Research Article

A Study on the Problems Faced by Higher Secondary School Students in Learning Computer Science

Prof. M. John Milin Sandeep,
Assistant Professor in Computer Science,
RP.A College of Education,
Marthandam, Viricode P.O, Kanyakumari,

Abstract

Computer Science is a subject have difficult and mysterious science, because of the numerous programs, flowcharts and source codes which it employs. Computer Science provides powerful ways of exploring, investigating and understanding the universe. In the present study, the researcher tries to analyze the problems faced by the Higher Secondary School students in learning Computer Science. The present study proves there are positive correlation between the way of Computer science learning and its variables.

Keywords: Computer Science, Higher Secondary Students, Learning Problems, Correlation Study, Programming, Flowcharts, Source Codes, Educational Challenges, Student Learning, Educational Research

INTRODUCTION

Computer Science is not a subject that is to be taught but it helps in carrying day-to-day activities successfully. A person who studies Computer Science not only achieves training and perfection but also a general professional intelligence. Usually the average score of Computer Science in a school or a state is low. It is a well-established fact that there is no other subject matter area the Higher Secondary School students suffered from erratic and unwise guidance than in the field of Computer Science. Computer Science is considered as a difficult and mysterious science, because of the numerous programs, flowcharts and source codes which it employs.

Problems with Computer Science differ from pupil to pupil. Teachers should study the difficulties of pupils and change the mode of instruction. In addition, teachers should adopt different techniques to solve the problems of pupils in Computer Science. Computer Science can provide pupils with powerful ways of exploring, investigating and understanding the world. The potential to apply the skills of investigating relationships and establishing connections reflects the importance of the subject across the curriculum during the school years. There are certain variable factors, which are of great importance in learning Computer Science. Only a few attempts have been made by researchers to understand the problems of pupils of Higher Secondary Schools in learning Computer Science. In the present study, the investigator tries to analyze the problems faced by the Higher Secondary School students in learning Computer Science.

STATEMENT OFTHE PROBLEM

The research problem is entitled as **"A STUDY ON THE PROBLEMS FACED BY IDGHER SECONDARY STUDENTS IN LEARNING COMPUTER SCIENCE".**

OBJECTIVES

- To find out the problems faced by Higher Secondary students in learning Computer Science.
- To find the level of problems faced by Higher Secondary students in content, teaching, examination, learning and subject.
- To investigate the problems faced by Higher Secondary students in learning Computer Science with respect to the variables Sex, Locality and Religion.

HYPOTHESES

The major hypotheses of the study are the following:-

- There will be a significant relationship between problems faced by Higher Secondary students in learning Computer Science with respect to the variables sex, locality and religion.

- There will be a significant relationship between problems faced by Higher Secondary students in learning Computer Science with respect to content, teaching and examination.

METHODOLOGY

In the present study, the investigator has selected normative survey method.

TOOLS

The investigator, depending on the nature of study, used the following tools for data collection.

A. General information sheet

B. PICTELS (Problems in Content, Teaching, Examination, Leaming and Subject)

SAMPLE

The sample of the present study consists of 400 Higher Secondary School students of Kanyakumari district. The investigator has adopted simple random sampling method. While selecting the subjects due representations where given to factors such as Sex, Locality and Religion.

ANALYSIS

The investigator collected the data by using the tool PICTELS. The statistical techniques mean, standard deviation and t-test were used for analyzing the data. The details of the test are given in the following tables:-

Table 1:

There is no significant difference between male and female Higher Secondary students faced problems in learning Computer Science with respect to Content, Teaching and Examination

Sl.No	Section	Group	N	Mean	S.D	t value	Level of significance
1	A(Content)	Male Female	180 220	6.80 6.19	2.32 2.26	2.65	Significant at 0.01

2	B(Teaching)	Male Female	180 *220*	5.60 5.52	3.60 3.70	0.22	Not Significant
3	C(Examination)	Male Female	180 220	5.39 5.90	3.41 4.21	1.34	Not Significant

Table 2:

There is no significant difference between Rural and urban areas Higher Secondary students faced problems in learning Computer Science with respect to Content, Teaching and Examination.

Sl.No	Section	Group	N	Mean	S.D	t value	Level of significance
1	A (Content)	Rural Urban	192 208	6.78 6.05	5.17 4.43	1.52	Not Significant
2	B (Teaching)	Rural Urban	192 208	5.51 5.52	3.56 3.70	0.028	Not Significant
3	C (Examination)	Rural Urban	192 208	7.17 6.11	2.03 2.17	2.76	Significant at 0.01

Table 3:

There is no significant difference between Hindu and Christian religions Higher Secondary students faced problems in learning Computer Science with respect to Content, Teaching and Examination .

SI.No	Section	Group	N	Mean	S.D	t value	Level of significance
1	A(Content)	Hindu Christian	160 168	5.62 5.47	3.82 3.37	0.05	Not Significant
2	B(Teaching)	Hindu Christian	160 168	7.92 7.31	2.11 2.07	2.94	Significant at 0.01
3	C(Examination)	Hindu Christian	160 168	5.50 5.67	3.51 3.96	0.41	Not Significant

Table 4:

There is no significant difference between Hindu and Muslim religions Higher Secondary students faced problems in learning Computer Science with respect to Content, Teaching and Examination

SI.No	Section	Group	N	Mean	S.D	t value	Level of significance
1	A(Content)	Hindu Muslim	160 72	7.92 6.94	2.43 2.83	1.80	Not Significant
2	B(Teaching)	Hindu Muslim	160 72	5.64 5.47	3.41 3.37	0.35	Not Significant
3	C(Examination)	Hindu Muslim	160 72	*5.50* 5.42	.3.51 3.69	0.16	Not Significant

Table 5:

There is no significant difference between Christian and Muslim religions Higher Secondary students faced problems in learning Computer Science with respect to Content, Teaching and Examination

SI.No	Section	Group	N	Mean	S.D	t value	Level of significance
1	A(Content)	Hindu Muslim	160 72	6.42 6.06	4.78 7.51	0.56	Not Significant
2	B(Teaching)	Hindu Muslim	160 72	5.62 5.47	3.82 3.37	0.30	Not Significant
3	C(Examination)	Hindu Muslim	160 72	5.67 5.42	3.39 3.69	0.47	Not Significant

RESULTS AND DISCUSSION

The results of this study indicate there is some relationship between learning of computer science and variables such as content and gender. The study also show positive correlation between religion and teaching of Computer science. Some researchers indicated that limited experience with computers might increase the level of students anxiety, which may affect students' academic performance. (Hedi, O'Neil & Hansen, 1973; Johnson & White, 1980; Johnson & Johnson, 1981). The Results of many studies exploring other factors such as age (Loyd & Gressard, 1984) and experience demonstrate similar contradictions. Francies (1988) studied the impact of educational level, gender, age and computer experience on computer

attitude. The sample of the study was 30 students. The results show that only the educational level was not a significant factor in relation to computer anxiety. Dyck and Smither (1995) studies the levels of computer anxiety and computer experience.

Subjects completed a demographic and computer experience questionnaire and two computer anxiety scales. Results indicate a negative relationship between computer anxiety and computer experience, more over males have less anxiety as compared to females.

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