

INNOVATIVE EDUCATIONAL PRACTICES IN HIGHER SECONDARY EDUCATION THROUGH ICT IN KERALA

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Abstract: Information and Communications Technology (ICT) learning is any instructional practice that effectively uses technology to strengthen a student's learning experience. ICT learning encompasses a wide spectrum of tools and practices, including, among others, online and formative assessment; an increase in the focus and quality of teaching resources and time; online content and courses; applications of technology in the classroom and school building; adaptive software for students with special needs; learning platforms; participation in professional communities of practice; and access to high-level and challenging content and instruction. In particular, blended learning occurs any time a student learns, at least in part, at a supervised brick-and-mortar location away from home and, at least in part, through online delivery with some element of student control over time, place, path, and pace.

Keywords: ICT, Blended Learning, Online Content, Learning Experience, Technology, Brick And Mortar Location.

Introduction:

History of Education in Kerala: The importance and antiquity of education in Kerala is underscored by the state's ranking as among the most literate in the country. The local dynastic precursors of modern-day Kerala - primarily the Travancore Royal Family, the Christian missionaries, The Nair Service Society, SreeNarayana Dharma ParipalanaYogam (SNDP Yogam) and Muslim Educational Society (MES) - made significant contributions to the progress on education in Kerala. There were many sabhamathams that imparted Vedic knowledge. Apart from kalaris, which taught martial arts, there were village schools run by Ezhuthachans or Asans. Christian missionaries brought the modern school education system to Kerala.

Education in Kerala had been promoted during British rule in India by Christian missionaries who were keen on providing education to all sections of society and on strengthening of women, without any kind of discrimination. The contributions of Catholic priests and nuns has been crucial and has played a major role in the education of women and members of lower strata of society, resulting in the surpassing of many social hurdles. A significant figure in the 19th century was Rev.fr. Kuriakose Elias Chavara, who started a system called "A school along with every church" to make education available for both poor and rich. That system still continues in the present. His work has resulted in the promotion of education for girls and has become a model for the educational system in Kerala after independence. Kerala's high literacy rate is attributed to a high literacy rate among girls; as it is said, "When a woman is educated, she will make sure that her children are well-educated."

The Kerala school of astronomy and mathematics was founded by Madhava of Sangamagrama in Kerala, which included among its members: Parameshvara, NeelakantaSomayaji, Jyeshthadeva, AchyutaPisharati, MelpathurNarayanaBhattathiri and AchyutaPanikkar. The school flourished between the 14th and 16th centuries and the original discoveries of the school seems to have ended with NarayanaBhattathiri. In attempting to solve astronomical problems, the Kerala school independently created a number of important mathematics concepts. Their most important results—series expansion for trigonometric functions—were described in Sanskrit verse in a book by Neelakanta called *Tantrasangraha*, and again in a commentary on this work, called *Tantrasangraha-vakhya*, of unknown authorship. The theorems were stated without proof, but proofs for the series for sine, cosine, and inverse tangent were provided a century later in the work *Yuktibhāṣha*, written in Malayalam, by Jyeshthadeva, and also in a commentary on *Tantrasangraha*. Their work, completed two centuries before the invention of calculus in Europe, provided what is now considered the first example of a power series (apart from geometric series). However, they did not formulate a systematic theory of differentiation and integration, nor is there any direct evidence of their results being transmitted outside Kerala.

Evolution of Higher Secondary in Kerala: In Kerala, the higher secondary education was a part of the higher education system and the plus two classes were offered as pre-degree courses in arts and science colleges. In order to reorganize the secondary and college education on the basis of the National Educational Policy (NEP), the pre-degree course was gradually de-linked from the higher education system and was brought under the school system. There was a partial induction of plus two stage of education in the school system with the introduction of vocational higher secondary courses in 19 schools, in 1983-84. The Kerala Higher Secondary Department was formed in 1990 with the main objective of imparting best quality education. The government issued a number of orders for the commencement of the higher secondary school education in the state. These orders facilitated the necessary steps to be taken to reorganize secondary and collegiate education in the state in accordance with the National Education Policy. In 1990, the predegree course was continued to be controlled by the universities (Government of India, 1990) and plus two was introduced only in selected government schools in the state. After watching the progress of plus 2 education for one year, the scheme was extended, stage by stage, to other high schools in the state. The school system was streamlined by fixing standards 1 to 4 as lower primary, 5 to 7 as upper primary and 8 to 10 as secondary. Higher secondary education consists of standards XI and XII. Thus Plus two was introduced in 1990/91, in 31 government schools, 1 in each educational district. At that time science group, comprising of Physics, Chemistry and Mathematics and Biology, was started in 6, humanities group, comprising of History, Geography, and Economics with Hindi or Malayalam, in 15 schools. There was only one course and one batch for each school and each batch had a maximum of 60 pupils. NCERT syllabus was followed with suitable modifications to suit local conditions, with English as the medium of instruction. All candidates who passed SSLC or equivalent examination were eligible for admission. The tuition fees and the examination fees were set as the lowest of the prevailing in the three universities and the general orders regarding fee concessions, lump sum grant, scholarships, stipend etc for pre degree students were extended to higher secondary course also (Government of Kerala).

At present the department conducts courses in Science, Humanities and Commerce streams and also conducts the various higher secondary examinations for students of Open School, Technical Schools, Kalamandalam Arts School, Schools in Lakshadweep, Mahe and Gulf Countries along with the students of the higher secondary schools in Kerala. Department conducts examinations, for the first year, as well as, for the second year in March. SAY(Save A Year)/Improvement Examinations are held in June, for enabling student, to save a year in case they fail in a single subject and supplementary examinations are also conducted in August.

Every student, under going higher secondary course, has to study 6 subjects. English language is compulsory with any one of the second languages offered for higher secondary courses such as Malayalam, Hindi, Arabic, Sanskrit, Tamil, Urdu, Kannada, Syria, French, Russian, Latin and German and a combination of four subjects, depending on the stream selected. The syllabus, prescribed by CBSE and NCERT text books are followed for English, subjects under science, Humanities and Commerce groups, as well as, for Hindi (Government of Kerala).

In Kerala, there are higher secondary divisions functioning under government, aided and unaided schools. As per the records of the Directorate of higher secondary education, as on academic year 2016-17, there are 2825 batches in the various government higher secondary schools in Kerala. The number of students in government schools comes to 1,40,950 and those in aided schools total up to 1,64,850 in 3299 batches. The total number of teachers in the language group comes to 5,527, in Science comes to 8,982, in humanities group there are 5,778 teachers and in commerce there are 1,657 teachers. The statistics relating to higher secondary school education like the number of schools under different management, number of teachers and students and results of higher secondary examination has been examined in the following pages.

Information and Communications Technology: Information and Communications Technology (ICT) learning is any instructional practice that effectively uses technology to strengthen a student's learning experience. ICT learning encompasses a wide spectrum of tools and practices, including, among others, online and formative assessment; an increase in the focus and quality of teaching resources and time; online content and courses; applications of technology in the classroom and school building; adaptive software for students with special needs; learning platforms; participation in professional communities of practice; and access to high-level and challenging content and instruction.

Today the role of Information and Communication Technology (ICT), especially Internet plays a crucial role , especially in the process of empowering the technology into the educational activities. Thus the education

sector can become an effective sector to anticipate and eliminate the negative impact of ICT. Technology (Internet) is another side that can be the most effective way to increase the student's knowledge.

Being aware of the role of ICT in our daily life , especially in the educational sector , educational authorities should be wise enough to implement the strategies to empower ICT in supporting the teaching and learning process in the Higher Secondary class rooms. ICT is not just the bloom of the educational activities , but also it will be the secondary option to improve the effective and meaningful educational process .The main purpose of the strategy for ICT implementation in the Higher Secondary Education is to provide the prospects and trends of integrating Information and Communication Technology (ICT) into the Higher Secondary educational activities. There are some unavoidable facts why ICT enabled education should be implemented without any failure. The following are some of the facts which in my view is very important and vital.

1. The whole educational system, especially the Higher Secondary Education should be reformed. The ICT has been developing very rapidly. Therefore , in order to accommodate the new trends in ICT the whole educational system should be reformed and ICT should be integrated into educational activities.
2. Influence of ICT cannot be ignored or belittled. Therefore the teaching – learning activities should be reoriented and remodified from the manual source centered to the open source d ones. In this case , the widely and wisely use of ICT is to be made an unavoidable policy that should be anticipated by the Higher Secondary School authorities.
3. Multimedia games and negative and porn sites are some of the serious problems that should be handled by the Higher Secondary Education authorities an educational institutions. The students cannot be exterminated from this case. They can access to it whenever and wherever they want. Schools do not have enough power and time to handle or prevent it. Meanwhile most of the parents do not have enough time to accompany and control their children. So the Higher Secondary students have a large number of opportunities to access to multimedia games or browsing the negative and prone sites. In such a situation , educational institutions plays an important role to eradicate these problems . Some of them are enlisted here. While mishandling the professional ethics of teaching there is nobody to look into the mental health of the higher secondary students. Few years ago a case was reported in the Alappuzha Dist. in Kerala. Three girls in a government school committed suicide. And it was a shocking news in the educational field. There was a hue and cry from different corners of the society that the teachers should give more energy and time to listen the personal feelings of the pupils especially girls. As per the wider demand, the government of Kerala instituted Souhrida Club in every school and a higher secondary teacher was given charge of this club.

Very recently three girls committed suicide by jumping out of the train in Ottappalam. They were on Bangalore visit without the knowledge of their parents. This three girls hailed from Pathanamthitta. Preliminary investigations revealed that this girls were mentally very weak and there were nobody to hear them. The teachers duty is not only to instruct the pupils in academic way but also to be a good listener. In both the above said incidents their teachers were the main culprit because they did not notice the mental stage of their students.

- Make Higher Secondary students familiar with educational games.
 - Encourage the students to create their own blogs and ask them to write articles, poems, short stories, features or ask them to express their opinion by an online forum provided in the Internet
 - Encourage the students to create innovation in web page design that will be useful for their future
4. The implementation of ICT in Higher Secondary education has not been a priority trend of educational reform and the State paid a very little attention to it. Therefore there should be an active participation , initiative and goodwill if the Higher Secondary schools and the Government institutions should enhance ICT implementation in Higher Secondary schools in Kerala
 5. The teachers are to be the main motivators and initiators of the ICT implementation in Schools. The teachers should be aware of the social and scientific changes in teaching activities. They should act as a catalyst of change from the classical method to the modern one.

The following are the aim and objectives of ICT implementation in Higher Secondary Schooleducation in my opinion

- To implement the principle of life – long learning in education
- To increase a variety of educational services and medium or method
- To promote equal opportunities to obtain education and information
- To develop a system of collecting and disseminating educational information
- To promote technical literacy to all citizens , especially to students
- To develop distance education with national contents
- To promote the culture of learning at school
- To support schools in sharing experience and information with others

At last and not the least , ICT enabled education should be made compulsory not only in the Higher Secondary educational level , but from the primary level.

References:

1. ICT Education , Chris Robert , 2012 , Penguin Publication , Auckland
2. Technology , Innovation and Educational Change : A Global Perspective , Robert B Kozma , 2009 , Oxford Publication
