CHANGES TO BE MADE IN THE GCE (ADVANCED LEVEL) INFORMATION AND COMMUNICATION TECHNOLOGY SUBJECT BASED ON FUTURE JOB MARKET NEEDS

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ABSTRACT

The Information and Communication Technology (ICT) sector is showing rapid growth in the job market. Examining schools' efforts to prepare ICT students for the job market raises questions about its effectiveness. It was examined whether the subject of ICT taught in the school is suitable for the future job market. The theoretical basis of the study was human capital theory. The research study was conducted using a sample of 300 students, 30 teachers, and 50 employers under the survey method to identify A/L ICT subjects and the job market. A questionnaire was conducted to collect data from the teacher-student sample, and structured interviews were conducted to collect data from the employer. Descriptive statistical methods such as five-point scale mean values, percentages, and Co-relation were performed for quantitative data analysis. According to the analysis of teacher, student sample data, their perception of the curriculum was not practical. The perception of ICT facilities was that computers were frequently down and there were insufficient facilities. Lack of teachers and their lack of updating were identified as problems. The student sample indicates that students choose ICT subjects with the hope of getting a job in that field. The curriculum should be practical. Analysis of employer data revealed that they came up with ten actions schools could take at the A-level stage. They are: knowledge should develop skills and attitudes in addition to schooling; the foundation needed to enhance vocational education should take place from the school stage itself; the syllabus should be practical; teaching and learning methods should change; and awareness of what should be encouraged to innovate. Can future employment opportunities Implementation of integrated school and workplace programs, a focus on self-study, referral for training in external institutions, conducting training work camps, etc. suggested that investment in education is essential to provide skills required for future employment. To overcome these challenges, it can be recommended that ICT job market-based training and skills start in school itself. Looking at education from an economic perspective, human capital theory should be linked with higher human resource planning for the future. Schooling should be designed to produce skills that can meet the challenges of the future job market.

Keywords: ICT Subject, Job Market, G.C.E.A/L

1.0 PROBLEM INTRODUCTION AND RESEARCH BACKGROUND

It has been identified that the Sri Lankan workforce is in high demand but lacks specialized skills for critical jobs, which is a threat to the country's sustainable economic growth. According to the Job Ranking Report (2019), in focusing on the labor market, among the top ten jobs are IT services-related jobs. It is evident that in every job that will grow in the future, new market trends related to businesses, such as networked services, nanotechnology, robotics and artificial intelligence, are emerging. It is also clear that IT knowledge has a very important place in the face of globalization.

It can be pointed out that the IT sector is a sector that is making a wide contribution to the Sri Lankan economy day by day. It is clear that the use of ICT in the future labor market will grow with a new trend, and that Sri Lanka can come further through innovation and skill development. According to the Strategy Paper, (2016), Sri Lanka's ICT sector has become the fifth largest value-added export earner Sri Lanka was also ranked No. 1 in South Asia in the World Bank's 2014 ICT Index. According to the ICT Index, published annually by the World Bank, Sri Lanka has been ranked No. 1 in South Asia for the years 2013, 2014, 2015 and 2016. Similarly, the United Nations has selected Sri Lanka as the country implementing the best ICT policy in South Asia. Accordingly, Sri Lanka's position among the top 100 countries in the field of Information Technology is very important as a developing country.

It is clear that Sri Lanka is still in a state where it cannot be satisfied with the "Knowledge-Based Labor Market. In moving forward as a country, the importance of the contribution of the ICT to the Economic Impact Index and the Social Impact Index can be confirmed. Since human resources have been identified as a key factor in the economic development of a country, it is necessary to identify the role that general education should play in the need to create human resources that meet the demands of the labor market. The opportunities that are open to a child entering primary school The labor market will exist for another twenty or thirty years so today's school student should be able to adapt to it The need to create a group of people ready for the future world of work by improving ICT skills and building human capital through it has been emphasized by the Sri Lanka Institute of Technology (2018).It is clear that ICT skills play an important role in preparing the human capital needed for the future world of work and that the necessary background can be prepared to uncover these situations using human capital theory.

In a situation where people are protesting for government jobs, the economic and social background that can be developed through such fields is very broad. The education system should be designed for such effective and efficient conditions. The theory of social efficiency explains such a situation. What is clearer is that the use of ICT is growing in a new trend in the labor market that can meet future labor demand, and that Sri Lanka can come further through innovation and skill development. For this, building a broad relationship between society, need and practice can start from the school ICT curriculum.

Table No. 1- Unemployment rate among G.C.E (A/L) graduates

Education Level	Unemployment	Unemployment (%)		
	No	(%)	Female	Male
Sri Lanka	420,231	4.9	3.4	7.5
Before G.C.E. (O/L)	127,195	2.5	2.5	2.6
After G.C.E. (O/L)	104,607	6.5	4.9	10.0

| After G.C.E. (A/L) | 188,428 | 9.5 | 5.1 | 14.0 |

Labour Force Survey, Quarterly Report, 2019

This implies that school education is still failing to produce people with skills that match the demand for labor. It is clear that despite educational qualifications, employment and getting suitable jobs have become a crucial issue. Although competitive examinations can measure knowledge, it seems that the skills and competencies of students cannot be measured. Therefore, those who fail examinations and drop out of school are not incompetent. Thus, the G.C.E. (A/L) Those who do not enter higher education or tertiary education after the G.C.E. (A/L) examination should be able to apply the syllabus they have learned to the world of work as appropriate. However, there is a lack of skilled individuals in the world of work through the pursuit of academic education with the aim of higher education or university admission.

The Proposal for a National Policy Framework for General Education in Sri Lanka (2003) report introduced the ways and innovations that should be directed towards the future course of education and emphasized on information technology literacy relevant to the future vision of education for human development. In the increasingly developing socio-economic environment, the primary objective of the student who is studying is to enter the productive production work or the job market after his studies. In such an environment, the opportunities available to students for learning should also be timely.

It can be emphasized that the work of education should evolve over time. Meanwhile, accordingly, the policy decision to include Information Technology in Formal Education - Information Technology as a subject in the secondary school curriculum was an important milestone in the general education system. Many years have passed since the introduction of the subject, and it was recognized that it is a timely need to investigate how the objectives initially established are actually being fulfilled in the classroom today. On that basis, the primary objective of this research was to find solutions to the problem of what changes should be made in G.C.E. (A/L) Information and Communication Technology education based on the needs of the future job market.

2.0 LITERATURE REVIEW

Any organization has goals and objectives to be achieved within a specific period of time, and for that they use tangible and intangible resources. Tangible resources can be buildings, money, machinery, etc., while human capital can be considered an intangible resource. This human capital in an organization, like other resources, is very helpful in achieving the desired goals and objectives and in its growth and development. According to the human capital theoretical framework presented by Swanson & Holton (2001), it has been shown that the final result obtained by the student entering the school through education and training should be reinvested in the market economy and become an economic earner in the production process and be able to achieve the desired result in the citizenship process. For that, how can the final output of education be helped to achieve maximum efficiency through the subject of Information and Communication Technology? It is more appropriate to use human capital theory for this study, which seeks to find out According to this theory, it is clearly shown that the entire scope of education should be expanded where skills expand beyond inputs. It is a problem that despite educational experience, the population does not have the necessary skills pool to adapt to

changing times and employment. Thus, the human capital theory is perfectly aligned with this new thinking and aims to improve students. Therefore, it leads to a competency-based education and turns education into an investment.

In looking at education from a liberal perspective, John Dewey (1916) was one of those who presented a progressive ideology on education. He emphasized the need to develop the potentialities needed for future life through the practical experiences that the student receives at school.

He further stated that active learning should be provided through practical teaching methods, criticizing textbook teaching. He also indicated that students should be directed to develop skills such as problem solving, exploration, observation, and critical thinking. He pointed out that 'education is a continuous process of experience' and that the responsibility of education is to develop the full personality of the child. He pointed out that the learning-teaching process should be shaped according to the child's abilities, interests, and social needs.

Illich (1971)'s views on education have criticized the functionalist views and presented his views. Illich (1971) who examines the role of education states that specific skills should be learned through education. He also points out that education should be a liberating experience that allows the individual to explore, create, use his initial abilities and judgment, and fully develop his talents and potential.

Illich, who points out that education is not essential, also states that education is the cause of many problems in modern industrial societies. Illich (1971) states that instead of a specific school, learning networks can open up opportunities to gain experiences of one's own choice. The learning networks he suggests can be created through information and communication technology.

The report by López-Bassols (2002) on ICT skills and employability argues that there are barriers and skills gaps facing OECD countries. Responses were obtained from 532 companies in a sample of 1493. This included computer programmers, computer engineers, computer systems analysts, data administrators, computer support specialists and all other computer scientists. However, it did not involve teachers or students to investigate the impact of schooling.

The study focuses on the IT workforce with professional IT skills and the increasing demand for these skills across the economy. It recommends that various measures can be used to ensure that the IT workforce is equipped with the right skill sets. It recommends that various supply and demand-side measures be used to meet the changing skills demands of the IT workforce, including developing strong IT skills in secondary schools for students, supporting teacher training, ensuring that IT careers are more attractive and better, integrating educational programs with "real-world" problems, and helping workers keep skills up-to-date.

Ranatunga and Wickramasinghe (2008) conducted a series of studies on science and technology graduates and their employment in Sri Lanka from 2001-2005, showing that 50% of graduates secured their first job within six months of graduation, but the main obstacles they faced were lack of work experience and lack of job opportunities in their field of specialization. Oboko (2015) conducted a survey-based study on the impact of ICT education in secondary

schools in Kenya on future employability. The study examined the importance of ICT in the 21st century labour market and found that secondary education provides a great support for the development of ICT skills, but there is a lack of facilities and space for the development of skills needed for the future. It also emphasizes that acquiring ICT skills is essential for connecting with the 21st century job market. Employment It points out that the importance of ICT skills has emerged in the market, and that education should be encouraged to ensure that secondary education and training successfully transmit basic skills for employment opportunities and encourage innovation.

"With special reference to soft skills, Sri Lanka's A research on "Mismatch between the Education System and the Job Market" has been conducted by Grero (2019) for which schools have been selected to represent 09 provinces, and the sample has been selected to represent all three sectors of school, university and tertiary education institutions - It has been stated that the main factors essential for securing employment are: extra-curricular activities, English language communication skills, technical skills, information and communication technology skills, career guidance and internships, which are common to all three education systems: general education, university education and technical and vocational training education. The study also suggests changes that need to be made to reduce the mismatch between the education system and the job market in Sri Lanka -

The Survey on ICT Education in India and South Asian Countries (2010) conducted in collaboration with the Information and Communication Technology Agency of Sri Lanka (ICTA) - has identified a number of factors that need to be addressed for effective ICT penetration in the education sector. These include the lack of trained manpower, the dire need for proper capacity building, and intensive training for teachers not only on computer literacy but also on how to integrate educational software into classroom activities and school curricula. Furthermore, the cost of setting up an ICT computer lab is significant for a developing country, so the cost problem, language barrier, poor English language proficiency, etc. have been cited.

Balan (1990) has conducted research on the contribution of education to national integration and development. Balan (1990) shows that it is timely to focus on pre-vocational orientations in secondary education. The school can contribute to the task of focusing on those orientations. He further emphasizes that the first 10 years of school should be strengthened through general academic education, and that the specific academic, vocational and professional needs of students should be provided for in the last two years and the subsequent higher education period.

Wanasinghe (2012)'s research on the need to design secondary education for the development of vocationally oriented skills required for the world of work suggests that due to the rapid change in technology, obtaining a single specialized vocational training is not very effective today, and instead it is important to develop multiple skills that can be used in the world of work. He further states that it is the responsibility of current secondary education to transform students into multi-skilled individuals who can successfully face the world of work through vocationally oriented skills. Accordingly, the current research identifies the expectations of students and job market expectations related to the subject of Information and Communication Technology and studies how the existing G.C.E(A/L) syllabus content and the skills provided by the school contribute to the world of work. Dassanayake (2013) The study has been

conducted using the CIPP model as the theoretical basis, emphasizing that the ultimate outcome of the learning process is to contribute to the production process. Accordingly, the current study has also focused on building human capital that contributes to long-term earnings by investing in the production process of educational inputs.

In light of the above, when considering education from an investment perspective, it is most appropriate to investigate the changes that need to be made in G.E.C.(A/L) ICT education based on the future job market needs. This research was conducted.

3.0 RESEARCH METHODOLOGY

When choosing the most appropriate research design for conducting the research, it can be identified that the current study is a study that can be researched according to positivism. In this study, it is more appropriate to follow the positivism philosophy since quantitative measures such as statistics are used to study the true nature of how society functions based on objectives. This study also aims to explain the existing situation and predict the relevance of the subject of information and communication technology to the job market.

According to Carr and Kemmis (:1986) a quantitative research approach based on realism was found to be more appropriate to investigate the "match between the A-C.E. (A-C.E.) Information and Communication Technology subject and the needs of the job market" since the objective is achieved by manipulating the variables according to realism.

Kothari (1999) states that just as an expert architect carefully prepares a house plan to build a better, more economical and attractive house, similarly, the researcher needs to prepare a more suitable research design to launch his research. The survey design was chosen for this research.

After identifying the research methodology, the representative sample for the study was selected and the appropriate sample size was also selected from among them. Accordingly, the total sample of the study is represented in Table 2.

Table 2: shows the total sample of the study and the sampling method

Sample	Sample Techniques	Sample Size
School Sample	Cluster Sampling	**(18)**
1- Students studying G.C.E. (A/L) Information and Communication Technology	Simple random sampling	300
2- Information and Communication Technology Subject Teachers who teach	Purposive Sampling	30
3 Employees in the field of Information Technology	Convenience sampling	50
4. Employers	Convenience sampling	50
Total Sample		**430**

The employer and client online questionnaires used for the study and the teacher and student questionnaires prepared to identify teacher-student perceptions were also validated using the coefficient of variation. A control test was conducted to further confirm that the research instrument was a valid research instrument.

Here, the data obtained from the sample groups used for the study were analyzed by classifying them in relation to the research objectives and calculating mean values and percentages and by calculating correlations. The data were interpreted and conclusions were drawn based on the information obtained from the data analysis.

3.1 Data Analysis and Findings

Employer Perceptions and Teacher-Student Perceptions were analyzed using the mean of the statements given for each variable to identify perceptions of the relevance of the ICT subject to the job market. The responses are presented in Table 3.

Table 3: Teachers' Perceptions of the Relevance of the ICT Subject to the Job

Statement	N	Total	Median
1. Students are motivated to choose the ICT subject based on future job prospects.	30	103	3.43
2. ICT skills acquired from school are essential in connecting with the job market.	30	101	3.37
3. Students choose the ICT subject with the desire to engage in a job in that field.	30	101	3.37
4. The G.C.E. (U.L.) ICT curriculum lays the foundation for the development of the ICT workforce.	30	88	2.93
5. The IT skills provided by the current G.C.E. (U.L.) ICT curriculum are compatible with the future job market.	30	77	2.57
6. The current G.C.E. (U.L.) ICT subject is a subject targeted at the future job market.	30	67	2.23

According to Table No. 3, the mean value for the statement 'The current G.C.E. (A/L) ICT subject is a subject aimed at the future job market' is between 1.51-2.50, so it is in the range of: 2.23* I somewhat agree, and the other statements are between 2.51-3.50, so it shows moderate agreement. Furthermore, students are motivated to choose the ICT subject based on future job expectations. The statement has obtained the highest mean score.

In order to investigate the current form of the IT subject and its orientation towards the job market, one more statement was given in addition to the 13 statements given for it. It was expected to identify the perceptions of teachers on whether changes should be made in G.C.E. (A/L.) ICT education to produce skilled individuals. According to Table No. 4.47, the teachers' response was that changes should be made in G.C.E. (A/L) ICT education to produce skilled individuals. All the people in the sample agreed with it and 80% strongly agreed. The

perceptions on the practical orientation of the IT subject, which was considered secondly in examining the current functioning of school IT education, are given in Table No. 4.

Table No. 4 Student perceptions of practical orientation

Statement	N	Total	Median
01. There is an environment that requires the use of ICT skills in personal life.	300	935	3.12
02. G.C.E. (A/L) ICT education is more oriented towards exam preparation than practical orientation.	300	902	3.01
03. Students have the understanding to use the knowledge acquired from the school ICT curriculum appropriately.	300	809	2.70
04. There are not enough facilities in the school for students to do practical exercises.	300	630	2.10

The current performance of school IT education was examined through student perceptions regarding the job market orientation of the IT subject. According to the responses on perceptions (Table 4), the mean scores for all statements are in the range of 2.51-3.50. This indicates a moderate level of agreement. Accordingly, students' perceptions regarding the job market orientation of the IT subject are moderate in agreement. Among them, it is clear that the statement "The G.C.E. (A/L) ICT curriculum lays the foundation for the development of the ICT workforce" has the highest mean score and the statement "The G.C.E. (A/L) ICT curriculum lays the foundation for the development of the ICT workforce" has the lowest mean score.

Table 5 Student Perceptions on the Job Market Orientation of the ICT Subject

Student Perceptions	N	Total	Median
01. The G.C.E. (A/L) ICT curriculum lays the foundation for the development of the ICT workforce.	300	941	3.14
02. ICT skills acquired at school are essential for engaging with the job market.	300	928	3.09
03. The current G.C.E. (A/L) ICT subject is a subject targeted at the future job market.	300	923	3.08
04. Changes should be made in G.C.E. (A/L) ICT education to produce skilled individuals.	300	920	3.07
05. The IT skills provided by the current G.C.E. (A/L) ICT curriculum are compatible with the future job market.	300	915	3.05
06. The G.C.E. (A/L) ICT subject contributes to the creation of the human capital demanded by the market.	300	850	2.83

As well as the requirements that employers generally consider when hiring employees for jobs, this study also examined the ICT requirements considered when hiring employees, as this study is about the IT job market. The top positions after ranking the competencies identified according to the responses are shown in Table 6.

Table 6: Information and Communication Technology Requirements Considered by Employers

S.N	ICT requirements considered by employers	N=50

		Median	Rank
01	Proficiency in office management packages	0.84	1
02	Managing email and internet connections	0.78	2
03	Social media management.	0.68	3
04	Online Collaboration skills	0.68	3
05	Updating technology to meet future technological needs.	0.64	5
06	Implementing and configuring computer networks	0.62	6
07	Developing Management Information Systems for organization operations and activities	0.62	6
08	Identify and resolve hardware and software related problems	0.60	8
09	Developing mobile applications to meet various service needs	0.58	9
10	Introducing new technology strategy.	0.56	10
11	Proposing e-solutions for the technological challenges of institutions	0.54	11
12	Digital photography and animation	0.52	12
13	Website design and maintenance	0.52	12
14	Organizing ICT training programs for officials.	0.44	14

The employer sample identified the ability to use office management packages as an essential requirement. Another important requirement that employers expect is to manage email and internet connections. Managing email and internet connections and handling the organization's social media networks. (Facebook, Twitter, YouTube, Google Plus, Instagram, Vimeo, etc.) Online collaboration skills have also received special attention. Updating technology to meet future technological needs, implementing and configuring computer networks, proposing e-solutions for the technical challenges of institutions, identifying and solving hardware and software related problems, developing mobile applications to meet various service needs, and introducing new technological strategies are moderate needs. Proposing e-solutions for the technical challenges of institutions, digital photography and animation, website design and maintenance, etc., have been emphasized by employers specific to each profession, although they are not represented by all employers. According to the responses of employers, organizing information and communication technology training programs for officers was ranked 14th in the ranking.

Table 7 shows the perceptions of employers regarding the ICT requirements that students receive from school education when recruiting employees.

Table 7 Employers Expect Information Communication Technology Requirements Students Receive from School Education

Statement	Frequency	Percentage
Students are not getting the ICT needs from school education	37	74.0
Students are getting the ICT needs from school education	13	26.0
Total	50	100.0

As shown in Table 7, 74% of employers do not provide the ICT skills they expect from school, while 26% do. The responses from the employer sample indicate that school education does not produce the ICT skills employers expect from entering the workforce. The main reasons identified in the interviews with employers on this issue are as follows:

- School education syllabus not being practical.
- School education being more inclined towards academic education.
- ICT teachers not being updated
- ICT teachers do not receive proper ICT education.
- There are fewer ICT teachers with ICT degrees in the system.
- Students not getting proper understanding of the job market.
- Inadequate ICT facilities required by school students.
- School education being strictly exam centered.

In order to develop ICT skills, employers' views were also obtained during the G.C.E. (A/LE.) school education stage. Based on the views presented, the main points identified as possible courses of action for the school were ranked and the courses of action that secured the highest positions are shown in Table 8.

Table No. 8: Steps that schools can take to develop ICT skills during the G.C.E. (A/L) school education phase

Serial No	Employer responses on actions schools can take to develop ICT skills	N=50		
		No. of responses	Percentage (%)	Rank
01	School education should develop skills and attitudes in addition to knowledge	42	84.0	1
02	The foundation for the development of vocational education should be laid from the school stage	40	80.0	2
03	Syllabus should be practical	39	78.0	3
04	Learning and teaching methods should be changed	36	72.0	4
05	Innovation should be encouraged	35	70.0	5
06	Raising awareness about possible job opportunities in the future	31	62.0	6
07	Implementing joint school and workplace programs	30	60.0	7
08	Directing self-study	27	54.0	8
09	Referring to training at external institutions	26	52.0	9
10	Conducting training camps	23	46.0	10

According to the above measures, it was clear that the main role of the school is to provide academic knowledge to the student and to provide the necessary facilities to develop practical

skills and abilities. In addition, measures such as promoting vocational education and changing teaching and learning methods were also suggested. Ideas were also proposed on implementing joint programs between schools and workplaces to encourage new creations and discoveries, and to raise awareness about possible job opportunities in the future. Practical suggestions such as self-study, referral to training at external institutions and conducting training camps were presented. Employers pointed out that schools should join ICT education in the future based on the existing and modern technological needs of workplaces. The main points identified by considering the common points of the ideas expressed by employers are as follows.

• Managing Internet connections: (Facebook, Twitter, YouTube, Google Plus, Instagram, Vimeo, etc.)

- Computer Programming
- Computer Networking
- E-Solutions
- Mobile Applications
- Database Management Systems
- Website Design
- Database Management Systems
- Big Data Analysis
- Machine Learning
- Embedded Systems
- Internet of Things
- Artificial Intelligence
- Data Science

Managing internet connections, handling social media networks, computer languages, computer networks, e-solutions, mobile applications, etc. were identified as the main skills, while data-driven management methods, website design, management information systems, big data analysis, etc. were moderately identified, and machine learning, embedded systems, macro-network Internet, artificial intelligence, data science, etc. were also identified as new trends. Spearman and correlation coefficients were calculated to investigate the relationship between acquiring IT skills at school and using IT skills at the workplace, which is shown in Table 9.

Table 9 Relationship between IT skills acquired at school and IT skills used at the workplace

			ICT skills acquired at school	ICT skills used at work
Spearman's rho	Q12 ICT Skills in School	Correlation Coefficient	1	.187
		Sig. (2-tailed)	.	.194
		N	50	50
	Q13	Correlation Coefficient	.187	1
				.

ICT skills in Job market	Sig. (2-tailed)	.194	
	N	50	50

According to Table 9, the correlation coefficient between the IT skills provided by the school and the skills currently used in the job market is 0.187. Since it shows a value close to zero, it can be identified that the relationship between the grades is weak.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The critical gap between educational needs and skills created by rapid technological changes is a fundamental challenge affecting job transitions. It can also be concluded that a number of major changes need to be made in the education system to maximize opportunities in the gradually evolving world of work.

The need to modernize the ICT subject by including areas such as artificial intelligence technology, machine learning, robotics, data processing and data analysis was concluded according to the responses.

The current G.C.E.(A/L) It can be concluded that it is necessary to design a syllabus that minimizes the strict theoretical content of the Information and Communication Technology subject and provides an environment for testing practical skills. It can also be concluded that the student should be provided with the necessary facilities to develop through one subject area in which he is good, out of the many subject areas under the subject of Information and Communication Technology.

5.0 RECOMMENDATIONS

According to the findings of this study, a number of conclusions were reached, the conclusions of which are as follows.

■ Curriculum reforms should be made to bring Information and Communication Technology under one subject stream and teach it.

■ Skills related to Information and Communication Technology should be developed to suit the daily work environment in the field of Information Technology.

■ Schools should be provided with the necessary quality facilities and technological tools to teach the subject of Information and Communication Technology.

■ A system should be developed to allow children in this country to experience the technological methods used for Information and Communication Technology education, such as the Internet, multimedia technology, computer technology, distance learning methods, television, smart devices and other electronic media.

■ An attractive certificate should be issued to a child who completes school education, reflecting the knowledge, skills and attitudes he acquired in the subject of Information and Communication Technology in school. This certificate shows that the student is not just a

passer of the exam but is a competent person who can do something he has learned, and it will also be an important certificate when entering a job.

■ The role of the teacher in the learning and teaching process related to the subject of Information and Communication Technology should change through the use of multiple learning methods such as student-centered activities, collaborative exploration, practical activities, etc.

■ It is necessary to provide training and opportunities to use technological tools and equipment to instill practical qualities in students to develop the subject competencies expected to be provided through the subject of Information and Communication Technology

■ State policies related to education and skills should be formulated to provide lifelong learning opportunities and capacity building to seize opportunities in the fields of information and Communication technology and start entrepreneurial activities.

■ The school should plan the necessary Information and Communication Technology facilities and methods to create human resources suitable for the job market and prepare a methodology to provide real experience and training related to the job market.

The learning and teaching process should not only instill an examination-centric mentality but also create capable human resources through practical application and use of the knowledge acquired through school education. Furthermore, if the current academic orientation and examination-centricity of secondary education are minimized and the competitive education pattern is changed, the development of skills required for the job market will be facilitated in secondary education students. This research made it clear that the subject of Information and Communication Technology takes a leading position for this.

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