Students' Attitude towards General Information and Communication Technology (Study Based on the Tamil Medium Advanced Level Students of Beruwala Zone)

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ABSTRACT

In the 21st century, as Information and Communication Technology stands as a fundamental pillar of education, employment, and social progress, the attitude of Advanced Level students toward the General Information Technology (GIT) subject directly determines their academic performance and future career opportunities. This study was conducted based on descriptive survey and mixed-method research approaches. From a population of 202 Grade 12 students studying in four Tamil-medium schools (Type 1AB and 1C) in the Beruwala Zone, 112 students were selected as a sample based on the Morgan Table. For data collection, questionnaires were used for students and teachers, while interviews were conducted with parents. The collected quantitative data were analyzed using SPSS and Excel software, and qualitative data were analyzed through thematic analysis. The attitudes of students toward the GIT subject are significantly influenced by student-related factors such as personal interest, technical skills, learning motivation, and the progress and barriers to learning GIT ; school-related factors such as teaching methods, resources, teacher support, technology usage, and the lack of technical training and guidance for teachers; and parent-related factors including parental encouragement, technological facilities at home, gender discrimination, and GIT usage. Furthermore, it is confirmed that fluctuations in past GIT examination results, external circumstances, and educational system challenges have also impacted students' attitudes. The study emphasizes the necessity of teaching strategies, educational resource development, and parental awareness to improve students' positive attitudes toward the GIT subject. This research is expected to serve as a foundation for educational planning, policy formulation, and future studies, while providing a useful contribution to the development of GIT skills among Advanced Level students and the country's human resource development. This study recommends that various measures be taken at different levels to address these issues.

Keywords: Advanced Level students, teaching-learning process, technical skills, academic performance

INTRODUCTION

In the 21st century, Information and Communication Technology (ICT) stands as an essential component of education, the economy, and daily life. The ICT subject was introduced into the Sri Lankan school curriculum with the aim of preparing students to face the challenges of the modern world. Specifically, at the Advanced Level, General Information Technology (GIT) exists as a national examination to evaluate students' knowledge and skills. However, the development of technical knowledge in the country is still not at an adequate level. Taking this into consideration, the primary objective of this study is to investigate the attitudes of Tamil-medium Advanced Level students in the Beruwala Zone of the Kalutara Education District toward the General Information Technology subject.

BACKGROUND

Education is essential for developing the potential of an individual, enabling harmonious living in society and ultimately improving the quality of life. In today’s digital age, acquiring technological skills has become a necessity, which makes General Information Technology (GIT) an integral part of education.

To support this need, General Information Technology has been introduced in the school curriculum to enhance the knowledge and skills of students. It is offered as an optional subject in class 10, and learningtextbooks along with workbooks have been provided in all three languages from classes 6 to 9. The objective of this subject is to equip students with the information and communication technology skills required to function effectively and succeed in the modern world.

General Information and Communication Technology (GIT) has become an essential part of modern education, transforming teaching and learning processes while introducing new challenges and opportunities. It encourages innovative teaching methods and helps students develop important skills such as problem-solving, adaptability, and positive learning attitudes.

In Sri Lanka, GIT is a compulsory subject for Grade 12 students across all streams, with structured teaching hours and a national-level examination conducted since 2005. Although the exam shifted to an online practical format in 2019, disruptions such as the COVID-19 pandemic, economic crisis, and power outages led to its temporary suspension. It was later resumed in 2023 as a written examination with a large number of candidates participating.

The study focuses on students' attitudes toward the GIT subject in Tamil-medium schools in the Beruwala Zone. It highlights that students' performance and attitudes are influenced by various factors, which can be observed through examination results from recent years. Overall, GIT education is seen as crucial for enhancing future career opportunities and contributing to national economic development.

Table 1: GIT Performance Analysis of Tamil Medium Grade 12 Students in Beruwala Zone

Year	**Total no of candidate**	**Set for the Exam**	**Pass %**	**Fail %**
2017	85	43	86.05%	13.95%
2019	97	56	98.21%	1.79%
2020	86	40	72.50%	27.50%
2021	84	55	69.09%	30.91%
2022	113	106	79.25%	20.75%

(Source: Beruwala Zone Tamil Medium Schools 2025)

The analysis of GIT examination results over the past five years shows an inconsistent performance pattern among students. Some years recorded strong achievement levels, while others showed noticeable declines, indicating that student learning ability, teaching quality, and external conditions significantly influence outcomes.

The year 2019 recorded the highest performance, with 55 out of 56 students passing, resulting in a 98.21% pass rate. This reflects a strong learning environment, effective teaching, and high student engagement during that period.

However, performance declined in 2020 and 2021, with pass rates dropping to 72.50% and 69.09% respectively. This decline is largely attributed to the impact of the COVID-19 pandemic, which disrupted normal schooling and limited effective online learning, leading to increased academic difficulties. The highest number of failures occurred in 2021, with 17 students not passing.

In 2022, student participation increased significantly to 106 candidates, but the pass rate improved only to 79.25%, which remained lower than the peak years of 2017 and 2019. Overall, the results indicate a fluctuating trend in GIT performance, influenced by both educational and external factors over the five-year period.

Research Objective

The main objective of this study is to identify the factors that influence the attitudes of Tamil medium Advanced Level students in the Beruwala zone of the Kalutara District towards the subject of General Information Technology.

Research Aim

1. To identify the student-related factors that influence the attitudes of Tamil medium Advanced Level students towards the subject of General Information Technology (GIT).

2. To identify the school-related factors that influence the attitudes of Tamil medium Advanced Level students towards the subject of General Information Technology (GIT).

3. To identify the parent-related factors that influence the attitudes of Tamil medium Advanced Level students towards the subject of General Information Technology (GIT).

LITERATURE REVIEW

In today's educational environment, students actively seek to acquire new information within the technological world. The General Information Technology (GIT) subject enhances students' self-learning abilities, critical thinking, and problem-solving skills (NEC Report, 2014).

Students' interest in learning directly impacts their engagement and performance in the GIT subject. However, since GIT-related content and educational resources are predominantly available in English, students with limited language proficiency often hesitate to study the subject (Ilmudeen, 2013). Consequently, a lack of self-confidence in using technological tools leads to further reluctance toward the GIT curriculum (Usman, 2012). Therefore, language barriers and low self-confidence serve as significant challenges in the students' GIT learning process.

Teacher training programs help educators use GIT effectively (Ratheeswari, 2018). In modern classrooms, teachers enhance students' learning by using GIT tools. However, the number of teachers who are qualified and trained to teach GIT is insufficient (Gunavardana, 2007). In many schools, teachers of other subjects temporarily teach GIT, which reduces the quality of instruction. Teachers are not provided with adequate technological development and continuous professional training opportunities (Tazci, 2011).

The lack of sufficient training to teach GIT is a major school-related factor that reduces students' interest in the subject. Teachers without adequate training tend to hesitate in using new teaching methods (Idris, 2014; Khslid, 2009). Especially in situations where there are insufficient computer resources, teachers are unable to conduct practical learning and focus only on theoretical instruction (Jayasuriya & Gunawardena, 2019). As a result, GIT appears difficult to students and leads to a decline in their self-confidence.

Parents encouraging their children to learn General Information and Communication Technology (GIT) and allowing them to use technological devices help improve their educational and professional skills (Julian et al., 2019). Support received within the family environment is a key factor in developing students' interest in technology. In particular, when parents encourage the use of technology and provide necessary facilities at home, it directly enhances students' attitudes (Gill, 2016).

Even if students have a personal interest in the GIT subject, a lack of support from people around them may lead to disengagement from the subject. Especially, if parents and friends do not support the subject, students may withdraw due to the social fear of being "isolated" (Brown et al., 2011).

Thus, the social environment and societal pressures have a direct impact on students' engagement in learning GIT.

Theoretical Study

Several psychological and educational theories are used as a basis to explain students' attitudes toward the General Information and Communication Technology (GIT) subject. These theories describe how students accept ICT and how their beliefs, feelings, and behaviors toward it are formed. Three important theories among them are the Theory of Planned Behavior, Social Learning Theory, and the Diffusion of Innovation Theory.

METHODOLOGY

Research Area

Since the study is based on Tamil medium schools in the Beruwala Education Zone in the Kalutara District, the Beruwala Pradeshiya Sabha, where these schools are located, was used as the study area.

Research Format

A descriptive survey research design will be used to conduct this study.

Research Methodology

This is conducted as mixed-method research using qualitative and quantitative data, with data being obtained using tools such as questionnaires, interviews, and documents.

Research Population and Sampling

The study population consisted of 202 Grade 12 Advanced Level students from Tamil-medium schools (Types 1AB and 1C) in the Beruwala Division. Three schools of Types 1AB and 1C were selected for this purpose. Using Morgan's Table, a sample size of 112 students was selected. The parent population comprised 202 individuals, from which a sample of 10 parents was selected using the Morgan table (at 10%). Both students and parents were selected using the random sampling method. Additionally, one General Information and Communication Technology (GIT) teacher was selected from each school.

Data Collection

Data collection techniques were gathered from students, teachers, principals, and parents to obtain answers to the research questions related to the research problem. Data collection methods such as questionnaires, interviews, and document analysis were utilized. Questionnaires were used to obtain data from students and teachers, while interviews were conducted with parents; additionally, further data related to the research problem were collected through document analysis.

Data Analysis

The data collected for research purposes were analyzed using descriptive statistics through SPSS and Excel software.

DATA And DATA ANALYSIS

Factors influencing the attitudes of Advanced Level students toward the General Information and Communication Technology (GIT) subject Student-related factors.

Table 2: Technology Use in GIT Teaching

Likert scale methodology	Students	Percentage of students
5	30	27

4	35	31
3	25	22
2	15	13
1	7	6

The findings clearly reflect the attitudes of Advanced Level students toward the General Information and Communication Technology (GIT) subject. Based on the responses of 112 students involved in this study, the data indicates that the majority of students hold a positive view of the GIT subject.

Likert Scale 4 (Good): 31% of the total chose this rating. This clearly shows that the majority of students evaluate the GIT teaching methods, teachers' use of technology, and the learning environment as satisfactory and beneficial. This situation suggests that technology is being used systematically in schools and is effectively supporting student learning.

Likert Scale 5 (Very Good): 27% provided this response. This result indicates that a significant number of students feel the GIT subject is being conducted at a very high standard. This may be attributed to teachers effectively utilizing technology to deliver lessons and students gaining a superior learning experience through these tools. It serves as evidence that the GIT subject enhances student interest and learning motivation.

Furthermore, 22% responded with a Likert scale rating of 3 (Average). These students are not sufficiently satisfied with the GIT subject. This suggests that some students may feel that technological facilities, learning methods, or practical exercises are inadequate. Therefore, additional resources and innovative teaching methods may be required to improve this area.

A Likert scale rating of 2 (Low) was chosen by 15 students, accounting for 13%. These students express a low level of satisfaction regarding the GIT subject. This could be due to a lack of technological facilities, insufficient computer/internet access, or deficiencies in the teachers' use of technology. These responses point to the necessity of further improving the GIT learning environment.

Only 6% responded with a Likert scale rating of 1 (Very Low). This low percentage indicates that only a very small number of students have serious dissatisfaction with the GIT subject. Nevertheless, their opinions are important as they may provide information regarding specific issues within schools or individual learning barriers.

The fact that the positive ratings of Likert scales 4 and 5 combined exceed 58% confirms that Advanced Level students rate the General Information and Communication Technology subject from Good to Very Good. Thus, this study clearly demonstrates that the GIT subject plays a vital role in student learning and functions in a way that develops their technological knowledge and skills.

Table 3: I use the internet at home via a computer or mobile devices.

School Type	Very Good - 5	Good - 4	Average -3	Low - 2	Very Low - 1
1AB	20	25	12	6	4
1C	12	15	8	6	4

The objective is to evaluate how students utilize GIT devices and internet facilities during their leisure time and the resulting impact on their attitudes toward the GIT subject.

However, 30% of students stated that they are unable to complete their subject-related practical exercises due to a lack of computer or internet facilities at home. It was found that this lack of resources can shift students' attitudes toward a moderate or, at times, negative state.

Table 4: Student Attitudes and Contribution to Learning

Question	Very Good - 5	Good - 4	Average -3	Low - 2	Very Low - 1	Total	% Very Good	% Good	% Average	% Low	% Very Low
	40	35	20	10	7	112	36	31	18	9	6
Q2: General Information and Communication Technology is a subject that is easy to understand.	30	40	25	10	7	112	27	36	22	9	6
Q3: I believe that the General Information and Communication Technology subject will be useful for future employment opportunities.	50	30	20	8	4	112	45	27	18	7	4

Data reveals several key facts regarding students' attitudes and engagement in the General Information and Communication Technology (GIT) subject. To the statement "I have an interest in learning the GIT subject," a majority of students showed enthusiasm.

In conclusion, students maintain a positive attitude toward the GIT subject in terms of interest, comprehension, and future benefits. The majority chose Very Good and Good ratings, which provides a positive impact on the learning process and student participation. This information can assist teachers in further improving the curriculum, making learning more engaging, and clarifying complex sections.

Table 5: Teachers' and Educational Administrators' Attitudes of Students and Subject Utility

Statement	Very Good	Good	Average
Q1: I am interested in learning GIT	35.7%	31.3%	17.9%
Q2: GIT is easy to understand	26.8%	35.7%	22.3%
Q3: GIT will be useful in future employment	44.6%	26.8%	26.8%

Highest Positive Perception: 71.4% of students (Very Good + Good) believe ICT will be useful for their future careers.

Interest Levels: 67% of students show a positive interest in learning the subject.

Ease of Understanding: While still positive, students find the subject slightly more challenging than they find it useful, with 22.3% ranking it as Average in terms of ease.

Since the percentage values for each Likert Scale response are clearly shown for every question, teachers and educational administrators can directly understand the students' attitudes and the effectiveness of the subject.

School-related factors influencing the attitudes of G.C.E. Advanced Level students toward the subject of General Information Technology (GIT)

Table 6: Analysis of teachers' opinions regarding the General Information Technology subject.

Statement	**Percentage**
GIT lesson is very useful	70%
Teacher technical training	65%
Teachers can guide students	70%
School administration support	75%
Positive impact of GIT on learning	60%

Table 7: Analysis of Teacher Opinions on the GIT Subject

Statement	**Percentage**
GIT is essential for future plans	95%
Students learn with enthusiasm	90%
Encourages self-learning	90%
Adequate computers and internet	55%
Equal access to facilities	55%

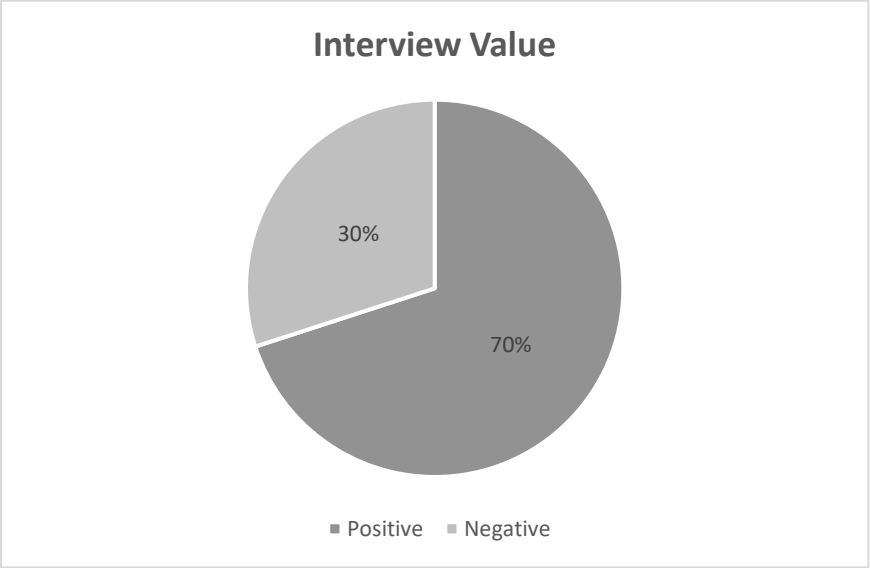
According to the study conducted, the percentage ratings of responses provided by teachers regarding various aspects of the General Information Communication Technology (GIT) subject have been identified. The two statements that this subject is highly useful for students and essential for their future plans received the highest ratings. This demonstrates a unanimous and high level of agreement among teachers regarding the necessity of this subject; furthermore, a high percentage of 65% was recorded indicating that students learn this subject with great interest and are encouraged toward self-learning.

Although a higher average of 65% was observed regarding the technical training provided to teachers, they have expressed a moderate level of confidence in their ability to guide students effectively.

A 75% rating was received for the cooperation of the school administration. High ratings of 65% and 75% respectively were given by teachers to the facts that the use of information technology creates a positive impact on learning and plays a vital role in the intellectual development of students. Overall, although there is a very positive attitude toward this subject among students and teachers, this study reveals that further attention must be paid to improving technical facilities and providing formal teacher training.

Parental factors influencing the attitudes of Advanced Level students toward the General Information Communication Technology (GIT) subject.

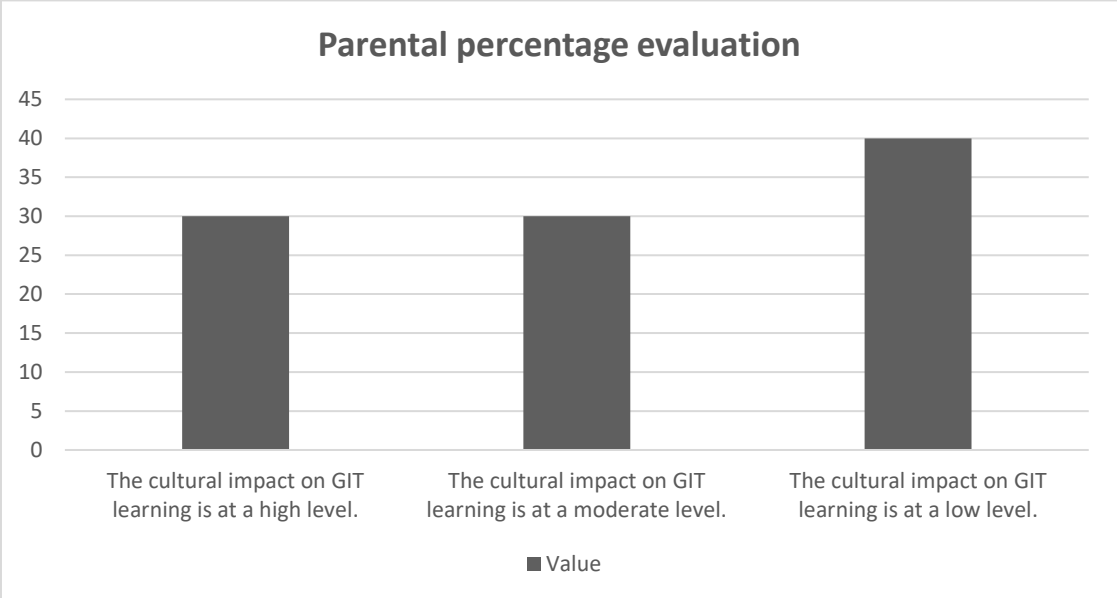
Figure 1: Interview regarding parental & family support.



A significant majority (70%) of the responses indicate a Positive level of support from parents and family. The remaining 30% falls into the Moderate category, suggesting that while support is present, there may be room for further engagement or resource allocation in those instances.

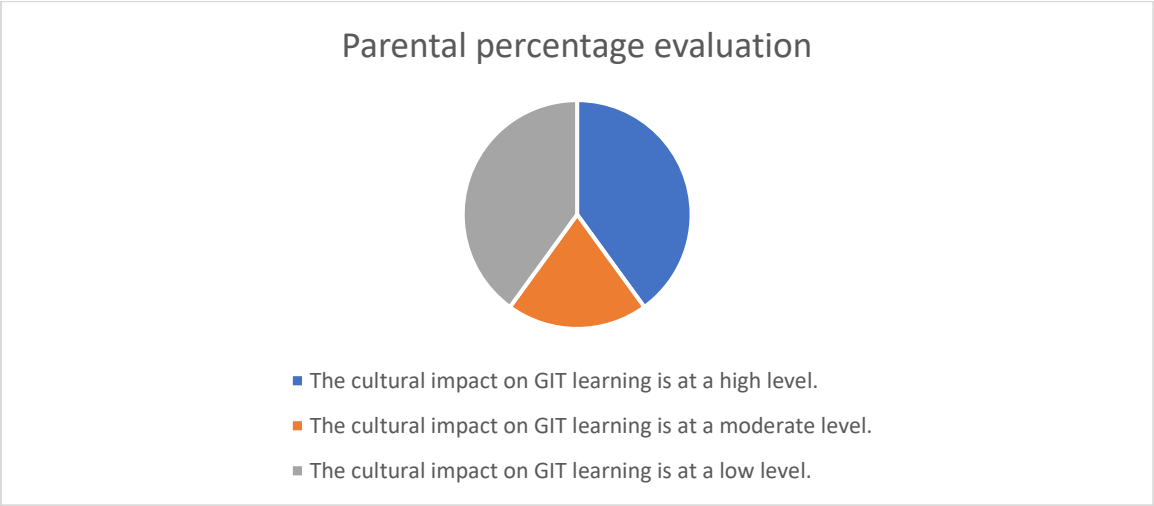
There is a generally positive perception among parents in the community regarding the General Information and Communication Technology subject. Most parents consider this subject important for the scientific and technological development of students. While some parents maintain a moderate approach, there is no significant negative sentiment.

Figure 2: Cultural impact on GIT learning.



Based on parental responses, it appears that cultural perspectives within the community act simultaneously as both a facilitator and a barrier to information technology learning. Parents expressed that while some cultural practices provide educational support, certain traditional mindsets and social restrictions hinder technical learning.

Figure 3: Social groups affect education



Social relatives, friends, and evaluators have a significant impact on a child's education. While this influence sometimes provides positive encouragement, in certain situations, it also creates indirect pressure or negative attitudes. As a result, the social environment contributes to students' academic progress in two different ways.

Parental beliefs regarding the General Information and Communication Technology (GIT) subject in society varied in several ways. Most parents believe that the GIT subject will significantly aid students' future technological development. Some parents stated that cultural habits and social practices sometimes create obstacles that hinder learning. Furthermore, it was revealed that social relatives, friends, and evaluators exert either a positive or an indirect influence on a child's education.

RECOMMENDATIONS

When considering student-related factors, it is clear that students' personal interest, self-learning attitudes, and opportunities to use technology strongly shape their attitude toward the GIT subject. Therefore, practical activities, project-based learning methods, and group learning opportunities should be increased to actively engage students in GIT learning. Guidance measures should be implemented to help students connect the GIT subject with their future educational and career plans.

Regarding school-related factors, school resource conditions, computer laboratory facilities, internet connectivity, and the GIT skills of teachers have a significant impact on students' attitudes. Therefore, basic information technology facilities must be provided equitably across all schools. Serious attention should be given to integrating GIT learning not only in classrooms but also within computer laboratories. Through this, the quality of the country's education system will rise, and the global ranking of national education can be improved.

Increasing the confidence of teachers in GIT serves as a vital method to inspire students' learning of the subject. Since the role of teachers is central to the successful implementation of new educational practices and policies, they should be provided with continuous technical training, skill development workshops, and opportunities for practical experience. When teachers' GIT skills are enhanced in this manner, they can more effectively motivate students toward technological learning.

From the perspective of parent-related factors, parental and family support is a key element in strengthening students' attitudes toward the GIT subject. Therefore, awareness programs for parents should be conducted to clarify the importance of GIT education, its future benefits, and career opportunities. Opportunities for students to use information technology devices such as computers and tablets at home should be made available. When planned actions are taken at the government level and these facilities are expanded nationwide, students will quickly engage with GIT learning.

Suggestions For Future Studies

In future studies, a comparative analysis of students' attitudes toward the GIT subject can be conducted by including more educational divisions. Similarly, longitudinal studies can investigate changes in students' attitudes following the improvement of technological resources.

It is recommended to extensively research the impact of student expectations, preferences, school-related factors, teacher instruction methods, and parental support within the GIT subject. Through this, new strategies can be identified to resolve obstacles, continuous research can be conducted, and insights can be shared through scientific forums. Furthermore, it is suggested to develop new examinations and assessments to evaluate student engagement and learning outcomes, while researching the effects of learning and technology to improve teaching methodologies.

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