IJMS 2025 12 (1): 52 - 65

International Journal of Multidisciplinary Studies (IJMS)
Volume 12, Issue I, 2025

Mobile Phone Usage Patterns among Post-Adolescent School Students

Herath H. M. S.[1] and Wanasinghe W. M. S.[2]

[1] D.B. Welagedara Central College, Kurunagala, Sri Lanka
[2] Secondary and Tertiary Education, The Open University of Sri Lanka

ABSTRACT

This study was conducted to identify "How post-adolescent school students use mobile phones". That was conducted according to the survey research design and implemented through three objectives. Determining the extent of mobile phone use among post-adolescent students, identifying the mobile phone usage patterns of post-adolescent school students, and identifying the problems faced by the students due to the use of mobile phones. As the sample for this research, eighty students were used, who were studying Advanced Level Technology stream from selected two schools in Kurunegala Education Division. Data analysis was carried out in both quantitative data analysis and qualitative data analysis. The pilot survey was conducted with ten students in grade 13 who did not belong to the research sample. According to the data analysis, the following conclusions were reached. Mobile phone usage among post-adolescent students has increased rapidly in the year 2020 and all students are currently using mobile phones. These students frequently use mobile phones and weaning them from using mobile phones is an impossible task, so what can be done is to get them to use mobile phones effectively. Further, post-adolescent school students often try to keep their mobile phone private and use it privately. They used mobile phones to get the information needed for their studies and to engage in their studies. Also, the use of mobile phones for non-academic activities was very high. Use of mobile phones caused to weaken the relationships between their family members as well as social relationships. The use of mobile phones had caused health problems for the students. And the parents' lax policies regarding their children's mobile phone use and their lack of knowledge about mobile phone is the main reason for students' mobile phone use to slip away from their control. However, mobile phones can be used to increase the academic performance and it is important to introduce data packages at affordable prices. And, it is also important to introduce special mobile phones with separate software for the use of students as well as to provide systematic training to both students and teachers on how to use mobile phones to increase learning performance. According to the above conclusion and the information obtained from the data analysis, the following suggestions are made to guide post-adolescent students to use mobile phones effectively: Implementation of a series of training programs for students and teachers on the effective use of mobile phones for academic purposes at the school level, and conducting an awareness program on the use of mobile phones for parents. According to the facilities available in the school, students are directed to use smart classrooms and tab computers in a planned schedule. Implementation of projects to encourage students to learn through exploration, applying for concessional data packages for students in consultation with communication institutes, and arranging sponsorships for communication institutes to get data scholarships for students, are the other recommendations.

KEYWORDS: *post-adolescent, student, mobile phones, usage patterns*

Corresponding author: Wanasinghe W. M. S., Email: wmwan@ou.ac.lk

1 INTRODUCTION

In Sri Lankan society, mobile phone was a forbidden device for school students, both in their households and in school. They are rarely allowed to use a mobile phone. That too is only for special needs. Especially the smart mobile phone is a very attractive object for the youth and they are proficient in using the mobile phone when compared to the adults. But with the corona epidemic situation in the first half of 2020, online learning started. Since the mobile phone was the most affordable device accessible for online learning, many students in Sri Lankan society owned a dedicated mobile phone.

According to "Smartphone use and addiction during the coronavirus disease 2019 (COVID-19) pandemic: cohort study on 184 Italian children and adolescents" presented by Gregorio Serra (2021), there was more frequent smartphone use among Italian children and adolescents during COVID-19 pandemic, compared to the pre-epidemic period. This survey interestingly revealed the changing patterns and aims in the use of smartphones among young people, which allowed them to limit some effects of the crisis. Indeed, they were exploited for many purposes such as human connection, learning, and entertainment, providing psychological and social support. In the meantime, a significant increase in overuse and addiction was observed. This led to many unfavorable clinical (sleep, ocular and musculoskeletal disorders), psychological (distraction, mood modification, loss of interest), and social (superficial approach to learning, isolation) outcomes.

According to Gamage, Rajapakshe, Kumudumali (2021), who revealed the situation in Sri Lanka through research "Determinants of Mobile Phone Ownership in Sri Lanka," youngers have more access to mobile phones compared to adults. Young, male individuals tend to have a higher chance of using mobile phones. Specifically, the mobile phone owners in Sri Lanka are young men.

Jinadasa (2016) who conducted the research "Representation of Youth Generation in the Mobile Phone and Internet Media in Sri Lanka" revealed that there is a considerable difference in the use of mobile phones and internet in the youth society in Sri Lanka. While it takes an expansion of new media, there is considerable destruction of youth society behaviors in Sri Lanka. We recognize physical activities as having complex interclass variations using semantic data of smartphones.

From the above findings, it is clear that there is a high level of mobile phone usage among post-adolescent youth in Sri Lanka as well as in the world. In this way, many factors can influence the mobile phone to be very popular among the youth.

According to the analysis of Sarwar et al (2020), Smartphones are equipped with precise hardware sensors including an accelerometer, gyroscope, and magnetometer. These devices

provide real-time semantic data that can be used to recognize daily physical activities for personalized smart health assessment.

Cognitive theorist Piaget (1958) describes adolescence as the stage of life in which the individual's thoughts start taking more of an abstract form and egocentric thoughts decrease. This allows an individual to think and reason with a wider perspective. According to Piaget, another complicated thought process that adolescents master is called "propositional thought." This means, youth can determine whether a statement is logical based solely on the wording of the statement, rather than having to observe or re-create the actual scenario to determine if it is logical. They Think about different possibilities and begin to develop their own identity.

A mobile phone, especially a smartphone, is a highly accessible, high-tech multi-tasking device. Post-adolescence is a period of rapid social and emotional growth. Also, a stage where thoughts become abstract, ready to reason and think from a broader perspective, attracted to the opposite sex, strive to spend time with peer groups, and do not resent adults, somewhat artistic. Therefore, the combination of post-adolescence and the mobile phone is a complex topic to study.

Considering the explanation of retention, Ebbinghaus, (1913), suggests that people tend to continually halve their memory of newly learned knowledge in a matter of days or weeks unless they actively review the learned material. According to the figure 1, illustrated it like this as a 'forgetting curve'.

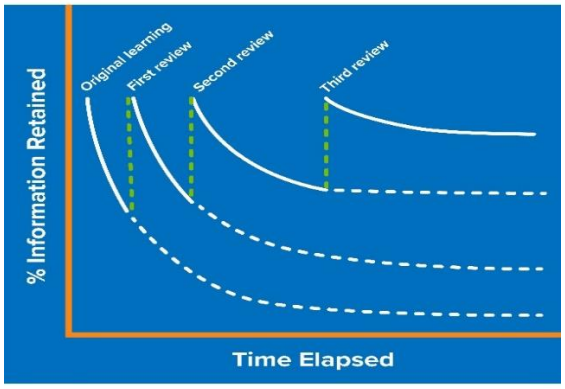

Figure 1. Ebbinghaus's Forgetting Curve
The source: Ebbinghaus's Forgetting Curve, www.mindtools.com,2022:P01

To increase the effectiveness of education, retain the memory of learning, and reduce forgetfulness, Thalheimer (2006) introduced "The Learning-Transfer Evaluation Model" for Sending Messages to Enable Learning Effectiveness. According to LTEM, both knowledge retention and knowledge recitation focus on facts and terminology, but knowledge retention also requires learners to remember the learned information over a substantial period. According to this model, mobile phone can be used as a device that reinforces the learning environment to reinforce learning. Considering how the mobile phone enhances the learning environment, learning is enhanced through mobile phones, by using mobile learning tools that enable quizzes, polls, discussion, question, and answer, and by providing mobile-assisted language learning opportunities, by providing skill-based learning opportunities, and by providing instant feedback opportunities, learning can be reinforced.

Considering Barlett's (1995) view of the creative nature of memory, Schemas are categories of information stored in long-term memory. A schema contains groups of linked memories, concepts, or words. This grouping of things acts as a cognitive shortcut, making storing new things in your long-term memory and retrieval of them much quicker and more efficient. Bartlett argued that rather than memories being retrieved precisely as they were stored, they would be reconstructed largely in line with the individual's values and beliefs, especially when there was a gap in the memory. It is this retrieval that makes Schema theory hugely important in education. If students can associate new ideas with schema they already have, the likelihood of them remembering them is much higher.

Concerning deep subject matter in education and in proving the concepts well, in confirming the concepts demonstrated by exploration, as well as in further study about the basic concepts learned, in building the correct schema related to it, and in further learning, the support that can be obtained through the use of the Internet to retrieval of them. There are many opportunities to obtain the necessary facilities through the Internet to carry out the educational process as well as the complex concepts related to it. The smartphone is the most affordable device anyone can own to access the Internet. Mobile phones can be used as an internet access device.

In the social development theory, Vygotsky (1978) primarily explains that socialization affects the learning process in an individual. The Social Development Theory includes three major concepts: the Role of Social Interaction in Cognitive Development, the More Knowledgeable Other (MKO), and the Zone of Proximal Development. The MKO is any person who has a higher level of ability or understanding than the learner in terms of the task, process, or concept at hand. Normally, when we think of an MKO we refer to an older adult, a teacher, or an expert. For example, a child learns multiplication of numbers because his tutor teaches him well. The traditional MKO is an older person; however, MKOs could also refer to our friends, younger people, and even electronic devices like computers and cell phones. The Zone of Proximal Development (ZPD) is the distance between what is known and what is unknown by the learner. It is the difference between the ability of the learner to perform a specific task under the guidance of his MKO and the learner`s ability to do that task independently. The theory explains that learning occurs in ZPD. Thus, the mobile phone can be used as a way to access an ocean of knowledge, and the contribution of the mobile phone as an MKO is very clear in achieving good development in the ZPD.

According to Bruner's (1976) Scaffolding theory, when students are provided with support while learning a new concept or skill, they are better able to use that knowledge independently. Social networks and mobile technologies are transforming the learning ecology. In this changing learning environment, we find a variety of new learner needs. The important thing is to investigate how to provide scaffolding to the learners in a Connectivist mobile learning environment. There are four

major aspects of scaffolding in a Connectivist mobile learning environment. They are: type of it, provider of it, timing of it, and strategies of it. The use of mobile devices increases the learner's motivation and interest. Learning will be more permanent by using mobile technologies. Social networks and mobile technologies make it easier to manage the learning process, and it will have a positive effect on learning.

As described in Csikszentmihalyi's (1990) flow theory, it is clear that the use of mobile phones can have positive effects as well as occasional negative effects. In Csikszentmihalyi's (1990) words, flow is "a state in which people are so involved in an activity that nothing else seems to matter; the experience is so enjoyable that people will continue to do it even at great cost, for the sheer sake of doing it". Today's generation is more inclined towards the use of mobile phones than the previous generation because of the entertainment and satisfaction that mobile phones provide. Mobile phones are used by young students as a motivator to pursue entertainment rather than for utilitarian purposes. The pleasurable experience they experience has a positive effect on their mobile phone addiction.

In the research "Teens, Social Media & Technology (2018) Anderson & Jiang (2018) revealed that YouTube, Instagram, and Snapchat are the most popular online platforms among teens. 95% of teens have access to a smartphone, and 45% say they are online 'almost constantly'. Serra (2021) revealed the changing patterns and aims in the use of smartphones among young people. Therefore, they were exploited for many purposes such as human connection, learning, and entertainment, providing psychological and social support. In the meantime, a significant increase in overuse and addiction was observed. This led to many unfavorable clinical, psychological, and social outcomes. In their study, "The impact of smartphone usage on academic performance of the undergraduates," Chathurangaa & Jaysundara (2020) revealed that the majority of the respondents have used their smartphones to access social media applications, and the Web-browser is identified as the most frequently used mobile application for the study purposes. There is a positive significant impact of smartphone usage on the academic performance of the respondents in terms of communicability with fellow students and lecturers, and accessibility to study materials. And also, there is a significant negative impact of smartphone usage on the academic performance of the respondents in terms of student's concentration, and student's lifestyle related to smartphones.

According to the above theoretical points and empirical investigations, there are both positive and negative impacts of mobile phone use. The type of access is based on the nature of the user. The present study examines how post-adolescent school students use their mobile phones. This research hopes to identify actions that can be taken to engage students in positive approaches to mobile phones.

2 MATERIALS, METHODS & TECHNIQUES

The main objective of this research is to identify "How post-adolescent school students use mobile phones". This study was conducted with the following three distinct objectives (research questions).

- Extent of mobile phone use among post-adolescent students.
- Mobile phone usage patterns of post-adolescent school students.
- Problems faced by the students due to the use of mobile phones.

Descriptive research approach was chosen for this research and survey research design was used due to the nature of the sample. The population of this study was post adolescence students in Sri Lanka. Purposive sampling, a non-probability sampling method, was used to collect data for this research. Eighty grade 12 students from advanced level technology stream in two schools of Kurunegala education division were used as the sample for the research. Data was collected from twenty teachers and twenty parents. Questionnaire and interview schedule were used as data collection techniques. The questionnaire was sent as a Google form to the WhatsApp group of the students and the data obtained was subjected to data triangulation during the focus group interviews conducted separately with students, teachers and parents. Both quantitative and qualitative data analysis were used. Numbers, percentages, tables and graphs were used in numerical data analysis, and data classification and data description were used in qualitative data analysis. A pilot survey was conducted using ten students of grade 13 who did not belong to the prepared questionnaire research sample.

3 RESULTS AND DISCUSSION

According to the results, all the students who were subjected to the research are using smart mobile phones. Out of eighty students, seventy-six have their own smart mobile phone. Through the revelations of teachers and parents, it was confirmed that every student is using a mobile phone. According to the disclosures of the parents, the majority had bought mobile phones in the year 2020 for their children's online learning activities, and there were also parents who had given mobile phones earlier on the strong requests of the children and as a present.

Analysis of the data in Table 1 shows that half of the students surveyed had purchased a smart mobile phone in the year 2020. The total percentage of students who bought a mobile phone before the year 2020 is 7%. These data show that despite their reluctance, the parents have purchased mobile phones for their children for online learning activities during the Corona epidemic period.

Table 1. Year of purchase of the smart mobile phone

Year of purchase	Number of students	Percentage of students
2022	02	2.5%
2021	15	18.75%
2020	40	50%
2019	13	16.25%
2018	03	3.75%
2017	03	3.75%

According to the table 2 reveals that 54 of the researched students use two SIM cards each. It is clear that many students are using prepaid services and some students are using both prepaid and postpaid services. The reason for the use of prepaid services may be that they have cash in hand. These students may be using two separate SIMs to make calls and receive data. And these young students may be using an extra SIM card to connect with their friends privately. The statements of the parents also revealed that the students were using the extra Sims in their possession.

Table 2. Number of SIMs used and payment method

	Number of students	Percentage of students
Using a SIM	26	32.50%
Using two SIMs	54	67.50%
Using prepaid service	68	85.00%
Using postpaid service	23	28.75%

Considering the data in the table 3 shows, it is very clear that these students spend more money to get the data. 25% of the students spend less than one hundred rupees for making calls. The highest percentage of students 47.5% spend between 100-200 rupees per month for making calls. In comparison, they spend a lot of money on data. 93.75% of students spend more than 100 rupees for data. 50% of these students spend between 500-1000 rupees for data. 25% of students spend between 1000-2000 rupees for data.

Thus, students spending more money on data cannot be described as an inappropriate situation because they use data to reach positive approaches. Many positive approaches that students can reach using data are now abundant on the Internet and this is a haven for a learner. As discussed in the theoretical approach, it is clear that a mobile phone can act as an attractive information provider, ladder binder, learning aid, and guide for a learner. Therefore, instead of trying unsuccessfully to remove the mobile phone from young students, as teachers, we should encourage young children to use their mobile phones for meaningful activities.

Table 3. The amount these students spend per month on their mobile phone usage

Amount spent in Rupees	For calls		To get the data	
	Number of students	Percentage of students	Number of students	Percentage of students
Between 00-50	10	12.5%	02	2.5%
Between 50-100	10	12.5%	03	3.75%
Between 100-200	38	47.5%	02	2.5%
Between 200-500	19	23.75%	10	12.5%
Between 500-1000	02	2.5%	40	50%
Between 1000-2000	01	1.25%	20	25%
Between 2000-3000	00	00%	03	3.75%

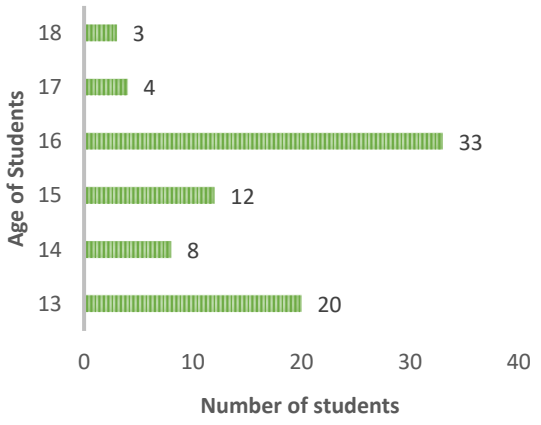

Figure 2. Age at which mobile phone usage started

As illustrated in the figure 2, majority of the students, (33), have started using mobile phones when they were 16 years old, having purchased their own phone. Although majority of Sri Lankan parents could not afford this for their children, they have been compelled to do so for the online learning of their children during the Corona epidemic.

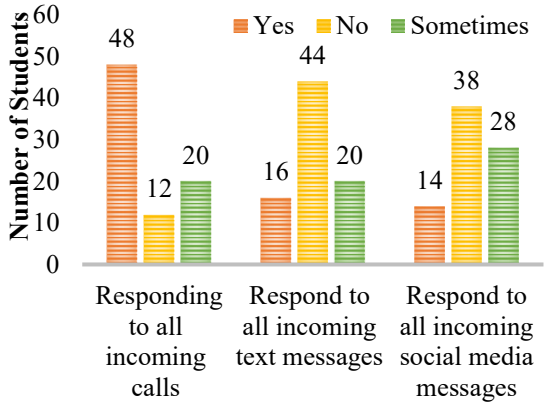

Figure 3. The nature of post-adolescent students' response to mobile phones

This data shows in the figure 3 that the majority of these students (60%) respond to all their calls, but a small number of students are in the habit of responding to all their text messages and social media messages. Paying attention to and responding to all messages received on their cell phone can be considered a sign of cell phone addiction, and it is clear that the majority of students surveyed do not exhibit such characteristics. But it is a clear fact that few students (about 18%) show signs of addiction.

To find out the extent to which these students use mobile phones, the time they spend with the mobile phone per day was obtained. According to the table 4 results, 42.7% of students use mobile phones for less than three hours, and 25% of the students use their mobile phones for more than 5 hours a day. The increase in the amount of time these students spend with mobile phones per day cannot be simply reflected as a negative situation, because they can be associated with mobile phones for positive approaches. However, the data shows that these students are accustomed to using mobile phones. In the interviews conducted with the children, it was also clear that they check their mobile phones frequently. But mobile phones are used for academic purposes as parents are always keeping an eye on them. In the interview, the parents also said that these students resort to using mobile phones frequently and constantly try to use mobile phones for non-academic activities. But their statements revealed that they too cannot control this situation.

It was revealed from the teachers that these students are using phones excessively and a few students are showing addiction to the use of mobile phones which has directly affected their academic performance and the parents have also failed to control this situation. But they also emphasized that there are students who have used the phones to improve their academic performance.

Table 4. Time spent per day with the mobile phone

Time spent per day with mobile phone.	Number of Students	Percentage of Students
Less than an hour	2	2.7%
Between 1-2 hours	12	15%
Between 2-3 hours	20	25%
Between 3-4 hours	18	22.5%
Between 4-5 hours	8	10%
Between 5-6 hours	6	7.5%
Between 6-7 hours	5	6.25%
Between 7-8 hours	3	3.75%
More than 8 hours	6	7.5%

Sri Lankan parents still provide opportunities for their children to use mobile phones under their supervision. In such a background, it will not be a difficult task to get students to use mobile phones for meaningful activities. But, because of the diverse socio-economic and educational backgrounds of the parents, the government and educational institutions need to prepare some awareness programs for them.

A mobile phone is a personal device. The group of students undergoing the research are post-adolescent school students. They are still under parental supervision. They are indeed going through a stormy season when it comes to youth. These students are at an age where they trust their friends and work together with them. Therefore, even though the mobile phone is a personal device, these students need to be under the supervision of their parents on how they deal with their mobile phones. But it can be seen that young people prefer to use their mobile phones very privately. For this reason, the following data were obtained to clarify this situation.

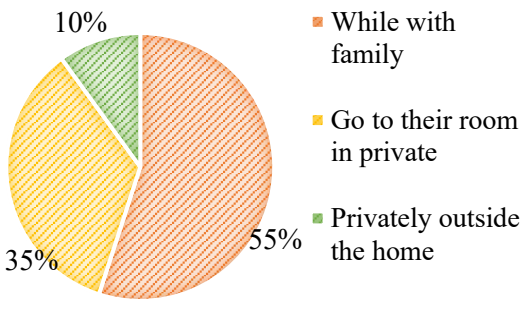

Figure 4. Responsive nature of mobile phone

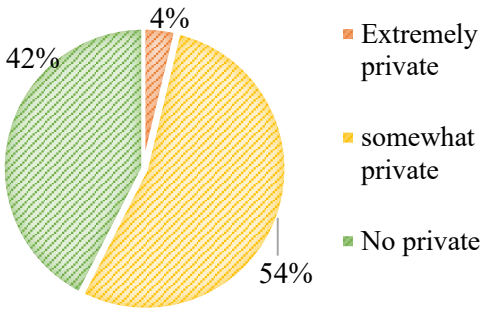

Figure 5. Privacy of students' mobile phone information

According to the figure 4 information, 55% of students answer their phone while they are with their family. And it is clear that except for 54% of the students, all the other students make some effort to keep the information on their mobile phones private. Another point to be noted here figure 4 is that there are 10% of students responding to their mobile phones very privately, and 4% of students keep the information on their mobile phones very private. These students may use their mobile phones unnecessarily and show many signs of addiction. Parents stated that their children try to use their cell phones privately and that they express disapproval or sometimes do not allow someone else in the family to check their cell phones.

Considering the answers given by these students, Table 5 was revealed that 33.75% of the students do not even allow others in the family to use their mobile phones and 32.5% of the students feel upset if someone else in the family uses their mobile phones. 57.5% of these students use a lock on their mobile even at home. Among these students, only 25% use their mobile phones openly with their families.

Considering these facts, it is clear that the post-adolescent students who have been researched are more inclined to use their mobile phones personally.

Table 5. Students' Efforts to Protect Privacy in Cell Phone Use

Efforts to Protect Privacy in Cell Phone Use	Yes		No		Sometimes	
	Number of Students	Percentage of Students	Number of Students	Percentage of Students	Number of Students	Percentage of Students
Allowing others in the family to use their mobile phone	39	48.75%	27	33.75%	14	17.5%
They get upset with their family members in using their phones	18	22.5%	26	32.5%	36	45%
Even at home they keep their phone locked	46	57.5%	31	38.75%	03	3.75%
They hide their phone from their family	19	23.75%	20	25%	41	51.25%

In this research, data was collected about the activities of these students using mobile phones. Data was also collected on the extent to which these students are engaged in those activities.

According to the table 5 more than 50% but close to 50% of these students usually send text messages, surf the internet and watch YouTube. Almost 40% of students usually do online learning, browse the internet for learning needs, make calls, chat through groups. There are no students who do not send text messages, do not do online learning activities, and do not browse the Internet for learning needs. But there are very few students who do not make calls, do not surf other social networks, do not watch YouTube, do not chat through groups, and do not send pictures. This data shows that there is a group of students in Sri Lankan society who use a mobile phone only for learning purposes. This is a very complex and sensitive issue and as a developing country, it shows the need for a concessional program for technical assistance for the educational welfare of Sri Lankan students. Another noteworthy point regarding the internet usage of these students is that 65% of these students use Facebook. Eighty percent of students surf on other social networks. Facebook as well as other social networks are software that do not fulfill any educational needs of these students and it is problematic for students to surf such software frequently. This wastes the time and money they could have spent on education. Through the Internet and YouTube, students have access to educational as well as non-academic activities. This is also a matter for the attention of adults, educational institutions, as well as the government, and this situation can be controlled to some extent by introducing separate packages for students who cannot enter unwanted entries.

Table 6. Mobile phone activities of post-adolescent students

Activity	Always		Usually		Sometimes		Rarely		No	
	Number of Students	Percentage	Number of Students	Percentage	Number of Students	Percentage	Number of Students	Percentage	Number of Students	Percentage
Sending text messages	9	11.25%	43	53.75%	15	18.75%	13	16.25%	0	0%
Sending pictures	0	0%	33	41.25%	21	26.25%	18	22.5%	8	10%
Chatting through groups	2	2.5%	30	37.5%	17	21.25%	23	28.75%	8	10%
Surfing the Internet	9	11.25%	45	56.25%	7	8.75%	8	10%	11	13.25%
Watching YouTube	7	8.75%	43	53.75%	13	16.25%	11	13.75%	6	7.5%
Facebook browsing	5	6 .25%	27	33.75%	11	13.75%	9	11.25%	28	35%
Surfing other social networks	9	11.25%	23	28.75%	13	16.25%	19	23.75%	16	20%
Playing mobile games	7	8.75%	19	23.75%	17	21.25%	13	16.25%	24	30%
Playing online mobile games	8	10%	21	26.25%	17	21.25%	16	20%	18	22.5%
Making calls	9	11.25%	31	38.75%	17	21.25%	16	20%	7	8.75%
View updated news	15	18.75	29	36.25%	19	23.75%	13	16.25%	4	5%
Engaging in online learning	44	55%	32	40%	4	5%	0	0%	0	0%
Surfing the Internet to learning needs	37	46.25%	34	42.5%	9	11.25%	0	0%	0	0%

The findings from these students about their internet usage were as follows.

Table 7. Reasons for Internet use by post-adolescent students

Reasons for Internet use	Number of Students	percentage
To see interesting things	28	35%
To watch confidential things	03	3.75%
To know daily information	42	52.5%
For educational purposes	56	70%

Table 8. Reasons for YouTube use by post-adolescent students

Reasons for YouTube use	Number of Students	Percentage
Know news and daily events	41	51.25%
To know universal information	55	68.75%
Watch secret videos	03	3.75%
To watch funny videos	18	22.5%
To watch movies and stories	24	30%
To watch lessons	62	77.5%

The above table 6 reveals that the majority of Sri Lankan post-adolescent school students are interested in finding daily information, and universal information, and watching news using the Internet and YouTube. And nearly 30% of these students use the Internet and YouTube out of curiosity, watch funny videos, and watch movies and stories. This only serves to entertain them and makes them prone to mobile phone addiction. Therefore, the intervention of parents, adults, and teachers is necessary to limit these conditions. However, according to the table 7, 70% of these students use the Internet for education, and 77.5% use YouTube for education. This is a positive situation to raise the educational level of these students. Proper guidance can lead to more success and increase their interest.

This study also examined the health problems caused by the use of mobile phones. It was shows in table 9 that the use of mobile phones causes eye-diseases. More than half of the students have inflammation in the eyes. Headaches also seem to be common among students. It is a clear fact that both these conditions especially affect their learning activities. This will affect their academic achievement levels.

Table 9. Health problem indicated by students

Indicated Health problem	Number of students	Percentage of students
Headache	28	35%
Inflammation of the eyes	50	62.5%
Feeling unstable	06	7.5%
Feeling restless	02	2.5%
Decreased mental concentration	03	3.75%

According to the Table 10, 20% of the students said that the mobile phone has affected their academic performance, 16% said that it reduced their bond with their family, 18% said that it reduced their time spent with their family, and 20% said that it reduced face-to-face meetings with friends, and 6% agreed that it contributed to conflicts with friends. This situation directly affects the personal development of these students. Research findings indicate that this condition affects nearly twenty percent of students. Hence, it should be understood that the problem has reached a situation that requires the intervention of authorities and elders.

Table 10. Problems faced by the students

problems faced by the students	Strongly agree	Agree	No idea	Disagree	Strongly disagree
Affected academic performance.	08 (10%)	12 (15%)	32 (40%)	20 (25%)	08 (10%)
Reduced contact between family members.	04 (5%)	12 (15%)	10 (12.5%)	36 (45%)	18 (22.5%)
Reduced time spent with family members	04 (05%)	14 (17.5%)	20 (25%)	28 (35%)	14 (17.5%)
Reduced face-to-face meetings with friends.	04 (05%)	16 (20%)	22 (27.5%)	20 (25%)	18 (22.5%)
Caused conflicts with friends.	04 (05%)	02 (2.5%)	16 (20%)	22 (27.5%)	36 (45%)

4 CONCLUSION AND RECOMMENDATIONS

Based on the data analysis, the following conclusions were reached: - mobile phone usage among post-adolescent students has increased rapidly in the year 2020 and all the students are currently using mobile phones. It was concluded that these students frequently use mobile phones and avoiding them from using mobile phones is an impossible task and what can be done is to get them to use mobile phones effectively. Another conclusion was that post-adolescent school students often try to keep their mobile phone private and use it privately. They also use mobile phones to get the information needed for their studies and to engage in their studies. The use of mobile phones by students for non-academic activities was also at a very high level. It was also revealed that the use of mobile phones by these students has affected both their family and social relationships, and even caused health

problems. Also, it can be concluded that the parents are neither knowledgeable about mobile phones, nor are very strict on their children's mobile phone use, thereby losing their control over the children's mobile phone use. However, it was also concluded that mobile phones can be used to increase the academic performance of students, and for this purpose, it is important to introduce data packages at affordable prices so that students can explore online learning and use other learning materials. Yet, it is essential to introduce special mobile phones with separate software for the use of students as well as to provide systematic training to both students and teachers on how to use mobile phones to increase learning performance.

The following suggestions can be made to guide post-adolescent students to use mobile phones effectively.

Implementation of a series of training programs for students and teachers on the effective use of mobile phones for academic purposes, directing students to use mobile phones under the guidance of teachers, and minimizing the unnecessary mobile phone activities of students.

Conducting an awareness program for parents on the importance of parental supervision of their children's mobile phone use.

According to the facilities available in the school, students are directed to use classroom tab computers in a planned schedule.

Implementation of projects to encourage students to adopt inquiry-based learning at subject level, class level, and sector level.

Apply for concessional data packages for students in consultation with communication institutes and provide data scholarships for students.

REFERENCES

Anderson, M, and Jiang, J, 2018. Teens, social media & technology 2018. Available from https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018/

Bartlett, FC, 1995. *Remembering: A study in experimental and social psychology*. Cambridge university press. Cambridge

Bruner, JS, 2009. *The process of education*. Harvard university press. USA

Chathuranga, MMN, and Jaysundara, JMDP, 2020. Impact of smartphone usage on academic performance: a study on undergraduates in FMSC of University of Sri Jayewardenepura, Sri Lanka. *Journal of Management*, *15*(1).

Gamage, SKN, Rajapakshe, P.S.K. and Kumudumali, S.H.T., 2021. Determinants of Mobile Phone Ownership in Sri Lanka: An Analysis of Individual Characteristics. *J. Technol. Value Addit*, *3*(1), pp.60-74.

Inhelder, B, De Caprona, D, and Cornu-Wells, A, 2013. *Piaget Today (Psychology Revivals)*. Psychology Press. Available from doi https://doi.org/10.4324/9781315886817

Jinadasa, M, 2016. Representation of youth generation in the mobile phone and internet media in Sri Lanka. *Psychology Research*, *6*(5), pp.311-317.

Miller, LC, 1980. Dimensions of adolescent psychopathology. *Journal of Abnormal Child Psychology*, *8*, pp.161-173.

Nakamura, J, and Csikszentmihalyi, M, 2009. Flow theory and research. *Handbook of positive psychology*, *195*, p.206.

Oppland, M, (8). traits of flow according to Mihaly Csikszentmihalyi. Positive Psychology. Luettu, 18, 2023. Available from https://positivepsychology.com/mihaly-csikszentmihalyi-father-of-flow/

Serra, G, Lo Scalzo, L, Giuffrè, M, Ferrara, P, and Corsello, G, 2021. Smartphone use and addiction during the coronavirus disease 2019 (COVID-19) pandemic: cohort study on 184 Italian children and adolescents. *Italian Journal of Pediatrics*, *47*(1), p.150.

Thalheimer, W, 2006. Spacing learning events over time: What the research says. Available from https://www.worklearning.com/wp-content/uploads/2017/10/ Spacing _Learning_ Over_Time__March2009v1_. pdf

Vygotsky, LS., 1978. *Mind in society: The development of higher psychological processes* (Vol. 86). Harvard university press.