An Experimental Study Conducted in Kerala at Higher Secondary Level on the Application of ICT Vs. Traditional Model of Teaching of English

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ABSTRACT

This study discusses how far ICT (Information and Communication Technology) can be used to improve the quality of education by comparing traditional methods of teaching with ICT models of teaching English at Higher Secondary level in Kerala. Today, English is considered a global language but the future of English will be more complex, more demanding and more challenging for native speakers and second language users as ICT lies at the heart of policy making in education. Today's challenge in Education is to define the best use of ICT for improving the quality of teaching and learning. There is a great possibility for the application of ICT at Higher Secondary level, as it help to improve skills in English (LSRW), in a communicative method classrooms in India, especially in Kerala. The researcher conducted a survey among teachers and students in Higher Secondary sections in Kerala to understand their familiarity towards use of ICT tools. As the findings of the survey result were positive about ICT familiarity of teachers and students, the researcher conducted an experimental study on the effectiveness of ICT tools in teaching by teaching Robert Frost's poem "The Road Not Taken". The implications of the study are presented in the paper.

Key Words: *Information and Communication Technology;* **ELT***: English Language Teaching,*

CLL*: Communicative Language Learning,* **LSRW***: Listening, Speaking, Reading and Writing*

Introduction

Bernard Shaw once said, "The reasonable man adapts himself to the world; the unreasonable man attempts to adapt the world to him. Therefore, all progress depends on the unreasonable man." Science and technology, like the unreasonable man, frequently, and often violently, move to change the world (qtd. in Prasad and Vijay Kumari, *Advanced Educational Technology* 107). ICT stands for Inform1ation, Communication, and Technology, and these three catch words are highly important in the modern highly technological world. Today, English is considered a global language its role in since it is mainly used for communication in the digital era the role of English in ICT age is a matter of debate.

The Future of English in ICT Age

Graddol in his book *The Future of English* identifies significant global trends in Economics, Technology and Culture which may affect the learning and use of English internationally in the 21ˢᵗ century. (Graddol 2). Commentators vary greatly in their attitude towards and expectations of global English. At one extreme, there is an unproblematic assumption that the world will eventually speak English as that this will facilitate the cultural and economic dominance of native speaking countries. Crystal in this context observes:

The future of English will be more complex, more demanding of understanding and more challenging for native speakers and second language users of English. There has never been a language so widely spread or spoken by so many people as English. There are therefore no precedents to help us to see what happens to a language when it achieves genuine world status (138-139).

The Scope of ICT in Education and ELT

According to Loveless, "Today, ICT lies at the heart of policy making in education" (*The Role of ICT* 37). Loveless and Viv Ellis' book '*ICT, Pedagogy and the Curriculum*', examines "the role ICT plays in challenging the construction of three subjects (core curriculum of UK") such as English, Mathematics and Science and also it reveals the importance of English in the curriculum world over by applying ICT in it (Loveless and Ellis, *Editors' Introduction* 5-6). It is painfully apparent that post-independent Indian Education system has failed to provide qualitative and meaningful education to every child born after the nation's 'midnight tryst with destiny'. But within the grove of the academia and the drawing rooms of the intelligentsia, there's rising expectation that the new wonder Information Technology (IT) may succeed where our system has failed (Shuchi, "Efficient Technology Usage in Classrooms" 40). Sagar in his book *Digital Technology in Education* discusses: "Today's challenge in Education is to define the best use of ICT for improving the quality of teaching and learning" (9).

An Outline/Framework of Research Study on Application of ICT in ELT

A survey among teachers and students in Higher Secondary sections in Kerala was conducted to understand their attitude towards ICT tools. It was decided to conduct an experimental study on the effectiveness of use of ICT tools for teaching if both the students and teachers are aware of using them. The survey result on ICT operational skills of teachers and students was positive and hence the researcher used YouTube Videos to teach Robert Frost's poem "The Road Not Taken".

Sample Data of the Survey

As part of the research study, a survey among 250 higher Secondary students and 300 teachers in Thrissur and Ernakulam Districts of Kerala was conducted.

Results and Interpretations based on Higher Secondary Students and Teachers Survey

The survey conducted among Higher Secondary students regarding their attitude to IT and their awareness of its usage gave interesting results. The survey indicated a positive trend in the use and application of computers by the students for their personal, social and study purposes. Another remarkable fact is that there is not a marked digital divide between higher secondary teachers and students of today in Kerala. Also, 84% of students know how to operate computers when compared with their teachers. Another interesting fact is that 40% of students have memberships in social networks. The survey results also gave the information that 90% of students use IT for entertainment and only a few (10%) use it for study purpose. Another major impact of the survey is that 60% of students supported ICT integrated classes and 80% firmly believed that they could improve their listening, speaking, reading and writing (LSRW) skills by applying ICT in English language learning.

Having acknowledged through survey the distinct advantages ICT could confer on the teaching of English to improve learners' communication skills, the researcher proceeded with applying the theory practically in Higher Secondary English classrooms in selected schools by teaching a poem "The Road Not Taken" by Robert Frost.

Sample Selected for the Experimental Study

To compare ICT model teaching with traditional mode, the researcher selected two schools for his experimental teaching[3].The sample of students included in the experiment was classified based on their gender and subject of study (See Table 3.1).

Table 3.1 Sex-wise classification of student sample in each subject

Subject	Male		Female		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
ComputerScience	42	37.5	14	32.6	56	36.1
Commerce-Computer	16	14.3	29	67.4	45	29
Science-Bio	30	26.8	0	0	30	19.4
Commerce-Mathematics	24	21.4	0	0	24	15.5
Total Students	112	100	43	100	155	100

Altogether, there were 155 students involved in the experimental study. Among this, 112 students (72.3%) were boys and 43 girls (27.7%). The entire sample was selected from four different batches. From the total sample, 56 (36.1%) were from Computer Science, 45 (29.0%) from Commerce (Mathematics), 30 (19.4%) from Bio Science, and 24 (15.5%) from Commerce (Mathematics). Figure 3.1a illustrates this information.
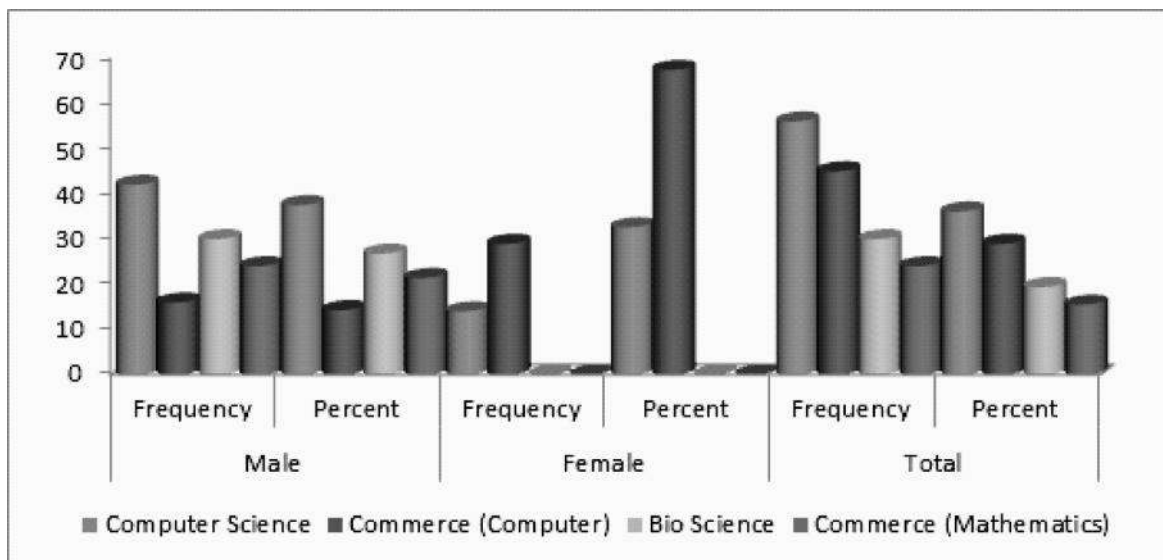
Fig. 3.1a Male-female participation branch-wise

Effectiveness of ICT Method over Traditional Method

 The researcher conducted model class using ICT means for the selected student sample, using a Poem "Road not Taken" by Robert Frost prescribed for Higher Secondary (Plus One) course under Kerala State syllabus. Before undertaking ICT model teaching, he had conducted traditional model of communicative approach class for the sample. A test was conducted for the students after the traditional model class keeping all the objectives of evaluation in mind. The marks and grades of students of each school were recorded branch-wise with precision. A post-test was conducted after ICT model teaching and the scores were recorded.

Paired T-test was used to compare students' performance across the tests. Null hypothesis test was used to examine if there was any significant difference in the achievements of students before and after ICT method of teaching. The results of the test are given in Table 3.2.1:

Table 3.2.1 Comparative achievements of students in ICT and traditional modes of teaching (N = 155)

Method	Mean	Std Error	T-value	P-value
Traditional	64.59	1.496	8.666**	<0.001
ICT Model	77.68	1.273		

** significant at 0.01 levels

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T-value obtained from the comparison of achievements of students after ICT method (8.666) was found to be significant at 0.01 levels. This result rejected the null hypothesis and found that there was significant difference in the achievements after the ICT method of teaching. The 'Mean' score of achievement increased from 64.59 to 77.68 which showed that ICT model teaching was more effective for achievements in English.

Effectiveness of ICT Method over Traditional Method for Sub-Sample of Gender

For the sub-sample of male and female population, the comparison of achievement after ICT method over the traditional method was done by using paired T-test. Null hypothesis tested here indicates that there is no significant difference in the achievement before and after ICT method of teaching for the sub-samples of males and females. Results of the test are given in Table 3.2.2a.

Table 3.2.2a Comparative achievements of students in ICT and traditional modes of teaching for the sub-sample based on gender

Sample	Method	Mean	Std Error	T-value	P-value
Male	Traditional	66.55	1.681	5.316**	<0.001
	Total(10)	75.09	1.562		
Female	Traditional	59.48	3.047	8.948**	<0.001
	Total(10)	84.42	1.763		

** significant at 0.01 levels

In the case of both male and female samples, T-value was found to be significant at 0.01 levels and the 'Mean' value of achievement was higher after ICT method of teaching in both the groups. Table 3.2.2b gives the results of independent T-test for comparing male and female students. Comparison was done by using both the scores of traditional method of teaching and ICT method of teaching. Null hypothesis tested signifies that there is no significant difference in the pre- and post- test scores between male and female students.

Table 3.2.2b Results of independent T-test for comparing male and female students

Method	Group	Mean	Std Error	T-value	P-value
Traditional	Male	66.55	1.681	2.141**	0.039
	Female	59.48	3.047		
Total (10)	Male	75.09	1.562	3.392**	0.001
	Female	84.42	1.763		

** significant at 0.01 levels, * significant at 0.05 levels

In the case of traditional method of teaching, T-value (2.141) was found to be significant at 0.05 levels. Hence, it can be concluded that there is significant difference in the achievement of male (66.55) and female (59.48) students. This shows that before undergoing the ICT method of teaching, achievement of males was higher than that of females. In the case of traditional method of teaching, T-value (3.392) was found to be significant at 0.01 levels. Hence, it can be concluded that there is significant difference in the achievement of male (75.09) and female (84.42) students. The 'Mean' score is higher in the case of female students which indicate that ICT method of teaching is more effective in the case of female students. In the case of boys, the achievement score increases from 66.55 to 75.09 whereas in the case of girls achievement score increases from 59.48 to 84.42. Increase is higher in the case of female students which also indicate that ICT method of teaching is more effective among girls than boys.

Conclusion

The use of ICT in English classrooms extends beyond its motivational value to address key outcomes of the syllabus and allows students to become competent users as well as consumers in English. Research suggests that incorporating ICT into English curriculum can improve learners'

(i) writing and reading skills,

(ii) speaking and listening skills, and can support their

(iii) collaboration, creativity, independent learning, and reflection.

As an interactive and collaborative medium, ICT allows responding, composing, and publishing to be easily shared and offers students the opportunity to explore the language of texts more creatively and develop as speakers, writers and readers for an ever-widening range of purposes and audiences. ICT can support them in their choice of genre for audience and purpose, identify key characteristics and features of text, and develop understanding of language and critical literacy.

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