

# STUDENTS' ATTITUDES TOWARDS INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) EDUCATION (SPECIAL REFERENCE TO ADVANCED LEVEL STUDENTS OF 1AB SCHOOLS IN TRINCOMALEE DIVISION.)

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## ABSTRACT

*Information and communication technologies (ICT) have become ordinary entities in all aspects of life. In Trincomalee zone, according to the pass level rate below 50% of students are passed in ICT education in 2011. Based on that researcher want to be identify factors influencing towards ICT education or not. The objectives are to identify the factors affecting the ICT education, to identify which factor has highly influenced towards ICT education, to identify the impact of social group influence on ICT education and to provide the suggestion to develop towards ICT Education. Conceptual variables are resource availability, personal Interest, global Trend on ICT, outcomes and impact of ICT education. 200 Advance Level students were taken as sample from all seven 1AB schools in the Trincomalee zonal division. The findings of the research are all the variables are moderately supported in the research. Suggestion are proper trainings should be provided to the existing teachers to get better outcomes and impact.*

**Key words:** *ICT education, Attitudes, Trend*

## Background

IT refers to an entire industry that uses computers, networking, software and other equipment to manage information. Generally, IT departments are responsible for storing, processing, retrieving and protecting digital information of the company. For achieving these tasks, they are equipped with computers, DBMS, servers and security mechanisms, etc. Professionals working in IT departments range from system administrators, database administrators to programmers, network engineers and IT managers. When executing a business, IT facilitates the business by providing four sets of core services. These core services are providing information, providing tools to improve productivity, business process automation and providing means to connect with customers. Currently, IT has become an essential part in business operations and has provided lot of job opportunities worldwide. Knowledge in IT has become essential to succeed in the workplace. Typically, IT professionals are responsible for a range of duties including simple tasks such as installing software to complex tasks such as designing and building networks and managing databases. ICT is a term widely used in the context of education. Even though there is no universally accepted definition for ICT, it mainly refers to utilizing digital technologies such as computers, television, email, etc to help individuals or organizations to work with digital

information. ICT can be seen as an extended synonym for IT. Therefore, ICT can be seen as an integration of IT with media broadcasting technologies, audio/ video processing and transmission and telephony.

Introduction of Information Technology into the secondary school curriculum in Sri Lanka is a very recent development. The subject General Information Technology (GIT) was included for G.C.E. Advanced Level Examination in 2005 while plans are afoot to introduce Information Technology as a subject for G.C.E. Ordinary Level from 2008. The results of the first GIT examination held in 2005 clearly show poor performance by students. Considering the large amount of money spent for Information Technology education in schools and the aspirations of students in acquiring a sound knowledge in Information Technology while in school, it is essential that an analysis is done to evaluate the merits and demerits of Information Technology education in schools.

In Sri Lanka Schools are being divided as 1AB, 1C, Type I, and Type II schools. According to National Standards they can be categorized as National Schools and Provincial Schools. In this study 1AB Schools are being selected.

learning and teaching. Such research insights have shown that advances in technology have opened up new possibilities for the way in which teachers educate their classes, giving potential for innovative ways to encourage students to become more engaged in their schooling. To enable the best possible outcomes for their students it is vital that schools are able to keep up with this progress. The 2008 Melbourne Declaration on Education Goals for Young Australians (MCEETYA, 2008: 6) affirmed the importance of ICT literacy within the classroom, stating that: rapid and continuing advances in information and communication technologies (ICT) are changing the ways people share, use, develop and process information and technology. In this digital age, young people need to be highly skilled in the use of ICT. While schools already employ these technologies in learning, there is a need to increase their effectiveness significantly over the next decade.

Currently Sri Lanka has a concept of being "ICT literate". However, although this is important in its own right, it usually refers to a facility with hardware and software rather than to anything we would more normally identify as literacy. Yet ICT has become an element of functional literacy. This is not a futuristic vision. It is becoming an

Name of Schools	Pass Level percentage							
	2005	2006	2007	2008	2009	2010	2011	2012
T/K. Hindu College	55%	34%	36%	45%	43%	NR	NR	NR
T/St Mary's College	52%	46%	51%	42%	46%	NR	NR	NR
T/Shanmuga College	49%	45%	42%	43%	50%	NR	NR	NR
T/St Joseph College	51%	48%	40%	39%	41%	NR	NR	NR
T/Orr's Hill Viv.	-	-	30%	44%	32%	NR	NR	NR
T/Vipulanada college	-	-	40%	39%	41%	NR	NR	NR
T/Methodist College	-	-	30%	44%	32%	NR	NR	NR

• NR – Result still not release

*Source – Zonal Education- Trincomalee/2012*

## Literature Review

### Information and Communication Technology

ICT has been used in educational settings since its inception, but recent empirical research has affirmed that it plays a vital role in high-quality

everyday reality. People read text on screen rather than on paper, for example, when we receive emails and access the Internet. (Report of household Computer Literacy Survey of Sri Lanka – 2004). In certain offices and homes, a computer with a word-processing package is

frequently used as the principal writing tool. ICT as a means for both producing and accessing texts, and indeed as the medium in which some of those texts will exist, is already commonplace. ICT is not something we need to add on to literacy. It must be an integral part of what we mean by being literate. According to the Household Survey on Computer Literacy of Sri Lanka – 2004, the target population was all those in the age group of 5 – 69 years. Of this population only 9.7 percent was found to be computer literate (Household Computer Literacy Survey of Sri Lanka – 2004).

### **ICT Education in South Asia**

The World Bank supported InfoDev is coordinating a survey of the use of information and communication technology for education in India and South Asia. The purpose of this survey is to gather together in a single resource the most relevant and useful information on ICT in education activities in India and South Asia. It is envisioned that data collected as part of this survey process can help to form a set of baseline data, against which future survey work and research could be compared. This data can be combined with data from other regions already surveyed or to be surveyed to help form a global database of information related to ICTs in education in developing regions. Information and communication technologies (ICTs) are widely believed to be important potential levers to introduce and sustain educational reform efforts, as well as useful aids to both teaching and learning. However, despite evidence of increasingly widespread use of ICTs in education initiatives around the world, there is little guidance available for policy-makers and donor staff specifically targeted at developing countries contemplating the increased use of ICTs in education.

### **ICT Education in Sri Lanka**

#### **G.C.E O/L Syllabus**

Information & Communication Technology (ICT) has become the state of the art technology of the contemporary world. Every sector of the

economy is forced to use this technology to make their work effective and efficient and thereby maintain a competitive edge. This has changed the types of skills and knowledge needed in the world of work. Since Sri Lanka is in the early stages of introducing ICT to lower grades, the present syllabus does not demand any ICT knowledge as an entry requirement. Therefore, this syllabus is intended to introduce ICT /computer science as a technical subject to be offered at the G.C.E (O/L). The objectives of this syllabus are to develop the competencies to utilize the ICT tools and to build a basic theoretical base for the student to act as a foundation to pursue higher studies in ICT. The present infrastructure and human resource development (teacher training) facilities are not sufficient to introduce this ICT syllabus. However, it is supposed that the required facilities for schools will be fulfilled in the near future by various donor agencies like Asian Development Bank, World Bank, etc. Sustainability of this syllabus depends on the continuous working conditions of ICT laboratories and the frequent provision of updated knowledge of the ICT teachers. The content of this syllabus has to be updated regularly to match the requirements of the rapidly changing technological world. The teaching/learning of this syllabus could partly be carried out in the English medium. However, a bilingual method should be used so that the terms of new ICT concepts are given in the media, the mother tongue and English. The minimum proficiency expected could be assessed and evaluated throughout the course of study. The practical components of this ICT syllabus provide a good opportunity for school based assessment. At the same time a fair percentage of content could be incorporated at national level evaluation.

#### **ICT in G.C.E A/L**

Information Communication Technology (ICT) will be included as a subject in the Advanced Level examination curriculum from 2009, said Secretary to the Ministry of Education Ariyaratne Hewage. He said approval for the ICT policy for education will be obtained soon

and it will help develop capacity, train teachers, set up ICT centers and build private public partnerships. Ariyaratne was addressing the academia career guidance pre meet organized by the Information Communication Technology Agency (ICTA) which will host the National ICT Capacity Summit and National ICT Career Fair (NICS 2007) from September 1-2 in Colombo. Ariyaratne said information technology and computer science has grown at a phenomenal rate to a US\$ 1 trillion industry, but the country has not been able to keep pace with developments due to the lack of skilled IT personnel. The challenge today is to get IT professionals in the market. The IT workforce grew by 10,000 during 2004-2006. Over 14,000 IT workers are required to meet the industry needs in the next two years. This year 5,755 graduates are needed for the industry, he said. The attrition rate of the IT workforce in the country has doubled from 6.6 percent in 2004 to 13 percent in 2006. Fixation is an obstacle to the growth of the IT industry. Parents and teachers want their students to become doctors and engineers and not IT professionals. Students are directed to sit for examinations to enter universities without providing them career guidance. Microsoft Chairman Bill Gates has volunteered to support Sri Lanka to develop capacity building in Information Communication Technology (ICT) by setting up a Microsoft center for excellence in the country. The Ministry of Education has introduced several programs to develop IT in the country and the e-village concept is one such program to bridge the digital divide. The village program was launched in Mahawilachchiya, Nihiluwa, Mahalakotuwa, Pitakumbura, Nikawewa and Dhamana. General Manager Virtusa, MaduRatnayake said with the shift from an industry based economy to a knowledge based economy world dependence on IT has grown tremendously. The BPO industry in Asia is growing at a rapid pace. According to a survey by AT Kearney Global Service Ltd. Sri Lanka is ranked 29 among the top 50 countries in outsourcing. India, which is ranked first has a vibrant IT industry, which contributes 5-6 percent of the GDP. ICT will be the next growth

wave for jobs and wealth creation in the country, he said. *Source: Sunday observer on 2007/06/17/*

### **Improve teaching and learning quality**

As Lowther et al. (2008) have stated that there are three important characteristics are needed to develop good quality teaching and learning with ICT: autonomy, capability, and creativity. Autonomy means that students take control of their learning through their use of ICT. In this way, they become more capable of working by themselves and with others. Teachers can also authorize students to complete certain tasks with peers or in groups. Through collaborative learning with ICT, the students have more opportunity to build the new knowledge onto their background knowledge, and become more confident to take risks and learn from their mistakes. Further, Serhan (2009) concluded that ICT fosters autonomy by allowing educators to create their own material, thus providing more control over course content than is possible in a traditional classroom setting. With regard to capability, once students are more confident in learning processes, they can develop the capability to apply and transfer knowledge while using new technology with efficiency and effectiveness. By using ICT, students' creativity can be optimized. They may discover new multimedia tools and create materials in the styles readily available to them through games (Gee 2007, 2011), CDs, and television. With a combination of students' autonomy, capability, and creativity, the use of ICT can improve both teaching and learning quality.

### **Student Perspective**

Frederick, Schweizer and Lowe (2006) showed that student mobility, special needs, and anxiety over standardized test results are the main challenges associated with ICT use. These challenges can be solved by providing more authentic group- and problem-based learning activities, and adequate learning support (Whelan 2008). Whelan (2008) also identified more barriers from the student perspective, including: subpar technical skills that reduce access to ICT

in classroom; an insufficient number of academic advisors and lack of timely feedback from instructors; and reduced interaction with peers and instructors. Therefore, the author recommends the following strategies to facilitate the learning process: more induction, orientation, and training for students; an increased emphasis on the importance of instructor access and effective administration; and the expansion of podcasting and online conferencing tools. In general, capacity building, curriculum development, infrastructure, policy, and government support are required in order to lower student barriers and improve the effectiveness of ICT use in the classroom. In addition, Castro Sánchez and Alemán (2011) encourage students to acquire specific technical skills to facilitate learning in ICT environments. Provide adequate technical support (Liu and Szabo 2009; Tezci 2011a; Yildirim 2007). Technology should be used for more than just support of traditional teaching methods (Tezci, 2011a). According to Tezci (2011a), teachers should learn not only how to use technology to enhance traditional teaching or increase productivity, but also should learn from a student centered perspective how ICT can be integrated into classroom activities in order to promote student learning. This means that teachers need to use ICT in more creative and productive ways in order to create more engaging and rewarding activities and more effective lessons (Birch and Irvine 2009; Honan 2008). Hence, Castro Sánchez and Alemán (2011) suggested that teachers keep an open mind about ICT integration in classroom. It is imperative that teachers learn new teaching strategies to adapt to the new instruments when teaching with technology. However, Yildirim (2007) found that teachers use ICT more frequently for the preparation of handouts and tests than to promote critical thinking. Similarly, Palak and Walls (2009) found that teachers mainly use technology to support their existing teaching approaches and rarely to foster student-centered learning. According to the authors, one possible explanation is a lack of models for how to use

technology to facilitate learning, and limitations related to contextual factors such as class size and student ability. Further, Brush, Glazewski and Hew (2008) found that pre service teacher preparation does not provide sufficient ICT knowledge to support technology based instruction, nor does it successfully demonstrate appropriate methods for integrating technology within a curriculum. More training should be provided in pre-service teachers' curricula, and ICT skills must be applied in the classroom in order to integrate effective technology strategies (Supon and Ruffini 2009). To help teachers cope with these difficulties, Chen (2008) suggested that rather than only providing education theories, ICT researchers should also document examples of how teachers accomplish meaningful and effective technology integration to meet their pedagogical goals and needs.

## **Problem Statement**

Nowadays ICT education is the most essential one and there are plenty of opportunities for the students who have completed their school education up to Advanced level, to get a higher education qualification through different ICT educational programs. In Trincomalee zone, according to the pass level rate below 50% of students are passed in ICT education in 2009. Based on that researcher want to be identified students' attitudes influence on ICT education or not?

## **Research Questions**

The main research questions are identified as mentioned below

- \* What are the attitudes of students towards ICT education after school education?
- \* What are the factors affecting the students' attitudes on ICT education?
- \* What are the impacts of Social group influence?

## Objectives

- \* To identify the factors affecting the students' attitudes towards ICT education.
- \* To identify which factor highly influences on attitudes towards ICT education.
- \* To identify the impact of social group influence on attitudes of student towards ICT education.
- \* To provide the suggestion to reduce the negative attitudes of ICT Education.

## Scope of the Study

This research mainly focuses on Advance Level students' attitudes towards ICT education. Even if they get through their A/L what is their attitude towards ICT education, the students of 2012 batch will be selected for this study.

## Significance of the study

ICT education has been taken for this research because this has been one of the major tools in one person's skills and knowledge development. The main purpose of this research is to find out the major influence for the attitude of the students of the Trincomalee Zonal area. Educate the student to use the opportunities with cheap and secure manner to get an ICT educational qualification.

## Limitations

- \* Data collection and research are restricted to only 2012 Advance Level students.
- \* The survey restricted to only 1AB Schools for Tamil medium in the Trincomalee Zonal Division.

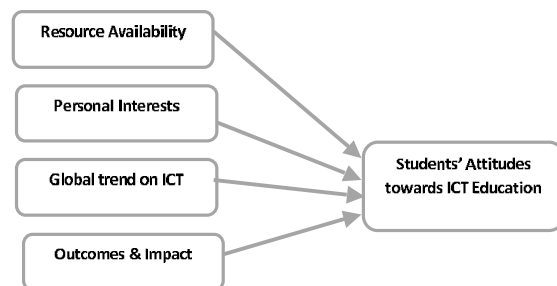
## Assumption of the Research

- \* All the questions and statements are clearly understood by the respondents.
- \* The collected data are true and fair and unbiased.

## Conceptualization

As illustrated below (in figure 1), the conceptual framework is developed using four groups of variable which have mainly influenced the attitudes of Advance Level students towards ICT Education.

Figure 1: Conceptual framework



Source : Develop for research purpose

Conceptual framework is formulated based on the following theories. Factors influencing the use of ICT can be divided into external factors and internal factors. The two types of factors are related to each other and to ICT usage level (Tezci 2011a). A variety of external factors have been identified that influence the progression or effectiveness of technology integration in schools. These include technology availability, accessibility of ICT equipment, time to plan for instruction, technical and administrative support, school curriculum, school climate and culture, faculty teaching load and management routine, and pressure to prepare students for national entrance exams (Al-Ruz and Khasawneh 2011; Lin, Wang and Lin 2012; Tezci 2011a). Among these external factors, the most common are lack of access to computers and software, insufficient time for course planning, and inadequate technical and administrative support (Chen, 2008). Several internal factors also influence technology integration outcomes (Sang et al. 2011). Internal factors related to teachers include: understanding of ICT use; beliefs, which may conflict with the application of ICT; attitudes toward technology integration; perceptions, including intention or motivation to use ICT; self-confidence and knowledge; technology skills; readiness to use ICT; and technology self-efficacy (Al-Ruz and Khasawneh 2011; Chen 2008; Lin, Wang and Lin 2012; Sang et al. 2011; Tezci 2011a).

## Operationalization

Details of the operationalization are given below.

**Table 1: Operationalization**

Variables	Indicator	Measurement
Resource Availability	Financial support	Questionnaire
	Recognized Teachers & Trainings	
	Recognized Subjects	
Personal Interests	Perception on ICT courses.	Questionnaire
	Family influences / Social Group	
	Knowledge/ Skills	
Global Trend on ICT	Awareness on importance of ICT	Questionnaire
	Extent of ICT usage.	
	Job Market needs	
ICT Education Outcomes and Impact	Performance	Questionnaire
	Expectation	
	Satisfaction	
Attitudes	Affective	Questionnaire
	Cognitive	
	Behavioral	

*Source: Developed for the research purpose*

## Sampling

A sampling is the collection of samples from the population in the area where the research has been done. From the researcher’s point of view,

the population includes 2012 batch A/L students from 1AB schools in the Trincomalee Zonal Division. Identified the systematic random sampling technique for research purpose.

**Table 2: Sample selection detail**

Name of the School	Total Population	Percentage	Selected Sample
T/Konneswara. Hindu college	178	36.70	37
T/St Joseph College	141	29.07	29
T/St Mary’s College	169	34.84	35
T/Orr’s Hill Vivekananda	152	31.34	31
T/Sri Shanmuga Hindu ladies	102	21.03	21
T/St Methodist College	116	23.91	24
T/Vipulananda college	112	23.09	23
<b>TOTAL</b>	<b>970</b>		<b>200</b>

*Source: Zonal Education Department Trincomalee/2012*

## Data analysis

The collected data have been analyzed by Mean, Correlation method and regression analysis.

### Methods of Measurement

In this study, measurement was carried out by five point Likert scale. The collected data from the questionnaires were analyzed based on the positive effect on the students' attitudes on ICT education by analyzing variables as mentioned below.

Strongly disagree-1/ disagree-2/ neutral-3/ agree-4/ strongly agree-5

### Data evaluation

Each variable is given a scale from 1-5 to show the extent of importance based on response univariate measures are calculated for each of the variables. For calculating the univariate measures, the Microsoft Excel 2007 and SPSS 17 windows have been used.

### Resource Availability:

Resource availability of students and schools are in moderately level that is the mean value is 3.06. Financial Support: In the research area majority students are coming under middle class. Therefore, most of the families are unable to spend money to buy computers and accessories. This may be the main reason for the above result of the research on financial support.

Recognized Teachers & Training: According to the result of the research, the indicator of recognized teachers and training are not in satisfactory level. The main reason could be insufficient number of well trained, specialized teachers in IT in the school system. On the other hand, the extent of providing training to Advance Level students is not at the required level. Recognized Subject: Recognized subject is not coming under satisfactory level. It reason could be according to the ICT syllabus, some useful subjects don't include in the ICT syllabus such as computer programs, Web designing, CAD, etc.

**Table 3: Decision criteria and rule**

Decision Criteria	Decision Rule
$1 \leq x_i \leq 2.5$	Low level of impact on attitudes on ICT Education
$2.5 < x_i \leq 3.5$	Moderate level of impact on attitudes on ICT Education
$3.5 < x_i \leq 5$	High level of impact on attitudes on ICT Education

## Discussion of the Results

**Table-4 Univariate analysis**

Variables	Mean	Standard Deviation
Resource Availability	3.06	0.588
Personal Interest	3.49	0.712
Global Trend on ICT	3.39	0.715
Outcomes and impact of ICT education	3.36	0.658

*Source: survey data*



### **Personal Interest**

The second factor ‘Personal interest’ also moderately affects the students’ attitudes on ICT education. Perception on ICT courses: Here the good sign is that the mean value of perception on ICT courses is in higher level. That means the students in the research area is well aware about the benefits and importance of ICT courses and very interested to follow such courses.

Family Influence/Social groups: According to the Advance level education system the three main subjects are only considered in the calculation of Z score other than ICT Education. Therefore, parents and social groups are not showing much interest to support on ICT education.

Knowledge & Skills: the last indicator of the personal interest, the medium of ICT examination was English, while the majority of schools in research area still uses native languages, i.e. Sinhalese or Tamil, for teaching.

### **Global Trend on ICT**

Global Trend on ICT is another variable which moderately influences the students’ attitudes on ICT Education. Awareness on importance of ICT: According to the above research results the students almost have consciousness and understanding about the awareness on the importance of ICT.

Extent of ICT usage: according to the result the indicator of Extent of ICT usage is moderate level, the reason for teachers and social groups are couldn’t be instructed of usage of ICT education for every day to day student’s activities.

Job market needs: according to the result of the research, the mean value of that indicator is 2.99. The main reason for Students’ could be understood get the job from his university study.

### **Outcomes and impact of ICT education**

Outcomes and impact of ICT education also moderately affect the students’ attitudes. Performance: The indicator of performance level is moderate. The main reason could be some schools are not provided special ICT training programs and inter school ICT education competitions for students.

Expectation: Expectation is the second indicator of outcome & impact of ICT education. According to the research, analysis the mean value is 3.14 and It’s also moderately level, the reason for the ICT education is not compulsory for university entrances, further students’ expectation of ICT education in Advance level is not better than other subjects.

Satisfaction: Satisfaction is the last indicator of the outcome & impact of ICT education. According to the ICT examination system, examination result will be released about after two years from the examination date. In that system could be the impact of students’ satisfaction about ICT education.

### **Correlation analysis**

The table 5 gives details of the correlation between each pair of variables. The values here are acceptable.

**Table 5 Correlations**

		Resource Availability	Personal Interest	Global Trend	Outcome & Impact	Attitudes
Resource Availability	Pearson Correlation	1	.739**	.731**	.681**	.702**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	200	200	200	200	200
Personal Interest	Pearson Correlation	.739**	1	.745**	.818**	.749**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	200	200	200	200	200
Global Trend	Pearson Correlation	.731**	.745**	1	.821**	.806**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	200	200	200	200	200
Outcome & Impact	Pearson Correlation	.681**	.818**	.821**	1	.800**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	200	200	200	200	200
Attitudes	Pearson Correlation	.702**	.749**	.806**	.800**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	200	200	200	200	200

\*\*Correlation is significant at the 0.01 level (2-tailed)

There is a positive relationship between the conceptual variables and attitudes.

**Data Reliability**

Reliability of the variables, Cronbach's coefficient alpha was calculated to evaluate the reliability of the measures. An alpha level of 0.70 or above is generally considered to be accepted (Cronbach,

1951). All the measures in survey exceed this threshold. Resource availability (alpha= 0.841), personal interest (alpha=0.861), global trend (alpha = 0.803 ) and outcome and impact (alpha= 0.854).

**Table 6: Coefficients**

<b>Coefficients<sup>a</sup></b>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.15	0.155		0.965	0.036
Resource Availability	0.164	0.075	0.133	2.195	0.029
Personal Interest	0.138	0.073	0.136	1.884	0.051
Global Trend	0.361	0.073	0.356	4.935	0.043
Outcome & Impact	0.336	0.086	0.305	3.902	0.042

Source: survey data

## Regression Analysis

### R, R Square and Adjusted R Square Analysis

**Table 7:**  
R, R Square and Adjusted R Square Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.852 <sup>a</sup>	.726	.721	.383

Adjusted R Square value is calculated which takes into account the number of variable in the model and the number of respondents our model is based on. This R Square value gives the most useful measure of the success of our model. We have adjusted R Square value of 0.721, therefore we can say that our model has accounted for 72% of the variance in the dependent variable.

## Conclusions

The results of the survey indicate that the students' attitudes towards ICT education is in the moderate level. The result of the research indicates that ICT related resources are fairly available in the research area. But the availability of recognized / qualified teachers and the training method are not in the positive level. As Personal interest of students towards ICT education is comparable in higher level, there are some opportunities to develop of ICT education in the area.

The students are aware of Global trend on ICT and its importance. Even though it has been identified from the result of the research that most of the students are not properly trained or guided to meet the job market requirement. Therefore the outputs and impact of ICT education is not in a good position in the research area.

## Recommendation

### Resource Availability

- ◆ Department of education has to take action to appoint new qualified IT teachers to the schools to provide better trainings to Advance Level students. Further, it is recommended to the Zonal education department has to provide necessary trainings to existing IT teachers to develop their skills.
- ◆ Schools have to provide useful special ICT training program for students in every ICT subject.
- ◆ Ministry of education has to focus to re-design the IT syllabus according to the global trend and to meet the job market requirements. Some subjects are included in IT syllabus such as Program languages, web designing, AutoCAD, etc.

### Personal Interest

- ◆ Parents and social groups' area should be so much interesting to support on ICT education for the students. Further, they should encourage the ICT subject likely other three compulsory subjects.
- ◆ The Department of Education should be announcing an ICT subject is compulsory for university entrance.
- ◆ Further Department of Education should be change the medium of ICT examination is the native language. i.e. Sinhalese or Tamil.
- ◆ The recognized ICT institutes are should be provide special offer for school students, further should be given an international recognized certificate.

### Global Trend on ICT education

- ◆ Proper guidance should be given to the students to follow the right course at the right time and right way by social groups.
- ◆ Trincomalee Zonal school computer labs are should be connect under the one network system and conduct the inter schools ICT competition via online.

- ◆ The department of education should provide a valid ICT certificate for students get the great job.
- ◆ Proper guidance should be given by teachers for the students to need of ICT when facing the any job interview.

#### **Outcome & impact of ICT education**

- ◆ The department of examination should release the ICT examination result within three months from the examination date.
- ◆ The schools should introduce a day for ICT (like English day, Science day etc.)
- ◆ The zonal Education department also has to introduce inter school competition in ICT education give a valuable prize to the winner.

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