounters and practices dependent on expected advantages that give motivating forces to its presentation. The theory clarifies various kinds of anticipated future advantages as impetus helpers: novel tactile, social, pleasant movement, and self-responsive motivations (Bandura 1986). Different tangible motivators hypothetically allude to inspirations identified with new sights and sounds that can be new data. This can be applied to understanding the client's rationale of the smartphone as a result of its incessant transaction with web associations with changing the conveyance of data. Social contact can be the most grounded thought process in smartphone users with a more noteworthy pervasiveness of the gadget (Deaton, 2015). Furthermore, as smartphone users believe utilizing the phone to be agreeable and fun, diversion action is a significant rationale in its clients. Also, self-sensitivity capacities lead to social awards for improving one's internal state. Self-responsiveness is applicable in understanding the inspirations of utilizing a smartphone since users depend on the gadget to overlook issues or to unwind (Deaton, 2015). Furthermore, smartphone users are progressively spurred to utilize their gadgets because of its quick availability. Openness has been recognized as a significant intention in early investigations of the smartphone. The sequela, current study considers that immediate

access to services explains the behaviour intention toward smartphone usage and their actual behaviour. (see Figure 1).

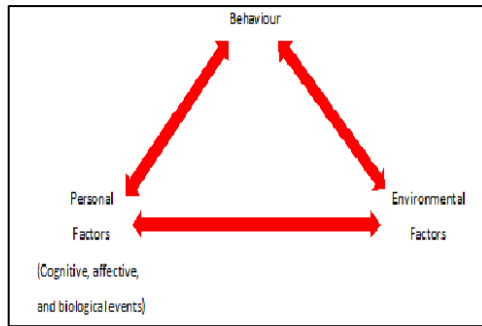


Figure 1: Social Cognitive Theory (Bandura, 1986)

## 2.5 Smartphone in the previous study serves as a learning platform

The widespread technology contains a profound impact on the tutorial lives of school students nowadays (Arefin et al., 2017). Furthermore, smartphone usage became widespread to the young generation especially school student owing to its academic and diverting choices by mistreatment the many applications. Among school students, students are progressively victimization smartphones. However excessive smartphone usage sometimes makes the scholars obsessed with it which impacts on user's educational performance, daily activities, physical and mental state, withdrawal tendency, and social relationships. Samaha and Hawi (2016) revealed that smartphone addiction risk was positively related to perceived stress, but the latter was negatively related to satisfaction with life. Additionally, a smartphone addiction risk was negatively related to academic performance, but the latter was positively related to satisfaction with life. Furthermore, there was a zero-order correlation between smartphone addiction and satisfaction with life on one hand and between perceived stress and academic performance on the other hand. As smartphone use continues to be on the rise despite all the alarming negative implications mainly behavioral addiction, intervention programs must be developed and implemented without further ado with the most vulnerable population segments children and adolescents (Samaha & Hawi, 2016). There are points of a smartphone in helping students to improve their confidence and understanding of mobile learning not only from because of internal factors but also external forces (Razzaq et al., 2018). Furthermore, whenever students participate in mobile learning, they will interpret their performance accomplishments and experiences to develop beliefs about their ability to engage in similar activities. While similar activities are bounded with smartphone habits and internet literacy level. If these activities are consistently successful, they tend to raise self-efficacy or, conversely, if these activities

produce failure, then it leads to low self-efficacy (Razzaq et al., 2018).

### **3.0 Methodology**

This study embraced the mixed-method approach. An explanatory mixed-method approach was used right now, started with the quantitative approach, and afterward upheld by the qualitative approach. As indicated by Creswell and Clark (2018), the Explanatory Design, otherwise called the Explanatory Sequential Design, is appropriate for instructive research examines. Moreover, the structure of this study helps clarify confined cases, clarifying whether the information is huge or not huge and clarifying the rise of new information. Moreover, this plan is appropriate for directing a quantitative report and is trailed by the qualitative approach. The structure of this study is valuable because the investigation can utilize the attributes of the respondents from the quantitative approach to fill in as a guide for choosing testing depends on the qualitative approach that to be done subsequent stage. Hence, this investigation is fitting utilizing Explanatory Design dependent on the suggestion of Creswell and Clark (2018). Different studies utilized Explanatory Sequential Design to give increasingly far-reaching proof to consider the exploration issue rather than exclusively depending on quantitative or qualitative research (Arango-Morales, Delgado-Cruz, & Tamayo-Salcedo, 2019; Siahaan, 2020). The researchers uncovered that the degree is consecutive logical structure since it tried to relate the watched factors as well as to clarify why and in what conditions proposed to help clarify or expound the recently gotten quantitative outcomes. In the first place, for the quantitative, the questionnaires were appropriated to the respondents comprises of 150 secondary school students in Klang Valley dependent on Krejcie and Morgan (1970) sample size formula. The participants were the school students age between 13 to 18, located in Klang Valley, Selangor, Malaysia.

There was a completed self-administered questionnaire consist of socio-demographic, behavioral responses, **smartphone usage in the learning environment**, and students' personal of interest. The set of questions has asked the respondents to use the Likert scale from the range of 1 to 5, which is represented as strongly disagree to strongly agree. Besides, the regression analysis is a set of statistical processes method applied in this study for estimating the relationships between the variable Second, for the qualitative approach, this investigation proposed test sizes, frequently 3 or fewer participants. The inquiries questions are open-finished to allow the members to completely recognize the experience from their perspective. The topical examination is used as a piece of emotional research and spotlights on inspecting subjects inside the information. This strategy underscores the association and rich delineation of the informational index. The study utilizes a consistent relative strategy and uses the information from the meetings to validate the quantitative findings. The questionnaire for quantitative and qualitative approaches and altered from past research that is identified with this investigation (Kwon, Kim, Cho, & Yang, 2013; Billieux et al., 2015; Ifinedo, 2017; Kuss et al., 2018).

### 3.1 Limitation of Study

There is a lack of precedence and limitation on the evidence of the use of smartphones in the learning environment and exercise in the private schools' context. The non-significant result is probably due to the type of error or the small sample size of this study with 28 samples only. The sample size was only limited to secondary school students located in Klang Valley, Selangor, Malaysia, who received the questionnaire. Therefore, the larger sample size from private schools is required (e.g., learning experience) that would strengthen the research base.

### 4.0 Results

This section presents the profile of respondents who participated in this study (quantitative survey). The respondents who are secondary school students located in the Klang Valley, with 150 respondents participated in this study. The demographic information explored in this study is gender, age, race, schools, and smartphone ownership. In this study, the female is the majority (58%) out of the 150 respondents, followed by the male (42%). Most of the respondents are in the range of 13 – 14 years old, which accounts for (35.3%), followed by 17 - 18 years old (30%), 15 - 16 years old (26%), and the lowest percentage is (18.7%) represented by those who are 19 years old and above. Meanwhile, in terms of race, the majority of respondents is Malay, which is represented by (96.7%), followed by Indian and Chinese (1.3%), and only (0.7%) for others race. Besides, in terms of schools, those who go to public schools are a majority (70.7%), followed by private schools (18.7%), not to schools (6%), and the lowest is self-learning (4.7%). The findings of this study revealed that 123 respondents own a smartphone (82.0%), and the remaining respondents do not have a smartphone (18%). The findings also showed that smartphone usage to social networks might be influenced by gender, showing that females are influenced as a biological and social factor in the men. The female respondents are more influence by social media (Instagram, Facebook, YouTube) and used this networking as a platform to learn and seeking information for their studies. While the male respondents were more interested in playing video games. The limitation of the study is the lack of respondents from private schools because of the difficulty of entering the school premises to administer the questionnaire (see Table 1).

Table 1. Profile of Respondents (quantitative approach – survey) (N=150)

Characteristics	Frequency	Percentage (%)
<i>Gender</i>		
Male	63	42.0
Female	87	58.0
<i>Age</i>		
13 – 14 years old	53	35.3
15 – 16 years old	39	26.0
17 – 18 years old	45	30.0
19 years old and above	13	18.7
<i>Race</i>		
Malay	145	96.7



Indian	2	1.3
Chinese	2	1.3
Others	1	0.7
<i>Schools</i>		
Public Schools	106	70.7
Private Schools	28	18.7
Self-Learning	7	4.7
Not to Schools	9	6.0
<i>Do you Own Smartphones</i>		
Yes	123	82.0
No	27	18.0

#### 4.1 Profile of Respondents (Qualitative Approach – In-Depth Interviews)

The purpose of in-depth interviews (qualitative) is to strengthen and support the findings obtained from the quantitative survey. Following the findings of the quantitative approach, this study further investigates the point of view of smartphone usage in the taking in condition from three respondents situated in Klang Valley. The three respondents were among the key respondents that were distinguished from the overview, which speaks to old enough 13, 15 and 17 years of age). The introduction of subjective discoveries depends on the topical examination got from the input gave by the respondents in this study, the pseudonym was applied for protecting the confidential information of the respondents. This examination utilizes M1, M2 pseudonym for male respondents and F1 for female respondents. The level of education shifts from UPSR, PT3, and SPM. Most of the respondents that were met are male. The majority of respondents used a smartphone to seeking information and to improved academic performance. These respondents stated that find information through apps that suite the smartphone is much easier than conventional. The findings revealed that there is a significant relationship with smartphone usage in the learning environment among respondents (see Table 2).

Table 2. Profile of Respondents (Qualitative approach) (N = 3)

Respondents	Age	Gender	Level education	Smartphone usage	Learning environment experience
M1	17	Male	SPM	Yes	Yes
M2	15	Male	PT3	Yes	Yes
F1	13	Female	UPSR	Yes	Yes

To answer the objective 1 multiple linear regression analysis was utilized. The general purpose of linear multiple regression analysis is to examine the relationship/influence of independent variables or predictors (learning environment) and a dependent variable or criterion variable (behaviour). All assumptions for multiple linear regression were met— data was normally distributed, linear, no multicollinearity issue (TOL>0.3, VIF<4.0) and no autocorrelation issue. Furthermore, the tolerance and VIF, in which the tolerance can be in the range of 0 to 1, while VIF value should be less than 10 (Field, 2014). The findings for the variable are as follows: environment (TOL=1.000, VIF=1.000), which is considered a

statistically significant effect. This study reveals that the behaviour responses on smartphone usage among students have a significant effect ( $p < 0.05$ ,  $\beta = -.165$ ) (see Table 3).

Table 3. Behaviour Responses on Smartphone Usage Among Students

	Beta	t	Sig.	Tol.	VIF
(Constant)		13.134	0.00		
Learning_Env (IV)	-.165	-2.033	0.44	1.000	1.000

a. Dependent Variable: dv\_behav

To answer objective 2 this study applied MLR for examining the influence of the environment, personal on smartphone usage in the learning environment. Besides, the Durbin-Watson value should be between 0 until 4 with a value of 2. The value of 2 indicates that there is no autocorrelation. However, if the value is greater than 2, it can be indicated that there is a negative correlation, but a positive correlation is implied if the value is less than 2 (Field, 2014). The value of Durbin-Watson of this study is (1.331), which indicates no autocorrelation issue. This finding is in line with Field (2014) since the value is more than 1 and less than 3. Furthermore, the value of (R Square) amounted to .27, which is represented as 27.0%. Overall, the variable applied in this study indicates a positive correlation with no autocorrelation. Hence, there is no multicollinearity and autocorrelation issue in this study. This study revealed that there is significant/influence of the environment, personal on smartphone usage in the learning environment (see Table 4).

Table 4. Environment, Personal on Smartphone Usage in The Learning Environment.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.165 <sup>a</sup>	.027	.021	3.18271	1.331

Predictors: (Constant), Learning\_iv\_env personal iv\_env  
 Dependent Variable: Behav\_dv

To answer objective 3 this study applied Process, developed by Hayes Model to examine the relationship between smartphone usage and students' behaviour through the mediating effect of environment and personal. In this study, the moderating variable is to analyze the relationship between independent variables, which is a learning environment that could affect behavioural capability. A moderator effect of some variables F on the outcome variable Y is one in which its size or direction is dependent on the value of a third moderator variable M. Analytically, the moderated effects disclose the variable statistically as an interaction between F and M in a mathematical model of Y (Hayes, 2017). According to the result, the R<sup>2</sup> change value explains that the independent variable of the environment has a (5.4%) relationship with the students' behaviour. Besides, R<sup>2</sup> change for personal amounted of (70.19%). Hence, all the variable has a very significant effect because the p-

values are less than 0.05. The findings of PROCESS analysis in this study reveal that there is a significant relationship between smartphone usage and students' behaviour through the mediating effect of environment and personal. (see Table 5).

Table 5. PROCESS analysis (moderating effects)

Outcome: Students Behaviour					
Model	R <sup>2</sup> Change	coeff	p-value	LLCI	ULCI
Environment	.0540	-.5877	.0053	-.9979	-.1774
Personal	.7019	.6355	.0432	.0198	1.2513

The finding for the qualitative approach revealed that all three respondents associated the environment, personal as a factor that tends to influence students used a smartphone as a learning tool. Most of them perceived that many teachers now used a smartphone to interact with students. Furthermore, one of the respondents (F1) mentioned one of the reasons that lead her to use a smartphone as a learning platform because easy and comfortable to find information that is needed. The findings are presented below:

[...] I used smartphones because many of my *friends* own a smartphone (influence by a classmate), it is *trend* school students' used the device nowadays (M1, italicize emphasis added).

I start used smartphones because the device consists of apps that bridge me to find some *valuable information* (easy **access to educational apps**) There are many educational apps available in a *wide range of subjects for all kinds of learners* [...]. (F2, italicize emphasis added).

Smartphones can allow me to work in *groups on projects, sharing information and discoveries that related to my studies* (allow for social learning), I can move toward a common goal, again, in a format is comfortable to used [...] (M3, italicize emphasis added).

## 5.0 Discussion

The findings of this study reveal that behaviour responses on smartphone usage among students have a significant effect. The students who are furnished with self-controlled learning techniques, they become progressively dynamic in embracing a lot of strong web-based learning practices reactions, for example, making a calendar, dealing with their time, speaking with teachers and cohorts during their online course, knowing their assets, and having a devoted report space. In like manner, students who have embraced progressively steady web-based learning conduct reactions are increasingly certain about understanding the topic and expect they will perform well in the classroom. Moreover, there is a huge relationship/influence of the environment, personal on smartphone usage in the learning environment where the majority of the students utilize the smartphone as an instrument to looking for the data and it tends to be gotten to whenever and anyplace. The learning instruments and applications gave in smartphones help them improved scholarly. This substantiates the discoveries to (Kumi Yeboah & Smith, 2016; Redmond, Heffernan,

Abawi, Brown, & Henderson, 2018; Yeh et al., 2019). The findings from the analysis (quantitative and qualitative) indicated that there are significant/influence smartphone usage and students' behaviour through the mediating effect of environment and personal.

The learning condition use smartphone was accepted to be compelling developments to impact scholarly execution among the school students in Klang Valley. This study endeavors to give a few bits of knowledge about the various drivers that could influence the conducting capacity of the students to utilize a smartphone for their learning. Right now, students own the smartphone and utilize the gadget to learning stage suit more to the virtual students. The students progressively dynamic and enthusiastic to experience the detail and learn new things without any problem. The device could encourage the conducting ability towards the utilization of smartphones for their educational plan, which is seen as potential apparatuses to upgrade and improve the learning procedure. The software is structured in the internet learning progressively viable, supportive, and will, in general, be increasingly free. This is wannabe to utilize various instruments to make learning increasingly demonstrated and less tedious. This is likewise bolstered by the discoveries from (Redmond, Heffernan, Abawi, Brown, & Henderson, 2018; Kacetl and Klimova, 2019). The researcher expresses that key advantages are as per the following: the upgrade of the student's psychological limit, the student's inspiration to concentrate in both formal and casual settings, the student's self-rule and certainty, just as the advancement of customized getting the hang of, helping low-accomplishing students to arrive at their scholastic execution objectives. This additionally demonstrated huge smartphone usage has executed powerful and great procedure learning conditions. This factor was likewise predominant in the investigation completed by (Razzaq et al., 2018).

## **6.0 Conclusions**

The smartphone should be used in mobile education for primary school students in Malaysia. Smartphone usage as an instructive innovation apparatus is a discerning and legitimate path for teachers to react to different students' needs. From the outcome, refining innovation takes into consideration the move from content conveyance to distinguishing and tending to students' needs. Additionally, smartphone users can make a protected situation for students' to take part in class conversations, and to underline a reasonable procedure into students' needs through personalization. Furthermore, the outcome has indicated that recent college grads are dependent on innovation. Directing this dependence on profound learning in the classroom would bring about better students' commitment. The outcome additionally indicated that grasping and adapting innovation were critical inspirations for a practical arrangement of the degree of care and individualized consideration in the learning condition. The other stage is the full audit features of refining innovation in the learning condition. The examination is critical as acculturating innovation can permit instructions to use the reality in the homerooms ultimately just as to become more acquainted with the students' by expanding the degree of empathetic educating. The ramifications of refining innovation are new methodologies that can gauge discovering that lies outside of conventional evaluation. By adapting instructive innovation, the writing

checked on has shown that smartphone usage has confirmed huge students' commitment to the learning condition. The gradually expanding influence of acculturating innovation of smartphone use is as exceptional value and computerized majority rules system.

The view of smartphone use in the learning condition, thus, is deciphered as good scholastic execution. In this way, if the school students' are sure that they can perform positive conduct ability, at that point, all things considered, they would show this conduct as long as the depiction gives bring about the ideal results. Smartphone usage in the learning condition is normal, yet these issues have gotten inadequate arrangement and insightful consideration in Malaysia. Because of the examination, the Ministry of Education should pull in endeavors and accentuation on the controlling and make the strategy to business commitment in smartphone use among school students' in the learning condition as a need. This effort is particularly displayed by the Ministry of Education in transformation education for a new impetus IR4.0 to align with the country's Shared Prosperity Vision 2030. In the context, it is vitally important to the students to appropriate their education to the future workforce. Also, the Ministry of Education should propose to implement home-based learning initiatives. This is because the world was alarmed by the COVID-19/CORONA viruses pandemic in the year of 2019 - 2020 and caused most of the countries, including Malaysia, to implement movement control orders (MCO). All schools are closes during the MCO. Therefore, to continues the learning Ministry of Education should implement home-based learning initiatives to the students. For the early stage of home-based learning, the ministry of education may face difficulties. Many parties must be involved effectively to improve the initiatives and the best way to implement it during the MCO. Besides, this study face with a limited number of participant from private schools due to restrictions to enter the premise. Future research needs to implement a large sample size from private schools to interpreted more different results of descendants' study. This is because there is a lack of study in that particular area in Malaysia. Moreover, future research should examine such potential qualitative differences. The large sample size should do so, taken together; the results suggest that despite different patterns of reporting, the strength of the association for goals of the study.

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