DEVELOPMENT OF CAI PROGRAM & IT'S EFFECTIVENESS ON STUDENT TEACHERS' ACHIEVEMENT

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Abstract

For learning in short period & with own speed, it is necessary to learn with the help CAI program. To give experience of self learning with the help CAI program to student teacher & to study the effectiveness of self learning through CAI program & teaching through traditional method on learning achievement of student teacher, researcher need to do research. Researcher used mixed method for research. Post test equivalent group design is used in the research. Achievement Tests & Self learning Record Chart are used for data collection. Mean, t test & F test are used as statistical tool. Self learning through CAI program is more effective. Student teachers gave good response about CAI program.

Keywords: *CAI Program, Self learning record chart, Health Care, First Aid*

Need: Teacher has no time to give personal attention for student. Students waste their time for searching the learning unit on internet. For learning in short period & with own speed, it is necessary to learn with the help CAI program.

To give experience of self learning with the help CAI program to student teachers & to study the effectiveness of self learning through CAI program & teaching through traditional method on learning achievement of student teacher, researcher has need to do research.

Statement: To develop CAI program for the units 'Health Care'& 'First Aid' in the subject Health Education under D,T.Ed. Syllabus & to study the effect of self learning through CAI on student teachers' achievement.

Objectives:

1. To develop CAI program for the units 'Health Care'& 'First Aid'.

2. To give developed CAI program for self learning to experimental group & teach to control group through traditional method.

3. To study the effectiveness of self learning through CAI program & teaching through traditional method on learning achievement of student teacher in the units 'Health Care'& 'First Aid'.

4. To Study the effectiveness of self learning through CAI program on learning achievement of student teacher in the units 'Health Care'& 'First Aid' with regard to student teachers' subject faculty in higher secondary school.

5. To analyze student teachers' response towards CAI program.

Assumption: There is compulsory computer practical of 60 marks in D.T.Ed. second year syllabus ,So student teacher have essential computer handling skill for self learning through CAI program.

Scope: CAI program developed by researcher is related to student teachers who will study through Marathi medium.

Limitations:

1. The study is not considered the student teachers attitude towards health education & their knowledge about 'Health Care'& 'First Aid' which they received through communication media, society, home or private coaching class.

2. The results in this study are depends on the student teachers response to achievement tests.

Delimitations:

1. Research is limited to only for D.T.Ed. second years' student teachers who are learning through Marathi medium in Bhor City, Pune district, Maharashtra.

2. Research is limited to only for the units 'Health Care'& 'First Aid' in the subject of Health Education from D.T.Ed. syllabus.

Methodology:

Type of Research: Applied Research

Research Method: Mixed method

Mixed Research Method	
Analysis Method	1. Analysis the content in the units 'Health Care'& 'First Aid'. 2. Analysis the student teachers' response towards CAI program.
Product Method	Development of CAI program.
Experimental Method	Study of effectiveness of self learning through CAI program on student teachers' learning achievement.

Design: Post test equivalent group design.

Variables:

Independent variable: CAI Program developed by researcher.

Dependent variable: Student teachers' achievement in unit test.

Attribute Variables: Student teachers' subject faculty in higher secondary school (Arts, Commerce, Science).

Population: All student teachers learning in second year of D.T.Ed. colleges (Marathi Medium) recognized by N.C.T.E. & M.S.C.E.R.T...

Sampling:

Selection of college: Sou. Nirmalatai Thopate D.T.Ed. college, Bhor, Pune district, Maharashtra is selected by purposive Method.

Selection of student teacher: 182 student teachers (D.T.Ed. second year) are selected from selected colleges by cluster method.

Research Tools

Data collection Tools	Achievement Test
	Self learning Record Chart
Statistical Tools	Mean
	t test
	F test

Achievement Test Achievement test developed by researcher on the units 'Health Care'& 'First Aid' are used for data collection.

Self learning Record Chart Student teachers noted information related with the help of following points in Self learning Record Chart developed by researcher.

Required time for self learning through CAI program, problems in self learning, expected changes & good things in CAI program.

Mean: M is calculated from student teachers score in achievement test & used for t calculation.

t test: t test is used for testing the significant difference between mean of experiment & control group.

F test: F test is used for testing the significant difference between means of student teachers' score with regard to student teachers' subject faculty in higher secondary school.

Analysis & Interpretation of collected data

Analysis of qualitative data:

From Self learning Record Chart, required average time for self learning to each student teacher is calculated. Each student teacher required average time 3 Hours & 10 Minutes & 2 Hours & 25 Minutes for self learning of the units 'Health Care'& 'First Aid' respectively.

Also from analysis of Self learning Record Chart, it is clear that student teachers had no any problem in self learning through CAI program & not expected any changes in CAI program & they liked learning through CAI program.

Analysis of quantitative data

Ho₁ There is no significant difference between means of student teachers' score in unit test (Health Care) after self learning through CAI program (experimental group) & traditional teaching (control group).

Ho₂ There is no significant difference between means of student teachers' score in unit test (First Aid) after self learning through CAI program (experimental group) & traditional teaching (control group).

Table 1. t value (Experimental & Control Group)

Unit	Group	r	df	M	D (M_1-M_2)	S.D.	Calculated t value	t value from table (0.05 level)
Health Care	Experimental	0.317	90	16.1	0.67	2.49	2.23	1.99
	Control			15.43		2.40		
First Aid	Experimental	0.198	90	16.2	0.72	1.94	2.4	
	Control			15.48		2.52		

Observation & Interpretation From the above table 1, it is clear that calculated t value for the units 'Health Care'& 'First Aid' are more than the table value 0.05 level & so the difference between mean of experimental & control group for the units 'Health Care'& 'First Aid' are significant at 0.05 level, so null hypothesis Ho₁ & Ho₂ are rejected.

Ho₃ There is no significant difference between means of student teachers' score in unit test (Health Care) after self learning through CAI program (experimental group) with regard to student teachers' subject faculty in higher secondary school.

Ho₄ There is no significant difference between means of student teachers' score in unit tests (First Aid) after self learning through CAI program (experimental group) with regard to student teachers' subject faculty in higher secondary school.

Table 2. F value (with regard to student teachers' subject faculty on higher secondary school)

Unit	Subject Faculty	Total students	C	S^2b (df = 02)	S^2w (df = 88)	Calculated F value	F value from table (0.05 level)
Health Care	Arts	51	23875.56	17.89	324.55	0.06	1.95
	Commerce	06					
	Science	34					
First Aid	Arts	51	23584.89	3.34	560.77	0.006	1.95
	Commerce	06					
	Science	34					

Observation & Interpretation From the above table 2,it is clear that calculated F values for the units 'Health Care'& 'First Aid' are less than table value at 0.05 level & so the difference between mean of student teachers' subject faculty in higher secondary school(Arts, Commerce & Science) for both the units are not significant at 0.05 level, so null hypothesis Ho$_3$ & Ho$_4$ are accepted.

Conclusions

1. Self learning through CAI program is more effective than traditional method for the student teachers' achievement in the unit 'Health Care'.

2. Self learning through CAI program is more effective than traditional method for the student teachers' achievement in the unit 'First Aid'.

3. There is no significant difference between student teachers' achievement in unit test (Health Care) after self learning through CAI program (experimental group) with regard to student teachers' subject faculty in higher secondary school.

4. There is no significant difference between student teachers' achievement in unit test (First Aid) after self learning through CAI program (experimental group) with regard to student teachers' subject faculty in higher secondary school.

5. Student teachers required average time 3 hrs. & 10 minutes & 2 hrs. & 25 minutes for self learning the units 'Health Care'& 'First Aid' respectively. They gave good opinion about CAI program. They like learning through CAI program, they have no any problem in learning & they do not expected any change in CAI program.

Educational Implication

CAI program developed by researcher is useful to teacher educators & student teachers of D.T.Ed.

Selected References

Aggarwal,J.C.(2006).EducationalTechnology and Management.Agra:Vinod Pustak Mandir.

Garret,Henry E.(2006). Statistics in Psycology and Education.First Indian Print Delhi:Surjit publication.

Mangal, S.K.(2008). Statistics in Psycology and Education. (Second Edition).New Delhi:Prentice,Hall of India Private Limited.

Rao,Usha.(2001).Educational Technology .(4thEdition). Mumbai: Himalay Publishing House.

Aaok¸saumana.³1995´.SaOxaiNak tM~iva&ana³iWtIya AavaR%tI´.puNao Á EaI ivaVa p`kaSana.

jagatap¸h.naa.³1997¸jaanaovaarI´.AQyayana]pp%tI va AQyaapna. puNaoÁ naUtna p`kaSana.

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