AN EXAMINATION OF THE INFLUENCE OF STUDENT ETHICS AND DATA PRIVACY ON THE IMPLEMENTATION OF EDUCATIONAL TECHNOLOGY.

Wang Ziheng, Nidhi Agarwal

[1] Lincoln University College, Petaling Jaya, Malaysia.

ABSTRACT

Using EdTech, or educational technology, in classrooms and other learning environments has fundamentally changed things. Realisation of personal goals depends on tailored education, timely feedback, and better access choices. If this digital revolution is to flourish and stay ethical, students have to own responsibility for their education and protect their personal data. How much depends on students' understanding of data privacy regulations and their own ethical behaviour on the acceptance and appropriate usage of educational technology? This work attempts to do that. This study intends to compile data on students' opinions on digital responsibility, how often they confront ethical difficulties like artificial intelligence usage and plagiarism, and how successful self-regulation is in lowering these concerns when using the internet. The link between students' usage of instructional tools and faith in official data management and collection systems is examined in this paper. The data collecting techniques employed in this study include in semi-structured interviews with undergraduate and graduate students from a range of disciplines, survey answers, and interviews with actively involved research participants. Two quantitative approaches of data analysis—theme coding rather than descriptive statistics and correlation—help us to identify ethical concerns and patterns in the qualitative data. One cannot argue against the connection between effective use of technology and self-discipline. When a student understood data privacy rules, their confidence and technological skills grew as well. Including ethical training and open data standards into the educational system would help to safeguard students' personal information and inspire personal responsibility. Teachers and legislators should prioritise the building of a digital classroom that supports student involvement, security, and responsibility to help to address these issues.

Keywords: Student Ethics, Data Privacy, Educational Technology, Academic Integrity, Self-Regulation, Digital Responsibility.

INTRODUCTION

The growing integration of educational technology (EdTech) has pushed many aspects of knowledge—including knowledge accessibility, knowledge delivery, and knowledge assessment—to be reevaluated at academic institutions. Among other things, the choices comprise cloud-based learning management systems and artificial intelligence-driven teaching tools. Still, this fresh development brings a number of challenging issues. The most crucial ones deal with students' ethical issues and safeguarding of their personal data. Although the deliberate or inadvertent use of technology tools could enhance learning outcomes, ethical issues are raised by their usage. Expressed many worries in 2020 including academic dishonesty, over-reliance on automation, and negligent data sharing. Students' cognitive and behavioural obligations in technologically advanced learning environments have to be carefully examined. The mentioned worries lead to the causes behind this. Especially in digital environments, the concepts of self-regulation, responsible digital citizenship, and academic integrity define student ethics at its core. This is particularly true with regard to digital settings. Virtual classes often leave students with moral conundrums.

Among these challenges are instances of plagiarism and unauthorised teamwork as well as the application of generative artificial intelligence technologies to eliminate scholarly quick cuts. Having students make more decisions in their own learning environment exposes these conundrums. Being able to maintain oneself responsible and follow one's moral compass free from outside influence is rather crucial in the modern society. Contends that students who lack self-control are more prone to disobey academic rules, therefore endangering not only their own development but also the reputation of the universities. Along with ethical problems, data privacy is growingly important. Students' interaction with instructional technology tools offered by their respective universities generates a lot of personal and academic data that is collected, kept, and sometimes shared to outside parties. Though there are legal protections like the General Data Protection Regulation (GDPR) and national privacy regulations, some students still lack knowledge on what their data is being used for or what happens should they provide consent without being fully informed. Students have to be aware of their own rights and obligations surrounding digital privacy if they are to have trust in educational technology businesses and schools. Trust and these things are connected in ways that go beyond mere mutual openness.

This study aims to investigate the extent of influence students' awareness of data privacy and ethics has on the general popularity and usage of educational technology. The main focusses of the study will be learning technologies acceptance and adoption. The major objective of this study is to find out how individuals usually behave and think so that ethical norms might be included into the usage of educational technology either more or less difficultly. This research will look at students' viewpoints, experiences, and actions in order to offer evidence-based

views on how educational institutions could help the evolution of ethical conduct and privacy literacy among them (Gujjula & Sanghera, 2023)

Fundamentally, the success of educational technology depends on the commitment of people who use it in an informed and ethical manner as much as on the excellent tools themselves. When the line separating the virtual and real classrooms blurs, a student's ability to make decisions for which they are personally accountable becomes absolutely vital. If the researcher is to build a secure and responsible online learning environment, the researcher must provide students with the knowledge and skills to handle ethical quandaries and concerns about data privacy (Greenhalgh & Barriage, 2023).

BACKGROUND OF THE STUDY

In recent years, educators and school administrators have been fast to embrace Ed Tech—that is, educational technology—as a tool to simplify processes and raise student learning outcomes. Two of the several benefits of using educational technology are customising of learning and increase of productivity. New technology does, however, bring serious ethical and privacy issues that must be sufficiently resolved. The growing use of technology in educational environments has resulted in a rise in the variety of issues concerning student behaviour. Illustrations of these issues are plagiarism, cheating, and the illicit use of internet-found materials. Apart from questioning the accuracy of students' academic performance, these issues compromise classroom environment and endanger students' confidence in their own work. There are legitimate privacy issues about student information as educational technology systems compile, retain, and apply data so widely. For all those engaged in the implementation of educational technology, including legislators, knowledge of the complex link between student ethics and data privacy was absolutely essential. To get beyond these challenges, a thorough review of the rules, procedures, and ethical guidelines controlling the incorporation of technology into learning environments was needed. One important ethical issue was looking at the issues students had navigated the online classroom. Among these challenges are issues with honesty and integrity and concerns about the inappropriate use of technology. The gathering, storage, and security of student data by educational technology systems; more especially, how these systems ensure conformity to privacy rules and standards (Huang, 2021)

The motivation for this study was looking at how data privacy regulations connected to student participation, academic success, and their application. In order to encourage ethical conduct among students and ensure the confidentiality of their data, researchers provide the following advice and recommendations for the use of educational technology to legislators, educational institutions, and teachers. With any chance, this study will clarify some hitherto undiscovered information and offer some answers to the issues afflicting the data privacy and ethical standards in

educational technology. The researchers concentrated mostly on these qualities, which also reflect the intended outcomes of the investigation. The main objective of the project was to create a reliable online classroom able to house every student (Lachheb, 2021).

PURPOSE OF THE RESEARCH

The researchers set out to investigate the issues of what students should and shouldn't do with their personal information when utilising instructional technology in the classroom. The aim of this study is to evaluate the possibilities and hazards connected to data security and the development of ethical conduct among students in settings of educational technologies. Review of present policies and procedures helped to achieve this. The outcomes not only enhanced the awareness of the best practices but also affected those practices, therefore motivating students to use technology in the classroom in a responsible, safe, and private environment.

LITERATURE REVIEW

In the past, educational institutions would evaluate yearly the proportion of graduates as well as those still enrolled. Teachers would compile this data based on classroom discourse and student grades. Although using data is not a new concept, learning analytics is becoming more and more popular as a result of several related issues gathering together. Among these subjects are the volume of data being collected, the capacity for storage, the processing capability of institutions, the types of visualisation tools at hand, and the necessity of big data analysis and application. Since "the quantification, measurement, comparison, and evaluation of the performance of institutions, staff, employees, and the sector as a whole is intensifying and expanding rapidly" learning analytics has become a vital tool in the field of higher education.

Learning analytics is the measuring, collecting, analysis, and reporting of data about learners and their environments, for understanding and improving learning and the environment in which it happens. A company with a Chinese headquarters this is a somewhat popular and well-known application of the term that denotes this particular interpretation of the statement. Schools have to create regulations to guarantee that students are implementing the recommended strategies in the classroom as learning analytics is becoming more and more important. Track most importantly truthfulness and trust-building, data practicality, access assurance, and privacy protection. Institutions should pay great attention to the four policy issues the Data Quality Campaign emphasises on the application of learning analytics. Among the various general phases in learning analytics are data collecting, data merging from several sources, pattern detection, data-based decision-making, result interpretation, and model update.

For one instance, learning analytics is a complex process consisting of various broad operations. Clow visually shows the Learning Analytics Cycle within the scope of his research. Companies can change their operational strategy after these overall guidelines are set. (Mutimukwe, & Cerratto-Pargman, 2021).

RESEARCH QUESTIONS

To what extent do self-regulation skills influence students' effective use of educational technology platforms?

RESEARCH METHODOLOGY

RESEARCH DESIGN

The quantitative data analysis was conducted using SPSS version 25. The odds ratio and 95% confidence interval were used to ascertain the strength and direction of the statistical link. The researchers developed a statistically significant criterion at $p < 0.05$. A descriptive analysis was performed to determine the key characteristics of the data. Quantitative approaches are often used to evaluate data obtained from surveys, polls, and questionnaires, as well as data modified by computational tools for statistical analysis.

SAMPLING

Research participants filled out questionnaires to provide information for the research. Using the Rao-soft programme, researchers determined that there were 830 people in the research population, so researchers sent out 930 questionnaires. The researchers got 900 back, and they excluded 20 due to incompleteness, so researchers ended up with a sample size of 880.

DATA AND MEASUREMENT

A questionnaire survey served as the principal tool for data gathering in the study. The survey had two sections: (A) General demographic information and (B) Responses on online and offline channel variables assessed using a 5-point Likert scale. Secondary data was obtained from many sources, mostly on internet databases.
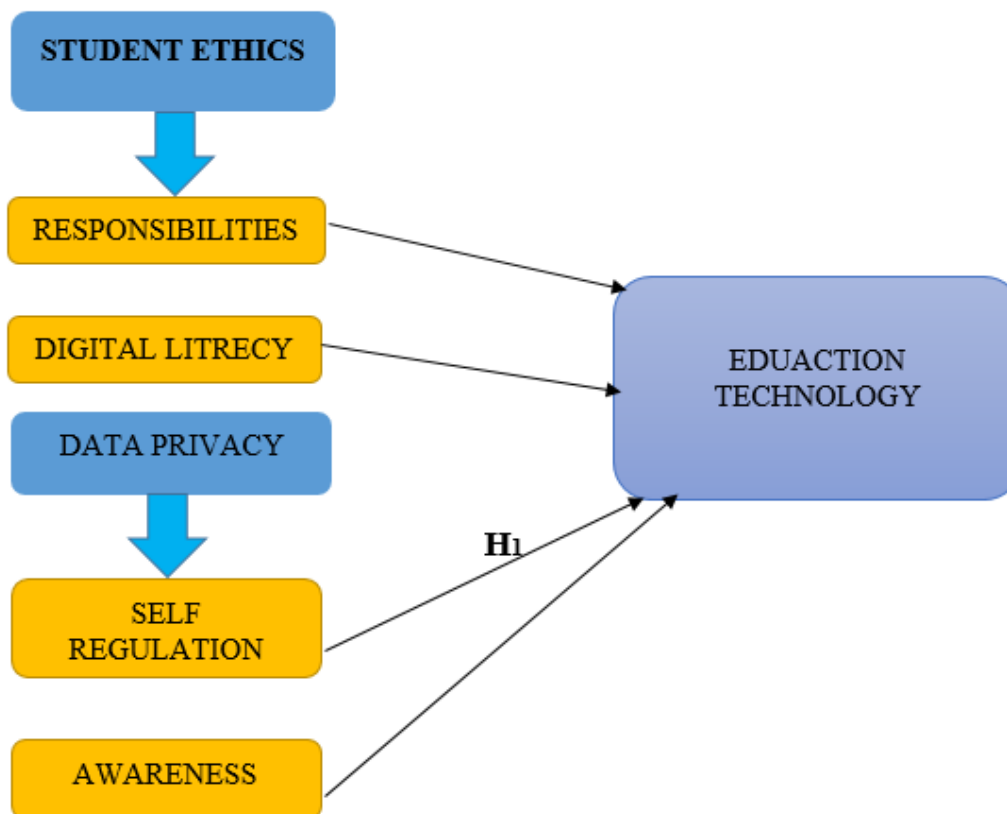
STATISTICAL SOFTWARE

The statistical analysis was conducted using SPSS 25 and MS-Excel.

STATISTICAL TOOLS

To grasp the fundamental character of the data, descriptive analysis was used. The researcher is required to analyse the data using ANOVA.

CONCEPTUAL FRAMEWORK

RESULT

Factor Analysis: A common use of Factor Analysis (FA) is to uncover latent variables within observable data. In the absence of definitive visual or diagnostic indicators, it is customary to use regression coefficients for evaluations. In FA, models are crucial for success. The subjectives of modelling are to identify errors, intrusions, and discernible correlations. The Kaiser-Meyer-Olkin (KMO) Test is a method for evaluating datasets generated by multiple regression analyses. The model and sample variables are confirmed to be representative. The data indicates redundancy, as seen by the figures. Reduced proportions improve data comprehension. The KMO output is a numerical value ranging from zero to one. A KMO value ranging from 0.8 to 1 indicates a sufficient sample size. The below quantities are considered suitable, according per Kaiser: The subsequent approval standards established by Kaiser are as follows:

A lamentable 0.050 to 0.059, insufficient 0.60 to 0.69

Middle grades often span from 0.70 to 0.79.

Exhibiting a quality point score between 0.80 and 0.89.

They are astonished by the range of 0.90 to 1.00.

KMO and Bartlett's Test for Sampling Adequacy Kaiser-Meyer-Olkin statistic: 0.870

The outcomes of Bartlett's test of sphericity are as follows: The degrees of freedom for the chi-square test are around 190, with a significance level of 0.000.

Table 1: KMO and Bartlett's Test.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.870
Bartlett's Test of Sphericity	Approx. Chi-Square	3252.968
	df	190
	Sig.	.000

This illustrates that claims made for sampling reasons are valid. Researchers used Bartlett's Test of Sphericity to assess the significance of the correlation matrices. A sample is deemed good based on the Kaiser-Meyer-Olkin criteria when the result is 0.870. The p-value derived from Bartlett's sphericity test is 0.00. The correlation matrix is not an identity matrix, as shown by a statistically significant outcome from Bartlett's sphericity test.

INDEPENDENT VARIABLE

Data Privacy: When people talk about data privacy, they usually mean the ability for individuals to choose for themselves how, when, and to what extent their personal information is shared or disclosed. Personal information might include things like a person's name, address, phone number, and actions taken in person or online. Like someone who wants to keep others out of a private discussion, many internet users want to limit or stop various forms of personal data harvesting. More and more people are using the Internet, making data privacy an increasingly important issue. Websites, applications, and social media platforms occasionally need to collect and store user personal data in order to provide services. Meanwhile, certain apps and platforms may gather and utilise more data than users anticipate, compromising their privacy more than they realise. A data breach putting customer privacy at risk occurred because other apps and platforms did not adequately secure the information they collected (Sheridan, 2022).

FACTOR

Self-Regulation: In the scholarly context, self-regulation is the ability to regulate one's own actions and emotions and evaluate their effectiveness. Children must learn self-regulation if they are to act ethically. Under autonomous or semi-autonomous learning environments, students must participate ethically in digital

platform interactions by controlling their own conduct. With relation to instructional technology, this is quite crucial. Since students are more prone to participate in unethical activities such digital plagiarism, unauthorised collaboration, and misuse of EdTech tools and often have less direct supervision, there has to be greater internal control with the rising use of EdTech tools. Students will most certainly participate in these events.

Good self-regulating students are more likely to use digital learning resources in a moral and beneficial manner. These students not only avoid using instructional devices but also effectively schedule their time, create personal goals, and resist distractions. Students who lack self-regulation, on the other hand, might find trouble depending too much on platforms that offer quick responses, multitasking too much, and sharing data without fully understanding the privacy ramifications. Self-regulation may be a major challenge especially in online environments where fast satisfaction—like obtaining rapid answers or help—is at one's hands. The prevalence of this phenomena begs one to question how long it will be until ethical judgement and autonomous learning show signs of development. Essential is learning when and how to securely and ethically share personal information as well as the required abilities to execute such disclosures effectively.

Crucially, teachers and online learning settings have greatly helped the concept of self-regulation to flourish. Using time management reminders, integrity checks, and privacy awareness courses will assist to build a responsible society. Encouragement of introspective activities helps students to develop their capacity to act morally and in line with data privacy standards. Two such tools are digital self-assessments and learning diaries.

Learning to self-regulate is crucial for one to be ethical in online classes. The development of these inwardly centred competences is intricately related to academic accomplishment, data security, and the creation of a responsible digital culture; thus, their cultivation is essential in view of the exponential expansion of educational technology (Utter et al., 2021).

DEPENDENT VARIABLE

Education Technology: Many long-established educational institutions have adopted contemporary pedagogical practices to better assist their students in the digital age. Recognising the importance of technology in education is an important first step. Which highlights the significance of audio-visual devices such as computers, recording media, and television. The skilful use of so-called hardware, new media, and machine industry procedures in the service of education is therefore the focus of educational technology. It is now obvious that the methodical use of technology to accomplish a goal is just as crucial as the technology itself. The software component of educational technology has progressed to a critical degree;

specifically, it is now helpful in integrating behavioural practices, or in other words, in finding solutions to difficulties related to encouraging learning and motivation. More important than just purchasing the necessary gear or software is the most popular understanding of educational technology in the modern day (Mutimukwe et al., 2021).

Relationship between Self-Regulation in Education Technology: In the always shifting sector of educational technology, the need of self-regulation in forming students' learning outcomes and ethical behaviour has become more important. This is resulting from the always shifting terrain of instructional technology. Self-regulation is the capacity of students to manage their own mental, emotional, and behavioural processes so as to achieve their academic objectives. Most classes need students to be able to work independently; so, they are expected to show mastery of self-control, time management, and decision-making in these contexts. Human potential becomes more valuable when it is included into the classroom as instructional technology raises the likelihood of student success all through the learning process. Students may access a multitude of materials including thorough knowledge, interactive tools, and tailored learning plans by means of instructional technology platforms. If students wish to maximize the flexibility these systems provide, they must be more proactive in their own learning. When it comes to defining and fulfilling academic goals, tracking their development, and adjusting their approach in response to comments made on different online forums and blogs, students who can control their own learning typically exceed their classmates. This dynamic connection helps students to participate actively in their educational path. This promotes ethical behaviour and responsibility among them, which improves the efficacy of their education.

Furthermore, to consider is the tight link between the ethical application of educational technology and its self-regulation. Using digital surroundings exposes students in circumstances compromising their academic honesty. In these circumstances, students might violate privacy rules or steal data, therefore compromising their integrity. Good self-controllers are more likely to be honest and thoughtful of others' personal information since they make wise selections. Lack of self-control can lead to problems like academic dishonesty, data abuse, and enhanced exposure to breaches of digital ethics. Regular self-regulation helps these circumstances to be avoided. The degree of digital literacy of an individual and the tools their institution provides help to manage the relationship between self-regulation and technology tools for learning. If students receive direction on how to utilize digital tools correctly while simultaneously being aware of ethical problems, they are more likely to grow both technologically competent and morally conscious as they go through their education. This two-pronged strategy develops individuals' capacity for self-directed learning as well as helping them become better digital citizens. Everyone engaged stands to benefit from this.

As said already, instructional technology has a major influence on students' ethical behaviour and capacity for self-regulation. This ensures that technology is applied in a way that advances ethical responsibility and academic success. Teaching pupils how to securely negotiate difficult digital environments without sacrificing their freedom and dignity helps them to do this. Subsequent to the above debate, the researcher proposed the following hypothesis to analyze the link between Self-Regulation in Education Technology (Balash et al., 2021).

Subsequent to the above debate, the researcher proposed the following hypothesis to analyze the link between Self-Regulation in Education Technology.

H_{01}: **There is no significant relationship Self-Regulation in Education Technology.**

H_1: **There is a significant relationship between Self-Regulation in Education Technology.**

Table 2: H1 ANOVA Test.

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	39588.620	346	5653.517	1297.869	.000
Within Groups	492.770	533	4.356		
Total	40081.390	879			

This inquiry will provide significant findings. The F value is 1297.869, achieving significance with a p-value of .000, which is below the .05 alpha level. This indicates that the hypothesis "H_1: **There is a significant relationship between Self-Regulation in Education Technology**" is accepted, whereas the null hypothesis is rejected.

DISCUSSION

While technology in the classroom has transformed learning, it has also raised major ethical and privacy issues for the students. Since new technologies are part of their operations, schools have to understand how digital tools affect student behaviour and data management. Known as student ethics, the guidelines controlling students' conduct in the classroom emphasise the requirement of honesty, integrity, and respect of others. Students have to keep in mind to act ethically in a technologically advanced environment while they work on group projects, engage in online discussions, and make use of other digital tools. By acting morally, students foster a positive learning environment that motivates their fellow students to trust and cooperate. Data privacy was still another big concern with educational technology. Growing collection of personal data via digital platforms has made data security, unauthorised access, and probable misuse top concerns. For several reasons—

including the necessity to follow regulations like FERPA and the preservation of the faith of parents, students, and institutions—the secrecy of student information is of the highest relevance. From parents to instructors and children, everyone engaged had a right to know what data was being acquired under whose direction. Regarding instructional technology, the fine balance between student ethics and data security is absolutely vital. When students realised their ethical obligations around data sharing, their interaction with these tools is probably really positive. Their educational opportunities are strengthened and this contact fosters an accountable culture. Furthermore, when data privacy is stressed in schools, children feel safe, which increases their involvement and inspiration in the classroom. Still, this environment might offer various challenges. Unintentional intrusions of privacy might happen as many students might not know the moral weight of their online behaviour. Moreover, schools might run across resistance while using new technology, particularly in cases of uncertainty over data handling. If schools take data privacy and ethical technology use very seriously, both teachers and students might gain from training on these topics. Maintaining everyone in the loop mostly depends on a culture of accountability and well-defined policies. With technology developing so quickly going forward, constant education regarding data privacy and ethics become more and more important. Schools should encourage discussions on these subjects so that kids could grow to have agency and control over their online selves. By stressing ethical behaviour and data protection, educational institutions may help to better integrate technology into classrooms. This finally produced for every kid safer, more interesting classroom. Ultimately, while adopting instructional technology, one must give student ethics and data protection first priority. Giving these elements great thought will help educational institutions create an environment that supports creativity while simultaneously safeguarding student rights and welfare.

CONCLUSION

At last, regarding the application of educational technology, there existed a complicated but necessary link between student ethics and the protection of their data. Establishing a strong feeling of ethics in every student is very crucial given the growing dependence on digital tools to improve learning by educational institutions. This paradigm not only enables students to behave in the digital world responsibly but also creates a polite and honest classroom atmosphere. It was most important to guarantee that private and safe information about pupils is maintained. When people trusted their data was managed with integrity and openness, they were more likely to embrace educational technology. This covers parents as well as the pupils. In the end, this kind of participation improves education and gives pupils the tools they need to succeed in the modern digital economy. Effective implementation does not, however, come without difficulties along the route. Educational institutions should provide constant education and open communication top priority as the possibility for progress might be limited by ignorance of ethical obligations and data

privacy. Making sure that teachers and students have access to the tools required for their achievement is one of the best ways educational institutions might encourage responsibility among them. Adopting a proactive stance on data privacy and ethics become rather essential going ahead. This guarantees not only that kids be responsible members of the digital community but also gets them ready for the academic and career paths they will follow down road. By doing this, schools would be able to provide kids safe surroundings where they may learn and also take use of technology without violating their rights or endangering their security. In the framework of a society going more digital, education's future was built on a solid basis of ethical standards and data security needs.

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