Academic Achievement, Self-Efficacy And Academic Procrastination Among Under Graduate Student In Relation To Mobile Applications

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Abstract:

Mobile Apps (Education and Non- Educational) are designed for people to have the added benefit of helping them to be more interactive, engaged, and perform better. In the present work usage of mobile applications has been studied in relation to Academic Achievement, Self-Efficacy and Academic Procrastination among under graduate students. (i) A significant relationship is found between academic achievement and usage of educational mobile applications of undergraduate students on one dimension (Engagement) only; but not on three dimensions and total; (ii) A significant relationship is found between academic achievement and usage of non-educational mobile applications of undergraduate students on one dimension (Functionality) only, but not on three dimensions and total; (iii) A significant relationship isfound between self-efficacy and usage of educational mobile applications of Undergraduate students on alldimensions as well on total scores of all dimensions; (iv) A positive relationship is found between self- efficacy and usage of non-educational mobile applications of undergraduate students on all dimensionsand total of all Dimensions of usage of educational mobile applications; (v) A significant relationship is found between academic procrastination and usage of educational mobile applications of Undergraduate students on three dimensions viz. Functionality, Engagement and Aesthetic dimensions, as well in total of scores of all dimensions, but not on one dimension viz Information and sharing Quality dimensions; (vi) A significant relationship is not found significant between academic procrastination and usage of non- educational mobile applications of under-graduate on two dimensions viz. Functionality and Information and sharing Quality dimensions, but found significant at two dimensions viz Engagement and Aesthetic dimensions as well on total of scores of all dimensions.

Introduction: Educational Apps

The mobile applications include a wide variety of applications like educational, entertain mental, informational, productivity, gaming, entertainment, communication, e-Commerce, musical andso on. Education apps focused on individual subject matter provide a wide range of material for different levels and learning styles and help students meet their learning goals, keep the classroom engaged, and connect with learners of all types. Apps designed for education can havethe added benefit of helping children be more interactive, engaged, and perform better. Most importantly, keep teaching methods fresh in order to keep students interested in their studies and open to learning new apps. According to Norries, Hossain, and Soloway (2011), when students use mobile

learning devices, including smartphones, during learning time, students' achievements increase significantly. Since they have the device on hand, their time-on-task completion will increase. Students use their smartphones to take pictures of abstract conceptsthat are taught in class so that they can compare the abstract concepts with the concrete ideas later. The results of Woodcock et al. (2012) showed that participants reported that smartphones had increased their productivity and led to an improvement in their learning capabilities. Non- educational also help in learning, also, but sometimes students meet a lot of distraction, they waste time. Many students open the mobile to learn something and end up using social media websites, chatting, sharing pictures or playing video games. These types of distractions waste one's time, which could have been used to perform a meaningful task. Students misuse thedevice for different purposes - like for fun, to have secret, evil intentions which are definitely notgood and need to be prevented.

Self-efficacy is influenced by a variety of internal factors, including student confidence, personal beliefs and practices, literacy, and clarity. A student's ability to use mobile learning increases as their internal forces for self-efficacy increase. External factors such as rules or requirements from universities to use Learning Management Systems (LMS), promotion and marketing (Wu, Wang, & Tai; 2004), and friends and families can also promote self-efficacy andself-awareness Use smart phones for mobile learning by searching the Internet, submittingassignments to lecturers via e-mail or LMS platforms such as Edmodo, and organizing all of the student's work in a folder so that it is easy to find and then use the work as a resource. It's possible to learn using a smart phone outside of a classroom or even during class time. It's easy for students to share information with their classmates and professors. As soon as something is posted on LMS's platforms, they are notified and can quickly come back and view what was posted in their leisure time (Wu, Wang & Tai; 2004). Students' self-efficacy is influenced by both external and internal causes through vicarious experience, such as watching another perform a task. It has been shown that students who have had favourable experiences withmobile learning as educational aids will be more accepting of it. However, students who havehad poor vicarious experiences have a more unfavourable attitude towards mobile learning, leading in the use of smart phones to interfere with mobile learning as a result of this. External influences that motivate and persuade people to execute a task can be influenced by positive verbal feedbacks from external forces. In general, students believe that mobile learning is within their reach. A sense of self-efficacy can be improved by receiving positive feedback, since it can assist build trust in mobile learning as an instructional tool. In mobile learning, students interpret their performance to generate ideas about their potential to engage with comparable activities in the future. The self-efficacy is likely to increase if these actions are consistently effective, while the self-efficacy is likely to decrease if they are repeatedly unsuccessful. Students with poor self-esteem will doubt their talents if they start out with low self-confidence. Uncertainty can lead to failure in mobile learning scenarios, as well as low self-confidence.

Procrastination may be exacerbated by technology, as several studies have shown Using gadgets for video and YouTube having a big influence on students' procrastination and the usage ofonline games, social media, news, and social knowledge has very little effect since the internet iscostly for

a junior high school student to access. Internet multitasking and a lack of control over Internet usage were both linked to procrastination (Reinecke, et al., 2018). Students' problematic usage of new media and various forms of procrastination (both general and decisional) have been linked in studies (Przepiorka, 2021). The more a high school student's procrastination scores are elevated, the greater their risk of being addicted to the Internet becomes. Internet surfing may be used by procrastinators as a distraction from the looming task of finishing it (Malyshev & Arkhipenko, 2019). Behzad (2021) found that procrastination is a direct result of smartphone addiction.

There is no denying that smart phones have become a part of people's everyday lives. Mobile learning's primary goal is to make long-distance learning with friends, teachers, and even communities more convenient. Furthermore, access to the Internet has never been simpler, and we now have access to an enormous amount of data at our fingertips. There are also learning apps for mobile devices. Additionally, smart phones can be used to record lectures using a video recorder. Self-efficacy to use mobile learning as a learning tool is associated with a variety of characteristics of students in higher educational institutions. As a result of internal and external factors, smart phones can be used for a variety of mobile interactions that can assist students enhance their confidence and understanding about mobile learning.

Review: Salvation (2017) revealed that when more time is spent on using educational applications, there are more chances of enhancing level of knowledge and classroom achievement since it is used as a learning tool to search for information needed for assignments and test or examinations. Jairus et. al. (2017) revealed no significant difference in the usage of mobile phone technologies and students' academic performance among secondary school students Sumathi et. al. (2018) showed the majority of respondents responded positively on the use of smartphone for academic purposes. Ahmad, Ermawati, Astuti, Kurniasih and Hassan (2021) Mobile application has been widely used as a learning aid in education. It could be the best learning service for adult's learner. Demir & Akpinar (2018) mobile learning may promote students' academic achievement; Quispe, Casas et.al (2018) the use of educational applications has a positive influence on the academic performance of students; Shahibi and Rusli (2017) explored that Online media usage for Education also helps students in improving their academic achievement; and Rezaei et al. (2013) claimed that using apps helped in increase in learning of vocabulary, confidence and class participation.

Qaisar et. al. (2017) revealed the excessive usage of mobile phone associated with a poorer performance of students in academics; Asemah, Okpanachi and Edegoh (2013) social media has a negative effect on student's academic performance; Haq and Chand, 2012) the use of Facebook by students adversely affecting their academic performance the behavior of male students are more active as they spend a lot of time on Facebook, which makes them unable to focus on their academics; Rouis et. al. (2011) students' Facebook use with an extroverted personality can lead to poor academic achievement; Tan et. al. (2008) Problematic-mobile-phone use had a significant negative relationship with academic performance of the college students; Anand (2007) online media have a negative effect on students' achievement; and Kubey et al. (2001) the decline of college student's academic achievement is due to the application of synchronous communication such as

chat rooms, which can lead students to stay up late at night and cause their academic achievement decline. But study which explored its positive effect; Anand (2007) Kubey et al. (2001) Garcia et al. (2015) explored the use of social media technologies widely used by students can have a positive impact on students and a key factor for the students in achieving summative grade. Similarly the relationship between mobile phone use and academic performance of the students and revealed that mobile phone use was significantly and negatively related to academic performance among students (Lepp, Barkley, & Karpinski, 2013; Lepp, Barkley, & Karpinski, 2015; Olufadi, 2014; Jumoke, Oloruntoba, & Blessing, 2015; Menayes, 2014; Beranuy, Oberst, Carbonell, & Chamarro, 2009).

Razzaq, Samiha and Anshari; (2018) found that the relationship between self-efficacy and usage of educational mobile applications of Undergraduate students is significant to each other. Nikolopoulou and Gialamas (2017) revealed that higher self-efficacy was linked to positive perspectives and feelings, to greater willingness to use mobile devices, and to favorable perceptions towards their independent control Tilton & Hartnett (2016) explored that an increase in the use of the iPad mini in the classroom resulting students' development of collectiveefficacy and this collective efficacy, supporting the increased use of devices and the development of teacher self-efficacy. Wu, Wang and Tai (2004) found Self-efficacy can improve also due to external forces such as rule or regulations from university to implement Learning Management Systems. The researchers of Susskind (2008); Wu & Tsai, (2006) and Tsai & Tsai (2003) revealed that learners' attitudes and self-efficacy regarding information technology influence their usage, and as a consequence might influence how they learn and their learning performance. Davis, Bagozzi, and Warshaw (1989) revealed that the easier a user perceives technology to be, the higher the self-efficacy associated with its use.

Erdogan et. al. (2013) revealed that academic procrastination was moderately correlated with problematic mobile phone use. Lakshminarayan et. al. (2012); Tang, et. al. (2008) found a significant negative relationship between procrastination and academic performance among undergraduate dental students. Chu and Choi (2005) revealed passive procrastination as a kind of conventional and negative procrastination, in which, the procrastinators do not delay their work deliberately but they are unable to make decisions or to work quickly and usually complete their tasks with postponement. Vennela and Rao (2019) explored that by a positive correlation between age and Internet Addiction and Academic Procrastination; Demir and Kutlu (2018) found that Internet addiction affects the academic procrastination in the positive direction; Taymur et.al. (2016) revealed smartphone addiction as a serious matter among majority of the students; Kvavik (2005) showed that when they are equipped for playing with technology,however are not actually utilizing it effectively.

Vennela and Rao (2019) explored that by a positive correlation between age and Internet Addiction and Academic Procrastination; Demir and Anand (2007) Kubey et al. (2001) Garcia etal. (2015) (Lepp, Barkley, & Karpinski, 2013; Lepp, Barkley, & Karpinski, 2015; Olufadi, 2014; Jumoke, Oloruntoba, & Blessing, 2015; Menayes, 2014; Beranuy, Oberst, Carbonell, & Chamarro, 2009).

Razzaq, Samiha and Anshari; (2018) Nikolopoulou and Gialamas (2017) Susskind (2008); Wu & Tsai, (2006) and Tsai & Tsai (2003) Davis, Bagozzi, and Warshaw (1989) Erdogan et. al. (2013) revealed that academic procrastination was moderately correlated with problematic mobile phone use. Lakshminarayan et. al. (2012); Tang, et. al. (2008) Vennela and Rao (2019) explored that bya positive correlation between age and Internet Addiction and Academic Procrastination; Demir and Kutlu (2018)

Sample of the study: Random sampling was employed on the sample of 800 students of1st, 2nd, or 3rd year of graduation classes of professional course (Science and Social sciencestreams) and Non –professional course students (Science and Social Science stream) with highand low usage of mobile apps, studying in GNDU and its affiliated college of Amritsar District. **DESIGN:** Correlation of Usage of Mobile Apps with variables Academic Achievement, Self-Efficacy and Academic Procrastination was computed.

Tools used: The tools used for the study were as followed –
1.   Scale on Mobile App Usage (constructed by the investigator).
2.   Self-efficacy Scale (SES: Singh &Narain; 2014)
3.   Academic Procrastination Scale (Kalia &Yadav; 2015).
4.   Academic Achievement was measured with the mark obtained in the previous class i.e.1st , 2 nd, 3rd, year of graduation.

Objectives:
1.   To study the relationship between Academic Achievement and Usage of EducationalMobile Applications of undergraduate students.
2.   To study the relationship between Academic Achievement and Usage of Non-Educational Mobile Applications of undergraduate students.
3.   To study the relationship between Self-Efficacy and Usage of Educational MobileApplications of undergraduate students.
4.   To study the relationship between Self-Efficacy and Usage of Non-Educational Mobile Applications of undergraduate students.
5.   To study the relationship between Academic Procrastination and Usage ofEducational Mobile Applications of undergraduate students.
6.   To study the relationship between Academic Procrastination and Usage of Non-Educational Mobile Applications of undergraduate students.

Correlation between academic achievement and usage of educational/ non-educational mobile applications: In order to find out, the correlation ® between Academic Achievement and usage of educational and non- educational mobile applications of undergraduate students has been prepared. The results are presented in table 1 below:

Table 1: Correlation between Academic Achievement and Usage of Educational Mobile Applications (Educational and Non-Educational; N = 800)

Variables	Dimensions of Variable	Value of 'r'
Academic Achievement and Usage of Educational Mobile Applications	Functionality	-0.045
	Engagement	-0.096**
	Aesthetic	-0.010
	Information and sharing Quality	-0.023
	Total Educational Mobile Apps Usage	-0.056
Academic Achievement and usage of non-educational mobile applications	Functionality	-0.136**
	Engagement	0.006
	Aesthetic	-0.055
	Information and sharing Quality	-0.012
	Total Non-Educational Mobile Apps Usage	-0.044

* Significant at 0.05 level **Significant at 0.01 level

A) Correlation between Academic Achievement and usage of educational mobile applications

Table 1 shows that the co-efficient of correlation is significant on one dimension only; i.e. between academic achievement and usage of educational mobile applications on Engagement Dimension (-0.096), which in comparison to table values, was found significant at 0.01 level.The result indicates a negative relationship existed between academic achievement and usage of educational mobile applications of undergraduate students on Engagement dimension, meaning thereby that high usage of educational mobile applications results into low academic achievement.

The above table shows that the co-efficient of correlation between AcademicAchievement and usage of educational mobile applications on Functionality Dimension (-0.045),Aesthetic Dimension (-0.010), Information and sharing Quality Dimension (-0.023) and total scores of all dimensions (-0.056); which in comparison to table values, was found not significant.Though not significant, but a negative relationship existed between academic achievement and usage of educational mobile applications of undergraduate students on the rest three dimensions viz. Functionality, Aesthetic, Information and sharing Quality Dimensions and total scores of usage of educational mobile applications.

Hence the Hypothesis No. 1 (A), 'There exists no significant relationship between Academic Achievement and Usage of Educational Mobile Applications of undergraduate students' stands partially rejected; as significant relationship is found between academic achievement and usage

of educational mobile applications of undergraduate students on one dimension (Engagement). The results indicate that the relationship between academic achievement and usage of educational mobile applications of undergraduate students is not significant to each other. The results are not in tune with Klimova (2019) foreign language learning, particularly studying and revising English vocabulary and phrases via smart phones is effective in the enhancement of university students' performance; Demir & Akpinar (2018) mobile learning may promote students' academic achievement; Quispe, Casas et.al (2018) the use of educational applications has a positive influence on the academic performance of students; Shahibi and Rusli (2017) Online media usage for Education also helps students in improving academic achievement; and Rezaei et al. (2013) claimed that using apps helped in increase in learning of vocabulary,confidence and class participation.

(B) Correlation between Academic Achievement and Usage of Non-Educational Mobile Applications

Table 1 shows that the co-efficient of correlation between academic achievement and usage of non-educational mobile applications on Functionality Dimension (-0.136), Engagement Dimension (0.006), Aesthetic Dimension (-0.055), Information and sharing Quality Dimension (-0.012) and total scores of all dimensions (-0.044); which in comparison to table values wasfound not significant at any dimension. The result indicates that there is a negative relationship between academic achievement and usage of non-educational mobile applications of undergraduate students on all dimensions, which is significant at 0.05 level of confidence.Meaning thereby, the academic achievement is not affected by the high usage of non-educationalmobile applications. Hence the Hypothesis No. 1 (B), 'There exists no significant relationship between Academic Achievement and Usage of Non-Educational Mobile Applications of undergraduate Students', stands partially rejected; The results of the present study are supported by Qaisar, et.al. (2017) revealed the excessive usage of mobile phone associated with a poorer performance of students in academics; Asemah et.al. (2013) social media has a negative effect on student's academic performance; Haq and Chand, 2012) the use of Facebook by students adversely affecting their academic performance the behavior of male students are more active as they spend a lot of time on Facebook, which makes them unable to focus on their academics; Rouis et. al. (2011)students' Facebook use with an extroverted personality can lead to poor academic achievement; Tan et. al. (2008) Problematic-mobile-phone use had a significant negative relationship with academic performance of the college students; Anand (2007) online media have a negative effecton students' achievement; Garcia et al. (2015) explored the use of social media technologies widely used by students can have a positive impact on students and a key factor for the students in achieving summative grade. Similarly the relationship between mobile phone use and academic performance of the students and revealed that mobile phone use was significantly and negatively related to academic performance among students (Lepp, Barkley, & Karpinski, 2015).

Correlation between self-efficacy and usage of educational/ non- educational mobile applications

To find out, the correlation between Self-Efficacy and usage of educational mobile applicationsof Undergraduate students has been prepared. The results are presented in table 2.

Table 2: Correlation between Self-Efficacy and Usage of Mobile Applications (Educationaland Non-Educational with N = 800)

Variables	Dimension	Value of 'r'
Self-Efficacy and Use of Educational Mobile Applications	Functionality	0.112**
	Engagement	0.117**
	Aesthetic	0.121**
	Information and sharing Quality	0.201**
	Total Use of Educational Mobile Applications	0.245**
Self-Efficacy and Use of Non-Educational Mobile Applications	Functionality	0.162**
	Engagement	0.126**
	Aesthetic	0.166**
	Information and sharing Quality	0.176**
	Total Use of Educational Mobile Applications	0.229**

* Significant at 0.01 level

(A) Correlation between Self-Efficacy and Usage of Educational Mobile Applications

Table 2 shows that the co-efficient of correlation between self-efficacy and usage of educational mobile applications on Functionality Dimension (0.112), Engagement Dimension (0.117), Aesthetic Dimension (0.121), Information and sharing Quality Dimension (0.201), and total scores of all dimensions (0.245), were found significant, either at 0.05 or 0.01 level of confidence, in comparison to table values. The result indicates a positive relationship between self-efficacy and usage of educational mobile applications of undergraduate students on alldimensions and total of usage of educational mobile applications.

Hence the Hypothesis No. 2 (A) 'There exists no significant relationship between Self-Efficacy and Usage of Educational Mobile Applications of undergraduate Students' stands rejected; as significant relationship is found between self-efficacy and usage of educational mobile applications of Undergraduate students on three dimensions as well on total scores of all dimensions. It indicates

the positive relationship between self-efficacy and usage of educational mobile applications of Undergraduate students is significant to each other. The results of the present study are supported by the authors who found correlation between Internets literacy levelof student and self- efficacy (Razzaq et.al.; 2018); higher self-efficacy was linked to positive perspectives and feelings, to greater willingness to use mobile devices, and to favourable perceptions towards their independent control (Nikolopoulou & Gialamas; 2017); and Self-efficacy can improve also due to external forces such as rule or regulations from university to implement Learning Management Systems (Wu, Wang & Tai; 2004).

(B) Correlation between Self-Efficacy and Usage of Non-Educational Mobile Applications
Table 2 shows that the co-efficient of correlation between Self-Efficacy and usage ofnon-educational mobile applications on Functionality Dimension (0.162), Engagement Dimension (0.126), Aesthetic Dimension (0.166), Information and sharing Quality Dimension (0.176), and total scores of all dimensions (0.229), were found significant either at 0.05 or 0.01 level of confidence. The result indicates that there is a positive relationship between self-efficacy and usage of non-educational mobile applications of undergraduate students
Hence the Hypothesis No. 2 (B) 'There exists no significant relationship between Self- Efficacy and Usage of Non-Educational Mobile Applications of undergraduate Students', stands rejected, as a significant relationship existed between self-efficacy and usage of non-educational mobile applications among all dimensions and total scores of all dimensions of Undergraduate students. The results indicate that the relationship between self-efficacy and usage of non-educational mobile applications of Undergraduate students is significant. The results of the present study are supported by earlier researchers Wu & Tsai, (2006) and Tsai & Tsai (2003) revealed learners' attitudes and self-efficacy regarding information technology influence their usage, and as a consequence might influence how they learn and their learning performance; Davis et. al. (1989) explore the easier a user perceives technology to be, the higher the self- efficacy associated with its use.

Correlation between academic procrastination and usage ofeducational mobile applications (a) educational (b) non- educational
(A) Correlation between Academic and Educational Usage of Mobile Applications
In order to find out, the correlation between Academic Procrastination and Educational Mobile Apps Usage of Undergraduate students has been prepared. The results are presented in table 3.

Table 3: Correlation between Academic Procrastination and Usage of Mobile Applications (Educational and Non-Educational; N = 800)

Variables	Dimension	Value of 'r'
Academic Procrastination and	Functionality	0.136**

usage ofEducational Mobile Application	Engagement	0.084*
	Aesthetic	0.199**
	Information and sharing Quality	0.018
	Total Educational Mobile Applications Usage	0.166**
Academic Procrastination and Use of Non-Educational Mobile Applications	Functionality	0.037
	Engagement	0.150**
	Aesthetic	0.096**
	Information and sharing Quality	0.054
	Total Use of Educational Mobile Application	0.120**

*   Significant at 0.05 level **Significant at 0.01 level

Table 3 shows that the co-efficient of correlation between Academic Procrastination and usageof educational mobile applications are Functionality (.136), Engagement (.084), Aesthetic (.199) Dimensions and Total (.166) of usage of educational mobile applications which in comparison to table values was found significant either at 0.05 or 0.01 level of confidence. The result indicates though a positive but not significant relationship between academic procrastination and usage of educational mobile applications of Undergraduate students on Information and sharing Quality Dimension (.018).

Hence the Hypothesis No. 3 (A) 'There exists no significant relationship between Academic Procrastination and Usage of Educational Mobile Applications of undergraduate Students', stands partially rejected; as significant relationship is found significant between academic procrastination and usage of educational mobile applications of Undergraduate students on threedimensions viz. Functionality, Engagement and Aesthetic dimensions, as well in total of scoresof all dimensions, but not on one dimension viz Information and sharing Quality dimensions.The results indicate that the relationship between academic procrastination and usage of educational mobile applications of Undergraduate students is significant to each other. Theresults of the present study are not supported by the authors; significant negative relationship between procrastination and academic performance among undergraduate dental students Lakshminarayan et. al. (2012); Tan et. al. (2008) and Chu and Choi (2005) revealed passive procrastination as a kind of conventional and negative procrastination, in which, theprocrastinators do not delay their work deliberately but they are unable to make decisions or to work quickly and usually complete their tasks with postponement.

(B)   Correlation between Academic Procrastination and Usage of Non-Educational Mobile

Application

In order to find out the correlation between Academic Procrastination and usage of non-educational mobile applications of Undergraduate students has been prepared. The results are presented in table 3.

Table 3 shows that the co-efficient of correlation between Academic Procrastination and Non-Educational Mobile Apps Usage on Functionality (.037), Information and sharing Quality (.054) Dimensions; which in comparison to table values was not found significant at any specified level of confidence. The result indicates a positive relationship between academic procrastination and usage of non-educational mobile applications of Undergraduate students on Engagement (.150), Aesthetic (.096) dimensions, and total (.120) significant 0.01 level of confidence.

The result indicates that there is a positive relationship between academic procrastination and usage of non-educational mobile applications of Undergraduate students on Total scores of all dimensions, which is significant at 0.01 level. Tan, Ang, Yeo, Wong, Huan, and Chong found procrastination as significantly and negatively related with academic success and grade goals of the students.

Hence the Hypothesis No. 3 (B) 'There exists no significant relationship between Academic Procrastination and Usage of Non-Educational Mobile Applications of undergraduate Students', stands partially rejected; as significant relationship is not found significant between academic procrastination and usage of non-educational mobile applications of under-graduate on two dimensions viz. Functionality and Information and sharing Quality dimensions, but found significant at two dimensions viz Engagement and Aesthetic dimensions as well on total of scores of all dimensions. The results indicate that the relationship between academic procrastination and usage of non-educational mobile applications of Undergraduate students is not significant to each other. The results of the present study are in consonance with the results of the studies - by a positive correlation between age and Internet Addiction and Academic Procrastination (Vennela & Rao; 2019); Internet addiction affects the academic procrastination in the positive direction (Demir & Kutlu; 2018); Taymur et.al. (2016) smartphone addiction is a serious matter among majority of the students; and they are equipped for playing with technology, however not actually utilizing it effectively (Kvavik, 2005).

Findings:

1. A significant relationship is found between academic achievement and usage of educational mobile applications of undergraduate students on one dimension (Engagement) only; but not on three dimensions viz Funtionality, Aesthetic and Information and sharing Quality dimensions as well on total of scores of all dimensions.

2. A significant relationship is found between academic achievement and usage of non-educational mobile applications of undergraduate students on one dimension (Functionality) only, but not on three dimensions viz Engagement, Aesthetic and Information and sharing Quality dimensions as well on total of scores of all dimensions.

3. A significant relationship is found between self-efficacy and usage of educational mobile applications of Undergraduate students on three dimensions as well on total scores of all dimensions.

4. A positive relationship is found between self-efficacy and usage of non-educational mobile applications of undergraduate students on all dimensions and total of all Dimensions of usage of educational mobile applications.

5. A significant relationship is found between academic procrastination and usage of educational mobile applications of Undergraduate students on three dimensions viz.Functionality, Engagement and Aesthetic dimensions, as well in total of scores of all dimensions, but not on one dimension viz Information and sharing Quality dimensions.

6. A significant relationship is not found significant between academic procrastination and usage of non-educational mobile applications of under-graduate on two dimensions viz. Functionality and Information and sharing Quality dimensions, but found significant at two dimensions viz Engagement and Aesthetic dimensions as well on total of scores ofall dimensions.

Implication

To increase self-efficacy of under graduate students the Educational apps must include understandable and worth reading video-based content with grabbing the eye of the user at a single glance quality; engaging target audiences to retain the learner's interest. The self-help apps like diet, physical activity, mental health and emotional health apps not only help individuals to promote behavior change but also provide working with the individuals to struggle with these kinds of problems. There is need to bring interventions like cognitive behavior therapy (CBT) to reduce both general and academic procrastination symptoms. The seminars should be arranged in colleges for the students identified as procrastinators. The debates and elocution competitions may be arranged for the limited use of the smartphones orturning off the phones.

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