

FIJI YEAR 12 CERTIFICATE
EXAMINATION
ENGLISH RESEARCH PROJECT



Names: Krishal S. Sharma, Dhruv Kumar, Ronish R. Nand, Gaurav A. Kumar

Year Level: 12A

School: Penang Sangam High School

Addressing Teacher: Mrs. Komal. K. Pal

Theme:

DIGITAL TRANSFORMATION IN EDUCATION

Topic:

**TECHNOLOGICAL ADVANCEMENT IN
EDUCATION AT PENANG SANGAM HIGH
SCHOOL, RA**

AIM

This research anticipates validating the need for Technological Advancement in education at Penang Sangam High School

OBJECTIVES

This study will:

- Identify the reasons digital transformation is desired at Penang Sangam High School.
- Identify the value of transformation and technological advancement at Penang Sangam High School.
- Address the obstacles hindering the digital transformation goals at Penang Sangam High School.
- Promote measures that could facilitate the implementation of digital transformation at Penang Sangam High School.

ACKNOWLEDGEMENT

Presentation, inspiration and motivation have always played a key role in the success of this venture. At the outset, we would like to extend our sincere and earnest gratitude towards all who have assisted us in this endeavour. We would not have completed this project without their positive guidance, cooperation and encouragement.

First and foremost, we are grateful to the Almighty Lord for showering us with the strength and knowledge needed for the compilation of this project

We are unutterably indebted to our English teacher, Miss. Komal Pal for her diligent guidance and encouragement to accomplish this research project.

We also acknowledge, with a deep reverence, our obligation towards our parents and family members who have supported us every step of the way. Likewise, we are highly grateful to the respondents of the written questionnaire for taking their valuable time to answer the questions.

Finally, any omission in this brief acknowledgement does not mean a lack of gratitude.

METHODOLOGY

This research project was completed using the following research tools:

Primary research

Questionnaire Survey

Ten questionnaires that included eight questions each were equally distributed among individuals which were students and staff of the institution. Five questionnaires were given to students and others were given to teachers. Likewise, to avoid gender discrimination, the questionnaires were equally divided between male and female staff and students. Initially, only eight questionnaires were fully answered out of ten that were given out. The questionnaires were kept safely for further reference.

Secondary Research

Internet Research

The Internet plays a vital role in the collection of relevant information. Google Scholar and other platforms were accessed for gathering and accumulating facts and figures from various articles. This research was carried out regarding the importance, advantages and disadvantages of digital transformation in education.

DECLARATION OF ORIGINALITY

We the undersigned, declare that this project is entirely our work and that any additional source of information has been duly cited.

Name: Krishal Suhan Sharma

Signature:

Name: Dhruv Kumar

Signature:

Name: Ronish Ravineshwa Nand

Signature:

Name: Gaurav Aryan Kumar

Signature:

Date of submission: 11/07/2024

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1.0 INTRODUCTION

In today's modern society, technological advancement is being supplemented in schools nationwide. Numerous forms of teaching methods have been introduced involving the use of computers. Digital transformation enhances the students' knowledge at a faster pace compared to traditional methods of teaching and learning.

Penang Sangam High School, situated in the province of Ra with more than 700 students, has adopted modern teaching techniques and innovative learning. Hence, the implementation of practices and education regarding technological advancement at Penang Sangam High School can be seen as a tactic towards the progression of Fiji at large. The implementation of technological advancements transcends conventional limits by facilitating collaborative learning experiences and fostering pupils. Teaching methods such as E-learning (electronic learning) can improve the knowledge capacity of students struggling to cope with the current learning methods. According to **Couros (2019)**, technology will not replace teachers but can be transformational in the hands of great teachers. During COVID-19 (Coronavirus 2019), students of Penang Sangam High School were given the opportunity to continue with their syllabus as teachers were uploading regular assignments and conducting online classes. **Ivar et al. (2020)** stated that the digital transformation pushed online learning forward during the coronavirus pandemic concerned children and their basic education.

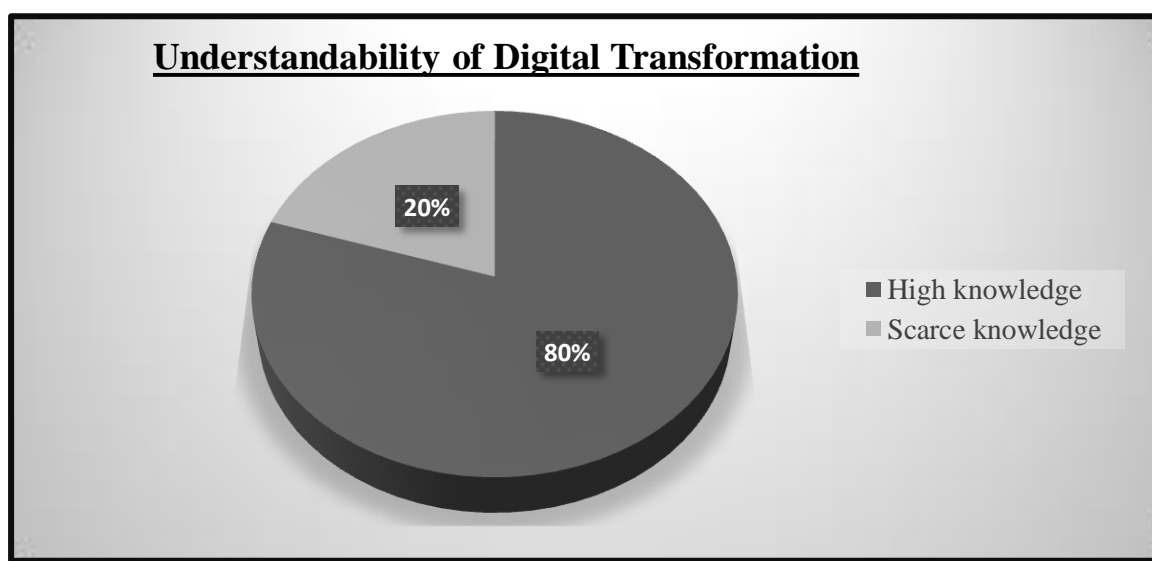
Throughout the journey of any survey and research, some hurdles hinder the progress of the study. However, the problems were accommodated with solutions and ideas. This project encountered many limitations and delimitations. The limitations were discovered in the following ways; the questionnaires were given to several candidates but a few individuals did not respond to the questionnaires. The time was also a problem as we had to keep up with other subject activities and notes. Lack of resources was one of the main concerns as enough resources were not provided on time. On the other hand, the team cooperated in a positive manner and with their support the completion of the project was achieved.

2.0 ANALYSIS OF FINDINGS

2.1 Definition of Digital Transformation

Digital transformation is adapting to technologies that revolutionise traditional methods into modern learning practices. Technological advancement has impacted the educational field in an optimistic manner such as improvement in learning outcomes. From the survey conducted 80% of respondents have a variety and quality information about digital transformation and the other 20% have scarce and minimal ideas about educational transformation

Fig 1.0 Understanding Digital Transformation



(Source: Questionnaire survey, 2024)

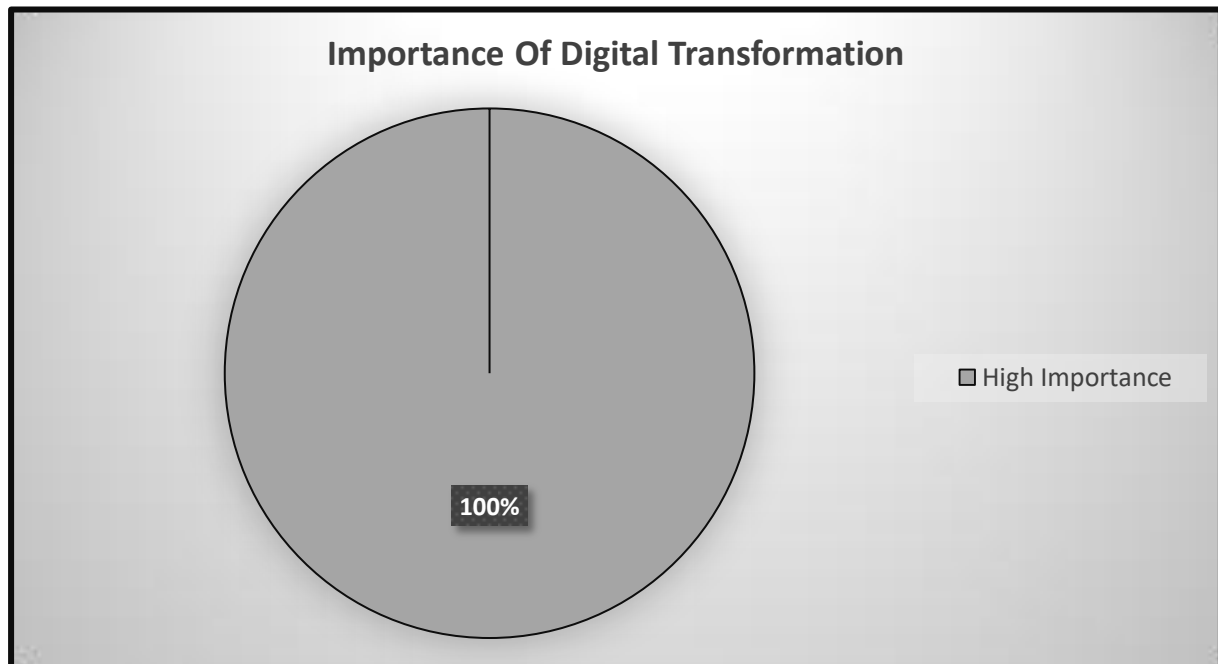
Bilyalova et al. (2019) stated that digital technology in the modern world is not only a tool, but also a living environment that opens up new opportunities: learning at any convenient time and continuing education. The evolution of digital innovation has staged education from blackboards to stand-alone projectors broadening students' learning skills across several schools to curb social and economic challenges. Such a Transformation enhances personal skills and knowledge which can be implemented to improve quality of life.

The process of spreading the importance of digital transformation in education can be achieved by creating awareness in schools in different districts and provinces by exposing students and teachers to various technological methods and gadgets that are available for use in teaching. Another alternative can be that the government must provide grants or subsidies for acquiring electronic devices in schools.

2.2 Importance of Digital Transformation

The digitalisation of educational systems and processes has led to positive changes for the educated and the educators, including accessibility to computer resources and improved participation and learning which enhanced the students' academic performance. From the questionnaire survey results, 100% of the respondents could recognise the importance of digital transformation.

Fig 2.0 Importance of Digital Transformation



(Source: Questionnaire Survey, 2024)

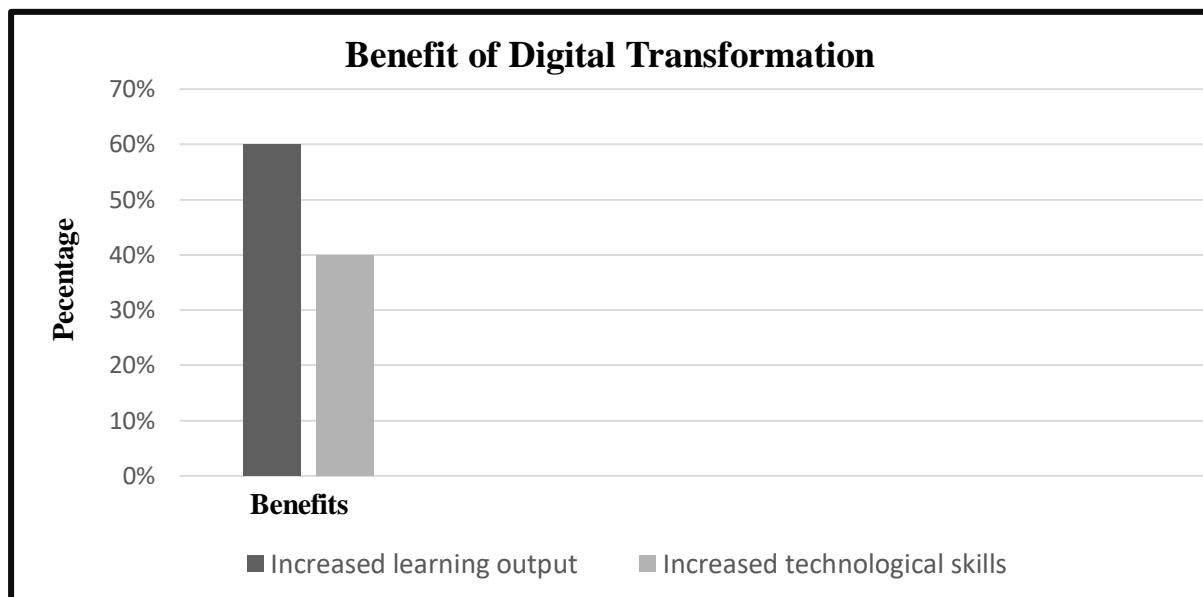
According to **Bogdandy et al. (2020)**, the integration of digital solutions into the curriculum of students indicates a positive and important process of digital transformation. The effectiveness and efficiency of the learning system have improved through the increasing contribution of digital technologies in the education sector. Improved learning methods have enhanced the quality of ideas and also developed the interpersonal skills of students.

The digitisation of the education system necessitates an increased emphasis on technology in teaching methods. Various digital tools need to be utilised by teachers to distribute interactive content, which can enhance understanding of concepts and illustrate real-world applications, providing firsthand experience. Training educators in the implementation of digital methods within teaching practices can enhance both the professional development and that of the students.

2.3 Benefits of Digital Transformation

Digital transformation in education provides numerous benefits that can enhance teaching, learning, and administrative processes. By enhancing entry, stability, productivity, and effectiveness in every angle of teaching and learning, digital transformation in education can train students for success in the technologically driven twenty-first century. According to the questionnaire poll, almost 60% of respondents said that the benefit was an increase in students' learning output, whereas 40% said that the benefit was an increase in the technological skills of pupils.

Fig 3.0 Benefits of Digital Transformation



(Source: Questionnaire Survey, 2024)

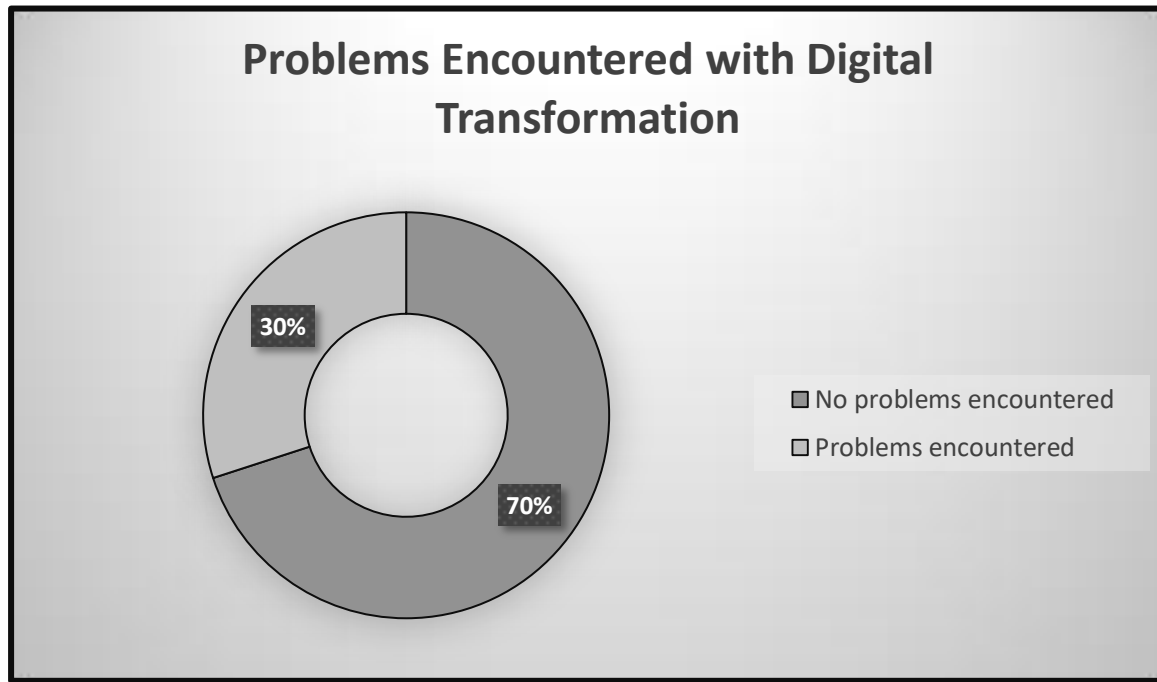
Smith (2021) “Asserts that increased administrative effectiveness, better resource access, and increased student involvement are all results of the digital transformation of education”. Digitalised workflows and data management systems prioritise certainty, speed, and reliability in organisational tasks enabling educators to dedicate more time and resources to guiding and assisting students. In addition to offering diverse learning capabilities, virtual classroom sessions foster a sense of belonging among students.

Furthermore, students who get instruction in the digital age are better equipped for success in the digital nation because they will use impactful digital literacy and abilities. Maximising the benefits of digital transformation in education requires consideration of various tactics and techniques. Educators need comprehensive training and professional development opportunities to enhance their educational careers, digital literacy, and proficiency in using digital devices for learning. Establish forums, such as online groups or professional learning networks, to facilitate collaboration among educators and the sharing of expertise.

2.4 Problems Encountered with Digital Transformation

Several obstacles hinder digital transformation in education, including inadequate framework, unequal access to digital devices, resistance to change from collaborators, and concerns regarding data security and privacy. According to the poll, 70% of respondents reported no issues adopting new technologies. However, 30% of the respondents indicated significant difficulties in adapting to digital technologies.

Fig 4.0 Problems Encountered with Digital Transformation



(Source: Questionnaire Survey, 2024)

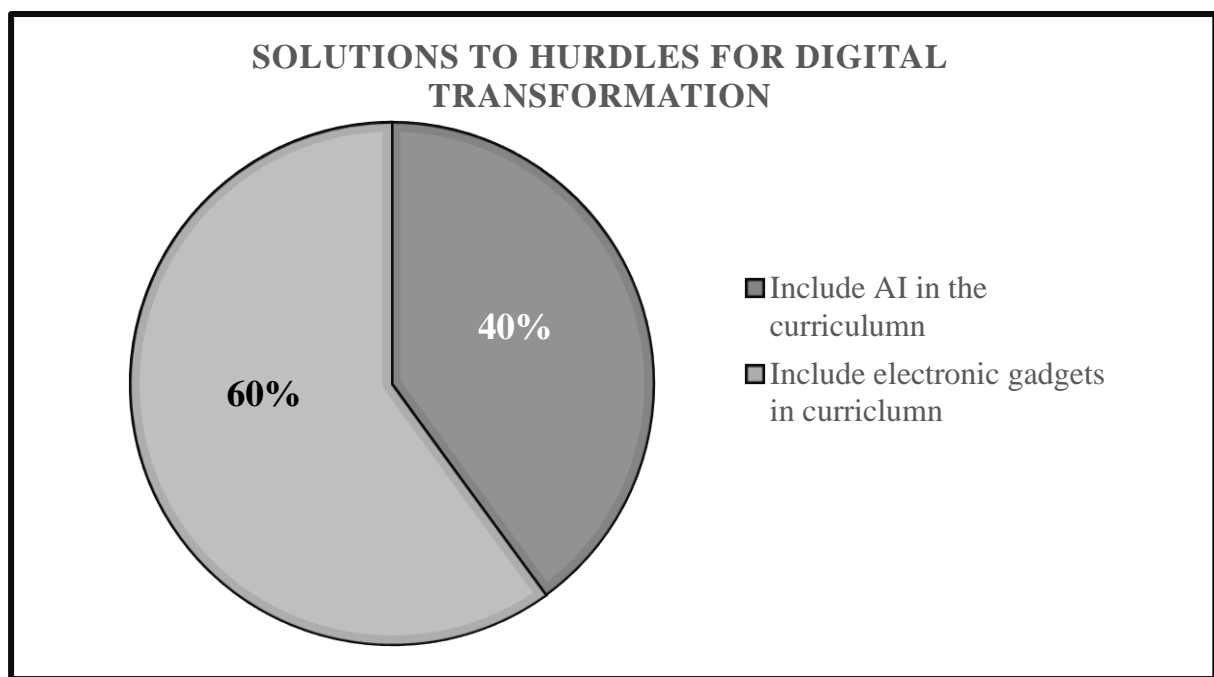
According to **Benavides et al. (2020)**, higher education institutions must undergo a comprehensive evolution to remain essential in the digital era and to avoid obsolescence. The realisation of digital transformation in education faces several significant challenges, including inadequate infrastructure, unequal access to technology, and a digital skills gap between educators and students. Addressing these obstacles requires coordinated efforts from educators, administrators, policymakers, and technology providers, and is essential for ensuring the continued relevance and success of educational institutions in the digital age.

The implementation of digital transformation in education introduces a variety of complex obstacles. Each barrier presents a unique set of challenges to overcome, including issues related to lack of digital literacy, privacy concerns, and resistance to change. However, through strategic planning, collaboration, and proactive measures, educational institutions can effectively navigate these challenges and leverage the transformative power of technology to enhance teaching and learning experiences. By doing so, the groundwork for a more innovative, inclusive, and equitable educational environment in the digital age can be laid.

2.5 Solutions to Hurdles for Digital Transformation

The successful integration of digital tools and methodologies can significantly enhance the learning experience in educational settings. According to survey data, 40% of participants acknowledged the incorporation of Artificial Intelligence (AI) in their learning processes. On the other hand, 60% of respondents advocate for the inclusion of electronic devices in the education system as a viable solution. These findings highlight the growing acceptance and implementation of technology in education. Both Artificial Intelligence (AI) and digital devices are perceived as beneficial additions to the educational landscape, promising to address and potentially resolve existing challenges.

Fig 5.0 Solutions to Hurdles for Digital Transformation



(Source: Questionnaire Survey, 2024)

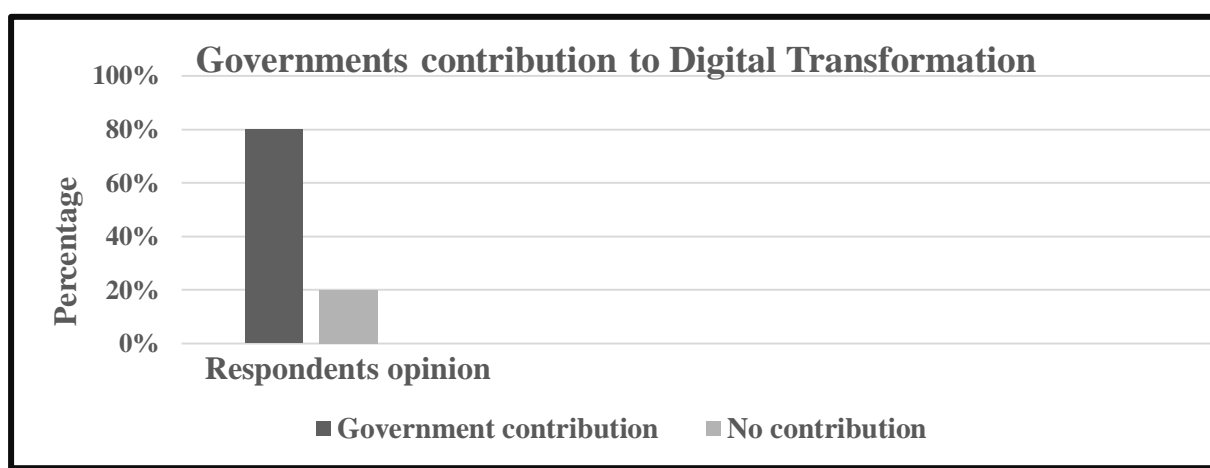
As per **Akour & Alenezi (2022)**, the evolution of internet-based technology has instigated significant shifts in the educational sector, facilitating the digital transformation of colleges and universities. Several factors such as partnership, framework, coaching, management, and curriculum necessitate consideration within the context of education's digital progression. Ensuring equitable access to digital resources, equipping educators with necessary tools, defining data preservation policies, integrating technology into classrooms, and fostering stakeholder innovation are all integral to this process.

The successful technological advancement in education calls for a comprehensive approach that encompasses framework development, teacher support, and curriculum adaptation. By systematically addressing these challenges, educational institutions can effectively leverage technology to enhance learning outcomes. This transformation is pivotal in preparing students for the digital age, thereby ensuring high-quality learning experiences.

2.6 Government's Contributions to Digital Transformation

The government's role is crucial in promoting the uptake of digital education programmes and establishing favourable conditions for using technology to improve instruction and student results. 20% of the respondents indicated on the questionnaire that the institute has received no support from the government in terms of electronic devices or other facilities. That being said, 80% of respondents concur that the central authority has taken action regarding the supply of digital devices and equipment.

Fig 6.0 Government Contribution to Digital Transformation



(Source: Questionnaire Survey,2024)

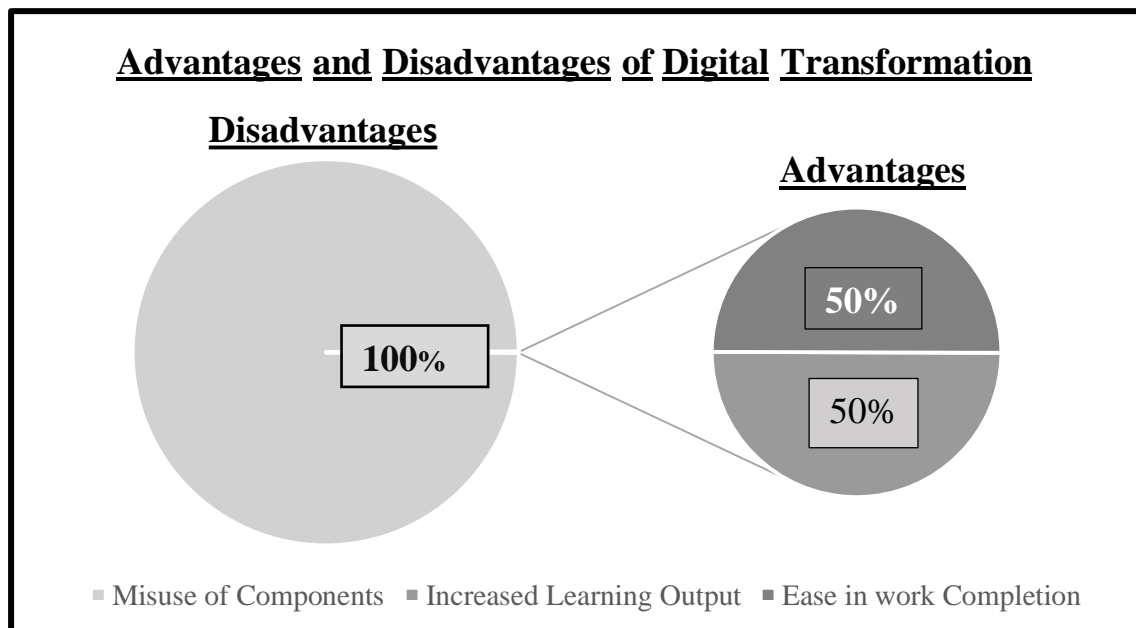
According to **Aminah & Saksono (2021)**, the government sectors have improved service performance and governance to become more accountable, clean, transparent, efficient, and participatory as a result of the rapid advancement of technology. The government's involvement in the implementation of digital transformation programmes can lead to improvement in data processing, provide better services, and increase citizen involvement. Promoting innovation and efficiency in government services and operations includes implementing cutting-edge technology like artificial intelligence, blockchain, and the Internet of Things (IoT).

The government mostly facilitates the implementation of digital transformation in the education sector, through strategic investments, legislative measures, and targeted initiatives. A few ways in which the government contributes towards Digital Learning Resources (DLR), are by collaborating with educational publishers, technology companies, and content creators to develop and provide digital learning resources such as e-books, interactive multimedia materials, educational software, and online courses. Governments create curriculum that are digitally friendly and integrate technological skills, digital literacy, and digital citizenship instruction in collaboration with stakeholders and educational professionals. To incorporate coding, computer science, and other technology-related topics, they might update the current curriculum or create brand-new classes that are entirely devoted to digital skills and competencies. The prestigious Penang Sangam High School has partially incorporated the aforementioned tasks.

2.7 Advantages and Disadvantages of Digital Transformation

The digital revolution in education comes with both benefits and challenges. Digital transformation revolutionises the educational landscape through enhanced accessibility and personalised learning, while also upholding concerns regarding fairness, privacy, and technological barriers. According to the survey data, 100% of the respondents listed the misuse of digital components by a small percentage of users as one of the disadvantages of digital transformation. On the other hand, 50% of the respondents mentioned an increase in learning output, and the other 50% mentioned ease of task completion.

Fig 7.0 Advantages and Disadvantages of Digital Transformation



(Source: Questionnaire Survey, 2024)

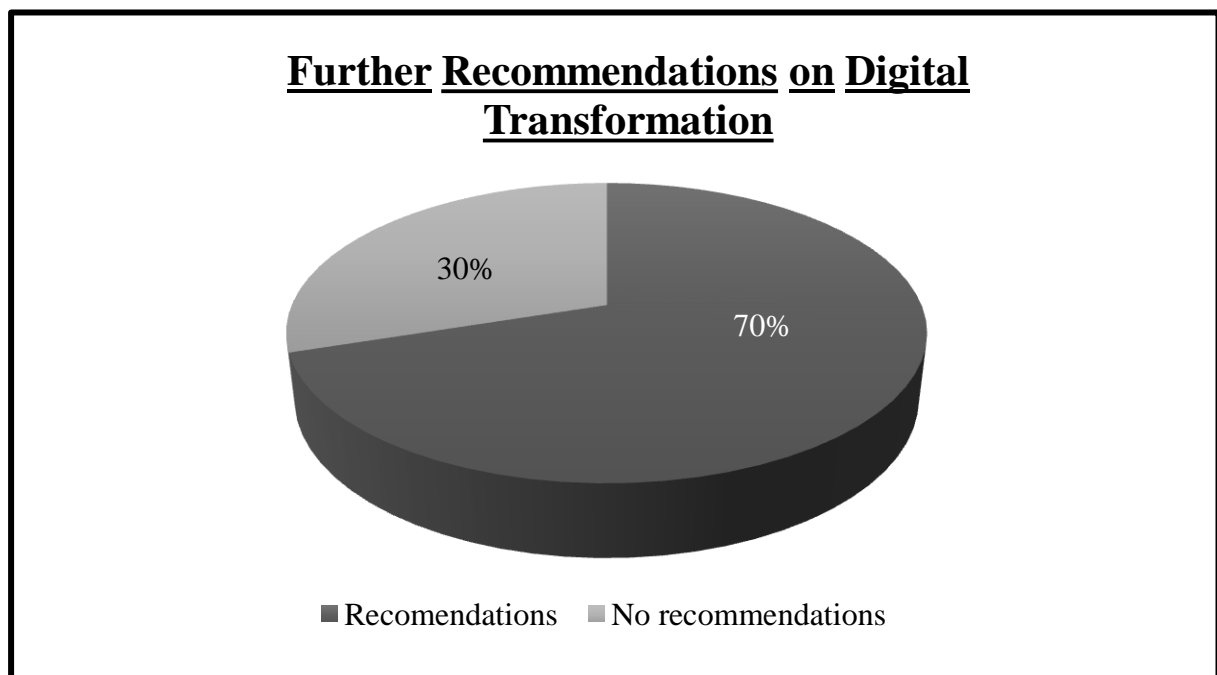
According to **Marchenko et al. (2021)**, the way the educational system is developing nowadays is heavily influenced by the changes occurring in the modern world. Varied methods must be employed in the education domain for accessing information and utilising interactive tools. The application of digital transformation in education holds numerous benefits, including the radical enhancement of accessibility and the stimulation of association between educators and students. Digital development in education does, however, also proclaim several genuine difficulties and disadvantages. However, digital development in education also presents several genuine challenges and disadvantages, which include technological obstacles, reliance on internet access, and the necessity of appropriate technological accessories for effective digital transformation.

Several advantages arise from digital transformation in education, including heightened participation, comprehensive literature, interactive content, and greater availability of educational resources. Nevertheless, ensuring that these conveniences are accessible to everyone requires addressing issues such as equity concerns and technological hindrances. By tackling these issues, a more constructive and broad learning atmosphere for all students can be established.

2.8 Further Recommendations on Digital Transformation

Learning experiences may be transformed, student participation can be expanded, and overall academic accomplishments can be revised using broad access to digital transformation in education. About 70% of those who completed the questionnaire indicated that they had further recommendations, such as improving the ability of the resources delivered, adding more digital amenities to the institution, and enhancing the government's policies. The remaining 30% had no further suggestions.

Fig 8.0 Further Recommendations on Digital Transformation



(Source: Questionnaire Survey, 2024)

Liu (2023) stated that the digital transformation of education is a strategic pillar driving the growth of high-quality education in the current period and presenting a novel idea. A decisive integral of the ongoing educational innovation that is growing the essence of learning and expediting the extension of high-quality education is the digital transformation of education. This shift is a revolutionising concept that could revise how people think about education and advance unique capabilities for teachers, students, and educational institutions.

The higher accessibility of outstanding educational resources is of great importance to the digital transformation of education. Students can approach a variety of educational resources through automated platforms, such as pragmatic simulations, collective intermedia content, and online classes from top schools and teachers locally. More advanced education is being nurtured in the modern era due to a key groundwork that is being brought up by the digital transformation of education, which is more than just a technological advancement. The digital transformation of education promotes commitment to spreading a more inventive, stable, and comprehensive curriculum that benefits all learners.

3.0 CONCLUSION

To conclude this report, implementing digital technologies at Penang Sangam High School has transformed education, equipping students with modern skills, and fostering critical thinking.

4.0 RECOMMENDATION

Technological advancement in education is an essential growth that presents the potential transformation throughout the entire education landscape. Investment in a robust infrastructure, including high-speed internet and fundamental hardware, establishes the groundwork for seamless implementation of digital tools and facilities. Integrating learning practices by blending traditional methods with electronic resources offers flexibility and enhances learning experiences. Numerous e-learning platforms facilitate interaction between teachers and students, and in some cases, educational content is derived from national television shows or social media platforms. Through ongoing assessment and modernisation, academic institutions can generate this transformation pathway, nurturing well-equipped generations with the skills and proficiency needed to thrive in the technological world.

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6.0 APPENDIX

English Project Questionnaire

Name: _____	Age: _____
Gender: _____	Residence: _____
Subject Discipline: _____	Phone Contact (Optional): _____

THEME: “Digital Transformation in Fiji”

TOPIC: “Technological Advancement in Education at Penang Sangam High School”

Questions

- 1) In your own words describe what “Digital Transformation” means.

- 2) What is the importance of “Digital Transformation”?

- 3) How will “Digital Transformation in Education” benefit you?

- 4) Are there any problems encountered in implementing digital transformation?

YES

☐

NO

☐

If yes, state the issues.

- 5) What can be some possible solutions to the hurdles mentioned above?

- 6) How have the government authorities contributed to the implementation of this transformation?

- 7) From your knowledge, what are some of the advantages and disadvantages of this transformation?

Advantages:

Disadvantages:

- 8) Any opinions expressed on this subject will be highly appreciated.

The information provided in this questionnaire will be strictly confidential and will only be used in the completion of this project.

Thank you for taking the time to complete this questionnaire.

Krishal Sharma,
Dhruv Kumar,
Ronish Nand,
Gaurav Kumar.
Year 12A
Penang Sangam High School
2024