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AN EXPLORATION OF ICT ON SELF-REGULATED LEARNING

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Abstract

The investigator made an attempt to study the influence of ICT on self-regulated learning among higher secondary school students of Malappuram district. The study is carried out on a representative sample of 100 higher secondary school students of Malappuram district using stratified random sampling method. Survey method was adopted. A questionnaire on ICT usage with special reference to self-regulated learning prepared by the investigator was the tool used for data collection. Percentage Analysis and Test of significance difference between means were the statistical techniques used in the study. As we are living in the digital era, students should be tech savvy in all areas of learning. One of the main aims of ICT is to make the students self-competent and confident users who can use the basic knowledge and skills acquired to assist them in their daily lives. Self-regulated learning, being an independent learning ability in students they should be aware of using all the available techniques related with technology. Hence, the present study is preferred.

***Keyterms**: Information and communication technology, Self-regulated Learning*

ICT on Self-regulated Learning –an exploration

Information and Communication Technology (ICT) has explored very vast changes in the field of education. Technological resources are increasingly used at all levels of educational system as they are assumed to improve the quantity of teaching and learning and to provide new avenues for thinking, interacting and working (Mc Loughlin & Lee, 2009).

ICT is a term that refers to all the hardware and software that people use to send and receive information. One of the main aims of ICT is to make the students self-competent and confident users who can use the basic knowledge and skills acquired to assist them in their daily lives. The use of technology to maximize the student learning experience is a vibrant area of interest across all tiers of global education. It offers 24/7 access to learning resources. It enables connectivity to information and to others. It also enables greater choice over the time, place and pace of study. It provides opportunities for reflection and planning in personal learning spaces.

ICT has been added to the curriculum in the 21st century as the fifth potent area of education in addition to teaching, learning, curriculum and educational program. (It plays a significant role in advancement of education. ICT has open up new vistas for education like online courses, e-journals, e-learning facilities etc. Thus it brings more and more resources and materials into classrooms. It has made imparting education stress free for both students and educators.

Educators have integrated technology into their instruction in the classrooms. They are always looking toward technology to provide students with higher quality learning. Technology driven learning experience is provided to all students through Technology Enhanced Learning Environment (TELE).Smart classroom in schools is a technologically enhanced learning environment. It is an environment in which students get an opportunity to become technologically competent in all areas. The systematic use of ICT tools in classroom instruction makes the teaching learning process more effective and highly interactive. It has shifted the teaching –learning process from teacher – centered learning to student centered learning. Research has shown that high level of student and instructor satisfaction can be produced in ICT enabled learning process.

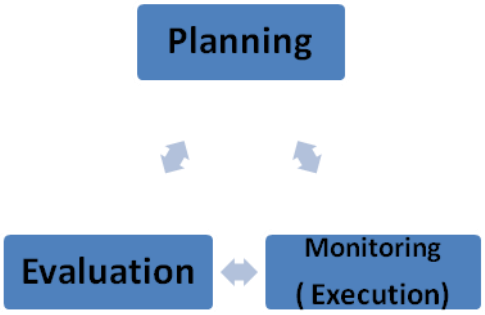
Actually, Information and communication technology is an umbrella term comprising all the products that store, retrieve, manipulate, transmit or receive information electronically in a digital form. For example: Personal computers, digital television, pen drive, compact disc, email, usage of internet etc comes under ICT.

Digitalization has made the process of education more simplifying and attention grabbing.ICT introduces innovative pedagogies into the classrooms, creates networking among educational institutions, and improves all standard of education. It has lessened the distance between students and their educational needs with objectives to foster self-paced, self-assessed and self-directed through the application of ICT. With the use of technology especially world wide web (www) and the internet, self-guided exploration can occur more easily than ever before. Hyperlinks and hypermedia allow jumping around and following an idea or a series of ideas.

Researchers have been given importance to self-regulated learning over two decades. Self- regulated learning can be defined as an active process by which learners become aware of their own learning and feel responsible for it, setting goals and monitoring their achievements, controlling their cognitive, motivational and emotional behavior, evaluating

their outcomes and devising strategies to improve them, paying attention to the contextual features of the learning environment in order to take advantage of the affordances (Zimmerman, 1998. Pintrich,2000). Or we can say simply it is the ability of the learners to control the factors affecting learning and the learning process from the cognitive, meta-cognitive, emotional and motivational points of view.

Self-regulated learning involves three cyclic phases which includes planning, monitoring and evaluation phase.



Phases of self-regulated Learning

Figure-1

During the **Planning** phase, learners set valuable academic goals (i.e. learners set what would they expect during the completion of course , also they note it down), plan learning strategies (learners write specific action plan to achieve those goals). In the second phase, **Execution** (monitoring) phase, learners execute what they had already planned. In the **Evaluation** phase, self-evaluation takes place (i.e. learners evaluate the nature of course and use contextual clues to determine what specific tasks are needed to achieve their goal).

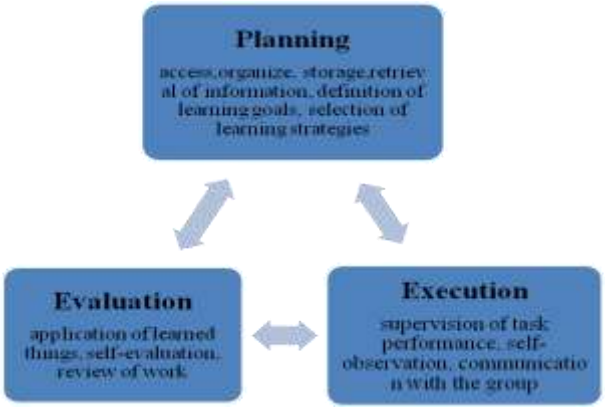
Some contributions of ICT to each of the three SRL stages-planning, monitoring and evaluation and to the learning process in general.

During the **first stage** ICT helps to access, organize, edit, store and retrieve information needed for the specific desired learning, the definition of goals and selection of appropriate learning strategies to achieve the goal.

During the **second stage** (monitoring) ICT helps in the supervision of task performance, self-observation of one's work and communication with the group and with teacher.

During the **final stage**, ICT helps in the correction of written work, spell check, grammar, sentence structure, self-assessment and the application of the learned material in other situation. Figure- 2 shows the contributions of ICT in different phases of self-regulated

learning.



ICT contributions to phases of self-regulated learning. Figure-2

On the basis of contributions of ICT and TELE, the investigator made an attempt to study its influence on self-regulated learning among higher secondary school students.

Objective

To study the influence of ICT & TELE on self-regulated learning among higher secondary school students**.**

Methodology

Sample: The study is carried out on a representative sample of 100 higher secondary school students of Malappuram district, Kerala using stratified sampling method. Survey method was adopted.

Tool: A questionnaire on ICT usage with special reference to self-regulated learning prepared by the investigator was the tool used for data collection.

Statistical Technique: Percentage Analysis

Test of significance difference between means

Analysis and Discussion

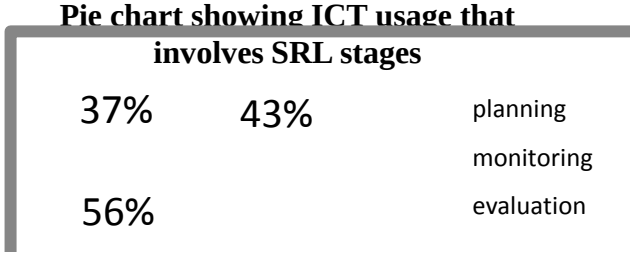


Figure-3

During the planning phase,

- 59% of students utilize the internet facility for seeking more knowledge and retrieving definitions on particular topics.
- 20% of students searched Google for knowing the correct structure of sentences.
- 52% of students use pen drive, compact disc etc. for storing and retrieval of data.
- 70% of students use the internet facility for immediate accessing of information.

During the monitoring stage,

- Nearly 50% of students aware and make use of computer and mobile applications in the educational field.
- 80% of students use to share notes and other information through social networking sites.
- Only 45% of students ensure their work at home by self-checking the same data done in class.

During the evaluation phase,

- 48% students utilize the internet facility to identify the scope of the course of study.
- 38% students use the internet facility for analyzing the grammatical corrections.
- Only 25% students apply or use their knowledge to new areas of learning and other situations.

Nearly 50% students know how to use spread sheets but only 18% of students know to use power point presentations.73% of students admitted ICT is inevitable in learning contest and 87% of students acknowledged that notebook, laptop, computer etc are necessary for learning purpose. Also, it was found that 33% students are not using internet facilities for any study purposes.

Table-1 Data and results of test of significant difference between mean scores based on gender and class of study

	Mean	**Standard Deviation**	**t-value**	**level of significance**
Gender	Male=56	11.34	3.51	3.26	significant
	Female=44	8.93	3.86		
Class	Plus one= 49	9.98	3.36	0.77	not significant
	Plus Two=51	10.57	4.27		

From table -1, it was found that the t-value obtained 3.26 is greater than the tabled value 2.58, at 0.01 level of significance. That means, there is significant difference in the

mean scores of ICT usage between male and female higher secondary school students. It was evident that there is no significant difference in the mean scores of ICT usage between plus one students and plus two students as the t-value obtained 0.77 which is less than the tabled value at 0.05 level of significance.

Conclusion:

The study concluded that the extent of ICT usage in self-regulated learning among higher secondary school is found to be 37% in planning stage, 56% in the monitoring stage and 43% in the evaluation stage of self-regulated learning. Compared to other phases, students are using ICT and ICT applications in the monitoring phase. Regarding self-regulated learning phases, male students depend more on ICT applications than female students.ICT usage must be promoted to enhance self-regulated learning among students. With recent developments in technology, and the main streaming of technologically enhanced learning environment, students should offer learning activities in order to promote ICT enabled self-regulated learning in students, providing it is a means to prop up with.

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