

## CHAPTER - 5

### SUMMARY OF FINDINGS AND IMPLICATIONS

---

The main research conclusions and their managerial implications for practitioners are covered in this chapter. Also discussed are the advantages of this study effort for academics and scholars. The study's limitations and future directions are listed, along with a conclusion that would be useful to academics, practitioners, and researchers.

#### 5.1 ESSENTIAL FINDINGS

The purpose of the current study was to investigate the association between technology use and academic success, self-directed learning (SDL), and student involvement among management students in Jaipur, Rajasthan. To make sure there would be no issues using the data's high quality for analysis, the validity and dependability of the data were evaluated prior to doing any statistical test. The following is a list of some of the study's key conclusions.

According to the report, smartphones are the technology that individuals use the most frequently. The next most popular applications of technology were emailing, internet searches, text messaging, general social networking, and sharing media. The study's findings are equivalent to those of Hampton et al. and Rosen, Mark Carrier, et al (2011). (2013). The results support the first hypothesis by showing a weakly negative relationship between student engagement, media and technology use, and academic performance. These findings concur with Uzun & Kilis's (2019) study, which found that excessive media usage lowers academic performance.

Academic performance was insignificantly and negatively correlated with smartphone use, general social media usage, emailing, media sharing, video gaming, and internet searching, according to the subscales of media and technology use. The non-significant and unfavourable results of the technology subscales suggest that students lack the requisite productive abilities to use these technologies in a way that enhances their academic achievement (Dunn & Kennedy, 2019a).

In light of this study, educators should focus more on the effective application of technology in the classroom. The aforementioned hypothesis aimed to determine how much technology use predicts student engagement, self-directed learning, and academic success. Three different multiple regressions were run to test this hypothesis. The results showed that technology use significantly predicted academic success, independent learning, and engagement.

The study's findings imply that a technology use model needs to be experimentally tested before being applied to teaching methods and the academic environment. In addition to removing the undesirable outcome, doing this can improve academic achievement, student engagement, and self-directed learning. Past research has demonstrated that "technology integrations have a limited impact on raising student engagement" (Hancock & Betts, 2002). Students gain knowledge, grow as active and engaged learners, and, at the same time, become more responsible for their own education when technology is integrated into academics and the learning process.

1. Determining the effect of ICT on students' academic performance was the main goal of the current research investigation. The third premise asserts that there is a significant inverse relationship between media and technology use and academic accomplishment. This finding backs up prior research by Wentworth & Middleton (2014) that linked heavy media use, greater multitasking, and subpar academic performance. The link between academic performance and subscales of media and technology use, such as smartphone use, general social media usage, emailing, media sharing, video gaming, and Internet searching, was also minimal and in the other direction.
2. The second objective of the current study was to investigate the relationship between ICT and self-directed learning, which was found to be positively and strongly associated. The fact that pupils are independent, enthusiastic about, knowledgeable about, and adept at using new technologies may contribute to the outcome's explanation.

3. In order to assess how ICT affects student participation, the study's third goal, it was discovered that technology use significantly predicted involvement. The same justification as before may be used to justify the outcome.
4. Investigating the links between technology use, student involvement, self-directed learning, and academic success is the ultimate goal. The results showed that while there is little correlation between technology use and academic achievement overall, it does predict student involvement and self-directed learning. These results are explained by two theories: 1) Despite the fact that they are used, students might not always be using these gadgets for academic purposes. 2) Multitasking and frequent use may lead to distractions and a lack of time for academic assignments, respectively.

Along with the major findings indicated above, further findings that support the study's objective are included below.

- ❖ Emailing has the highest mean score among smartphone activities, and it is followed by internet searching, texting, general social media, and media sharing. The research found that emailing; online searching, sharing material, and general social media use were the most widely used technologies.
- ❖ A slight negative connection between media and technology use and academic achievement was found after controlling for the null hypothesis.
- ❖ While there was a weak significant positive link between the two, there was no significant correlation between student participation and academic success (as determined by GPA).
- ❖ It was not established that there was a significant correlation between the academic achievement and technology subscales.
- ❖ Weak yet significant positive relationships were identified between smartphone use and student involvement as well as video gaming and SDL.
- ❖ Internet searches and smartphone use were statistically found to be closely correlated.
- ❖ Additionally, a substantial association between social media in general and video gaming was found.

- ❖ The use of technology significantly predicts engagement, self-directed learning, and academic performance.

## **5.2 PRACTICAL IMPLICATIONS OF THE STUDY**

The study's findings have a number of significant implications for management.

The current study lends support to the hypothesis that, despite the fact that students who are "technology natives" are self-motivated, engaged, knowledgeable about and skilled users of modern technologies, it is essential to promote carefully designed pedagogy to boost student engagement and self-direction, which enhance academic performance. Additionally, educators and faculty should consider how to incorporate technologies that promote learning and critical thinking because how and in what contexts digital tools are used is more important than just their existence. Self-directed learners risk getting distracted while acquiring skills if they are not given teacher direction.

The findings above suggest that if empirically tested technology use models are appropriately directed in academic settings and integrated into pedagogical strategies, they may not only improve academic performance, student engagement, and self-directed learning, but they may also lessen negative outcomes. According to research, "technology integrations are fairly beneficial in boosting student engagement" and "inequalities in access to technology have a deleterious influence on student engagement." The use of technology in the classroom has two positive effects on students. First, it encourages them to become active, engaged learners instead of passive ones, which encourages them to take more responsibility for their education.

1. Teaching students how to develop abilities for lifelong learning or self-directed learning may benefit from this study.
2. This study may make a significant contribution to the body of literature since it tackles crucial facets of academic behaviour in the contemporary educational environment-student involvement, self-directed learning, and ICT use.

3. While minimising the negative effects of technology, the empirically supported approach utilised in this study can be used to enhance academic achievement, student engagement, and self-directed learning.
4. This study may contribute something new to the corpus of literature since it tackles important aspects of academic conduct in the contemporary learning environment-student involvement, self-directed learning, and ICT use.
5. While minimising the negative effects of technology, the empirically supported approach utilised in this study can be used to enhance academic achievement, student engagement, and self-directed learning.
6. It can be utilised as a potent educational and pedagogical tool to encourage student involvement, academic success, and the willingness to take responsibility for one's own learning in today's technologically advanced generation.

### **5.3 LIMITATIONS AND FUTURE DIRECTIONS**

The research has illuminated the complex relationships between the ideas of student involvement, self-directed learning, academic success, and technology use. Even if the data hint at many different avenues for additional research, there are certain limitations. The only GPA that may be used to gauge academic success is one that is self-reported. Even though this pattern frequently appears in many research studies, it is not always indicative of academic achievement or all-around learning. Future studies might look at measures of learning in addition to GPA.

For student engagement and learning, organisational elements and teacher involvement are equally crucial. In order for students to succeed in their ambition to become self-directed learners, Silen and Uhlin (2008) underlined that "students require challenges, encouragement, and feedback and consequently demand constant attention from faculty."

Future studies may include faculty roles and organisational characteristics to provide further insights and a deeper knowledge of the research. Additionally, it can make use

of particular technologies to improve learning autonomy, student engagement, and academic performance.

Future studies might take into account experimental design, particularly pre- and post-experimental design, as the current study is correlational and simply establishes association. Research samples from other educational institutions that comprise students from a variety of fields are recommended in addition to the sample of the study that only included management students.

In addition, this study is vulnerable to problems with self-reported data. Future research may employ a multi-method strategy.

## **5.4 DISCUSSION**

The current study aims to determine the relationships between management students' media and technology use, academic performance, student engagement, and self-directed learning. According to the report, respondents used smartphones the most frequently, followed by email, internet searches, text messaging, general social networking, and media sharing. The study's findings are equivalent to those of Hampton et al. and Rosen, Mark Carrier, et al (2011). The results support the first hypothesis by showing a weakly negative relationship between student engagement, media and technology use, and academic performance. These findings are consistent with Uzun & Kilis's (2019) study, which found that media usage is a factor in decreased academic performance.

The subscales of media and technology use found that internet surfing, emailing, sharing media, playing video games, and using smartphones were all strongly and negatively correlated with academic achievement. The technology subscales' non-significant and unfavourable results suggest that students lack the productive abilities required to use these tools in a way that boosts their academic achievement (Dunn & Kennedy, 2019a). In light of this study, educators should concentrate more on making effective use of technology in the classroom.

The aforementioned hypothesis aimed to determine how much technology use predicts student engagement, self-directed learning, and academic success. Three

different multiple regressions were run to test this hypothesis. The results showed that technology use significantly predicted academic success, independent learning, and engagement.

The study's findings imply that a technology use model needs to be experimentally tested before being applied to teaching methods and the academic environment. Doing this might enhance academic performance, student engagement, and self-directed learning, in addition to avoiding any negative effects. According to evidence from previous studies, technology integrations "are fairly beneficial in enhancing student engagement" (Hancock & Betts, 2002). Students learn more, become more engaged and active learners, and, at the same time, take greater responsibility for their education when technology is integrated into academics and the learning process.

## **5.5 CONCLUSION:**

Educational institutions all over the world are looking for workable ways to include self-directed learning or lifelong learning in the classroom in order to increase student engagement and learning. This multivariate study will add to the body of knowledge by examining the connections between a variety of academic behaviours that are essential in today's educational situations, such as the use of technology, student involvement, self-directed learning, and academic accomplishment.

The findings are considered from the standpoint of inference based on the body of literature, and it is crucial to support the notion that new constructs should be explored to explore technology use and facilitate a better understanding of how it can be used as an effective learning tool to augment academic achievement as opposed to the advancement of student engagement and enhance self-directed learning among today's technology-driven generation of students.

The first objective in the present research study was to determine the impact of ICT on student academic performance. Considering the third hypothesis, result indicated a negative significant relationship between academic performance and media and technology usage. This result is consistent with previous research Wentworth & Middleton, (2014) indicating that heavy media usage relates to higher level of multitasking and lower level of academic performance. Also the subscale of media

and technology usage like Smartphone Usage, General Social Media Usage, emailing, Media Sharing, Video gaming and Internet searching were insignificantly and negatively associated with academic performance.

The second objective in the present study was to determine the impact of ICT on self-directed learning which was found to be significantly and positively related with each other. The possible explanation of the outcome is that students are self-motivated, engaged, proficient with and skillfully navigate through the modern technologies.

As per the third objective which was to determine the impact of ICT on student engagement. It was found in the study that technology use significantly predict engagement. The possible explanation of the outcome is that modern educational interactive technology enhances the learning process.

The last objective is to examine the interrelationship between technology use, student engagement, self-directed learning and academic performance. Findings demonstrated that technology use predicts self-directed learning, and student engagement, but has a negligible overall relationship with academic performance. There could be two possible explanations of these outcomes:

- ❖ 1) Students though engaged with varied kind of technology may not necessarily be using technological skills for academic purpose.
- ❖ The high frequency usage and multitasking may be leading to distractions and shortage of time for academic task respectively.

It could be concluded from the results of this study that it is very important to empirically test the model of technology use before implementing and incorporated it in academic environment and also in pedagogical strategies.

And also by this way one can not only eliminate the negative outcome but also may improve academic performance, student engagement and self- directed learning.

Integrating technology into academics and also in the learning process brings lots of benefits to the students: they receive knowledge and become active and engaged learner and at the same time become more responsible for their own education.

COVID-19 pandemic initiated an extensive and dramatic transformation in the society. The pandemic forced us to take an extraordinary digital leap in the education sector.

We should also be more active in preparing the society for digital transformation.

### **SIGNIFICANCE OF THE STUDY**

- This study may be used to inculcate the self –directed learning skills or lifelong learning skills among students.
- As this study is exploring important constructs (student engagement, self-directed learning and ICT use) of academic behaviour in today’s educational setting, it may provide unique contribution to the existing literature.
- The empirical tested model of this study can be used not only to enhance academic performance, student engagement and self-directed learning, but may also be used to reduce the negative outcomes of technology.
- It can be used as an effective educational and pedagogical tool to enhance academic achievement, and student engagement and to promote self-directed learning among today’s technology driven generation of students.

## 5.6 CONFERENCE PARTICIPATION/PRESENTATIONS & PUBLICATIONS IN JOURNALS

- Singh, V., Aggarwal, A.K and Mathur P. (2023). The smartphone in Education: A review of current and potential use among students, Vol. 12, *HIV Nursing 2023;23(3): 412-417*
- Singh, V. and Mathur P. (2020). Women Empowerment through ICT. In Patricia Ordóñez de Pablos. *IT and the Development of Digital Skills and Competences in Education*. <https://orcid.org/0000-0003-1662-2093>
- Singh, V. and Mathur P. (2021). Analyzing the Relationship between Technology use, Student Engagement, Self-Directed Learning and Academic Performance, Vol. 10, *International Journal of Multidisciplinary Educational Research*.
- Singh, V. , Aggarwal, A.K and Mathur P. (2023). Capital structure and its theories, Vol 14 **Journal of Pharmaceutical Negative Results (ISSN: 2229-7723)**.
- Singh, V., Aggarwal, A.K and Mathur P. (2022). Brand Positioning Strategies. Vol 15 **Industrial Engineering Journal (ISSN: 0970-2555)**.
- Workshop on Qualitative Data Analysis through Atlas-Ti, Swami Vivekanand Institute of Management, Mumbai (2020)
- Workshop on AMOS & SPSS at MNIT, Jaipur (2020)
- Leadership capacity building and enhancement of teaching skills workshop (December 2009), Infosys Ltd.
- Research & Developments in Engineering & Management- 2nd ICRDEM-2022
- Organized by International Institute of Research in Multidisciplinary-Skill Development Trust, Chirala, Bapatla, Andhra Pradesh, India::Date: 30 - OCTOBER – 2022.