Teacher's Competency In Using Powerpoint Applications In Teaching With Special Reference To Selected Private Schools Of Karad City

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Abstract

The use of computers in the teaching and learning process is now a daily occurrence. The internet has arrived at our doorstep. Teachers in schools serve as role models; they are the foundation of society. Teachers must update their knowledge in order to survive in the teaching field in the age of e-learning. Teachers can provide students with information. If teachers are unable to effectively use ICT, their teaching will be ineffective. As a result, this research paper attempts to determine the level of competency of teachers in using PowerPoint in their teaching learning process, as well as the relationship between a teacher's academic qualification and competency in using PowerPoint presentations in the teaching learning process.

1. Introduction:

The instructor is essential for the resource to be used effectively in the educational system. The best predictor of student achievement is the caliber of the teacher. Teaching involves expertise

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and standards that would include the norms and concepts that would be recognized globally, yet these things appear to generate very little attention. Therefore, the study's focus is on identifying the traits and efficacy of teachers in order to determine their competency level. Researchers agree that effective use of computer technology in the classroom depends on teachers' positive attitudes toward computers and their proficiency with computers.

2. Effectiveness of Teacher

Teacher effectiveness is determined by how well a teacher performs in the classroom, which is determined by the teacher's competence. Teacher Competence refers to the knowledge, abilities, and beliefs that a teacher possesses and brings to the teaching situation. These characteristics constitute a stable characteristic of the teacher that does not change significantly when the teacher moves from one situation to another. (b) Teacher Performance refers to a teacher's behaviour while teaching a class (both inside and outside the classroom).It is defined by what the teacher does. c) Teacher Effectiveness: Effective teachers are those who meet their own or others' goals, such as school principals, education administrators, and parents. Teaching effectiveness can be defined as how a teacher can best direct, facilitate, and support students toward specific academic goals such as achievement and satisfaction. In order to incorporate computers into the teaching learning process in schools, a teacher should learn Word processor skills, Spreadsheet skills, Database skills, and Electronic presentation skills. This paper researcher focuses on various activities in PowerPoint. Teachers should learn the fundamentals of PowerPoint in order to use computers in the teaching-learning process as given in table1.

Sr. No	PowerPoint Applications
1	Insert texts
2	Move graphics
3	Change templates
4	Delete slides
5	Add slides

3. **Objective of the study:** To assess teachers' proficiency in using PowerPoint applications in the teaching and learning process.

4. **Hypothesis of the study:** There is a strong relationship between teachers' academic qualifications and their competency in using PowerPoint applications in the teaching-learning process.

5. **Research Methodology:** The study is descriptive and analytical in nature. The survey method was used to collect data from teachers at various schools in Karad. The survey was carried out in private schools in Karad City, Satara District, with teachers chosen at random.

6. **Sample Design Example:** Karad city has more than 25 schools in various mediums. There are approximately ten English-medium schools among them. This research paper is limited to English medium private schools in Karad. As a result, the survey was conducted in ten different

schools in Karad City, Satara District. The research universe included 100 teachers, with a sample size of 30 teachers chosen at random for the survey.

7. **Data collection:** The teachers were given a questionnaire, and their responses were recorded. The questionnaire contained approximately 11 questions that included demographic information as well as information about the use of PowerPoint applications in the teaching and learning process. The proficiency level of teachers' use of PowerPoint applications was assessed using a 5-point Likert scale:(5) Very competent: Can teach others how to perform a task, (4) Competent: Can easily complete a task, (3) Moderately competent: Can complete a task with less effort, (2) Little competent: Can perform a task with assistance, and (1) Incompetent: Cannot perform a task. The information gathered is in Table 2 given below.

Sr.No	Academic qualification	Particulars	(1)	(2)	(3)	(4)	(5)	Total
1		Insert texts	3	2	1	1	2	9
2		Move graphics	1	2	2	3	1	9
3	B. A, B. Ed	Change templates	3	2	2	1	1	9
4		Delete slides	2	3	1	2	1	9
5		Add slides	2	1	1	3	2	9
		Total	**11**	**10**	**07**	**10**	**07**	**45**
1		Insert texts	0	2	2	3	3	10
2		Move graphics	0	4	1	2	3	10
3	B.Com, B. Ed	Change templates	1	2	2	3	2	10
4		Delete slides	1	3	1	2	3	10
5		Add slides	1	2	1	3	3	10
		Total	**03**	**13**	**07**	**13**	**14**	**50**
1		Insert texts	0	1	4	4	2	11
2		Move graphics	1	0	4	2	4	11
3	B. Sc, B. Ed	Change templates	1	1	3	2	4	11
4		Delete slides	0	1	3	4	3	11
5		Add slides	1	0	4	2	4	11
		Total	**03**	**03**	**18**	**14**	**17**	**55**

Table 2: Competency level of teachers in using PowerPoint application

The data collected was analyses according to demographic data on basis of their Gender, Age, Teaching Experience, Academic Qualification and subjects taught as shown in table 3.

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	Gender	No. of Responses	%		Teaching Experience (In years)	No. of Responses	%
01	Male	18	40%	**04**	1-4	08	27%
	Female	12	60%		5-14	12	39%
	Total	**30**	**100%**		15-24	05	17%
02	Age	No. of Responses	%		25-34	03	10%
	21-30	04	13%		Above 35	02	7%
	31-40	08	26%		**Total**	**30**	**100%**
	41-50	05	17%		Subjects Taught	No. of Responses	%
	51-55	08	27%		English	06	20%
	Above 56	05	17%		Marathi	05	17%
	Total	**30**	**100%**		Hindi	02	7%
03	Academic Qualification	No. of Responses	%	**05**	Mathematics	04	13%
	B.A with B. Ed	9	30%		Science	06	20%
	B.Com with B. Ed	10	34%		Social Science	03	20%
	B. Sc with B. Ed	11	36%		Computer	04	13%
	Total	**30**	**100%**		**Total**	**30**	**100%**

Table 3: Distribution of teachers on basic of Demographic Data

8. Hypothesis Testing

Academic Qualification	1	2	3	4	5	Total
B. A, B. Ed	11	10	07	10	07	45
B. Com, B. Ed	03	13	07	13	14	50
B. Sc, B. Ed	03	03	18	14	17	55
Total	17	26	32	37	38	150

Table4: Frequency of competency of teachers according to their qualification

Let us assume that,

H0: There is a no relation between academic qualification of teachers and competency level regarding use of PowerPoint applications in teaching learning process.

H1: There is a strong relation between academic qualification of teachers and competency level regarding use of PowerPoint applications in teaching learning process.

$E11 = \dfrac{R1 \times C1}{T} = \dfrac{45 \times 17}{150} = 5.1$	$E21 = \dfrac{R2 \times C1}{T} = \dfrac{50 \times 17}{150} = 5.66$	$E31 = \dfrac{R3 \times C1}{T} = \dfrac{55 \times 17}{150} = 6.23$
$E12 = \dfrac{R1 \times C2}{T} = \dfrac{45 \times 26}{150} = 7.8$	$E22 = \dfrac{R2 \times C2}{T} = \dfrac{50 \times 26}{150} = 8.66$	$E32 = \dfrac{R3 \times C2}{T} = \dfrac{55 \times 26}{150} = 9.53$
$E13 = \dfrac{R1 \times C3}{T} = \dfrac{45 \times 32}{150} = 9.6$	$E23 = \dfrac{R2 \times C3}{T} = \dfrac{50 \times 32}{150} = 10.66$	$E33 = \dfrac{R3 \times C3}{T} = \dfrac{55 \times 32}{150} = 11.73$
$E14 = \dfrac{R1 \times C4}{T} = \dfrac{45 \times 37}{150} = 11.1$	$E24 = \dfrac{R2 \times C4}{T} = \dfrac{50 \times 37}{150} = 12.33$	$E34 = \dfrac{R3 \times C4}{T} = \dfrac{55 \times 37}{150} = 13.56$
$E15 = \dfrac{R1 \times C5}{T} = \dfrac{45 \times 38}{150} = 11.4$	$E25 = \dfrac{R2 \times C5}{T} = \dfrac{50 \times 38}{150} = 12.66$	$E35 = \dfrac{R3 \times C5}{T} = \dfrac{55 \times 38}{150} = 13.93$

Table5: Calculation of Expected frequency

Degree of freedom= (c-1) (r-1) = (5-1) (3-1) = 4.2 =8, Where c is no. of columns and r is No. of rows in table 4

Sr. No	O	E	$(O-E)^2$	$(O-E)^2/E$	Sr. No	O	E	$(O-E)^2$	$(O-E)^2/E$	Sr. No	O	E	$(O-E)^2$	$(O-E)^2/E$
1	11	5.1	$(5.9)^2$	6.82	6	03	5.66	$(-2.66)^2$	1.25	11	03	6.32	$(-3.32)^2$	1.74
2	10	7.8	$(2.2)^2$	0.62	7	13	8.66	$(4.34)^2$	1.76	12	03	9.53	$(-6.53)^2$	4.47
3	07	9.6	$(-2.6)^2$	0.70	8	07	10.66	$(-3.66)^2$	1.25	13	18	11.73	$(6.27)^2$	3.35
4	10	11.1	$(-1.1)^2$	0.10	9	13	12.33	$(0.67)^2$	0.03	14	14	13.56	$(0.44)^2$	0.01
5	07	11.4	$(4.4)^2$	1.69	10	14	12.66	$(1.34)^2$	0.14	15	17	13.93	$(3.07)^2$	0.67

Table 6: Calculation of tabulated value of χ^2

From the above table, Σ (O-E)^2/ E = **24.6,** Therefore table value of χ^2 at 8 degree of freedom & 5 % level of significance is **22.00.** Hence, **Table value of χ^2 (24.6) > Calculated value of χ^2 (22.0)** **.**Therefore the null hypothesis (H$_o$) is rejected. Hence it concludes that, **"*There is strong relation between teacher's academic qualification and competency level of teachers regarding use of PowerPoint application in teaching learning process."***

9.Findings

1. According to graph1, the majority of respondents (60%) are female teachers, while the remaining respondents (40%) are male teachers. This demonstrates that females are more drawn to the teaching profession.

2. According to graph2, the majority of respondents (27%) are between the ages of 51 and 55, while 26% are between the ages of 31 and 40, 17% are between the ages of 41 and 50, and 13% are between the ages of 21 and 30.

3. According to the graph above, the majority of teachers are nearing retirement and only a few are new to the teaching profession.

4. It has been found from *graph3* that majority of the respondents (36%) are undergraduate with science & B. Ed, 34 % of the respondents are undergraduate with commerce background and 30% of respondents are undergraduate with arts background. As the graduation with B. Ed which is the basic requirement for a teacher to teach secondary school students.

5. It has been found from *graph4* that majority of the respondents 39% of teachers have 5 to 14 years teaching experience, 27% of teachers have 1 to 4 years teaching experience, 17% of teachers have 15 to 24 years teaching experience, 10% of teachers have teaching experience above 25 to 34 years of teaching experience while 7% of teachers have teaching experience above 35 years.

6. It has been found from *graph5* that majority of the respondents selected for the survey 20% taught English subject. 20% of teachers teach science subject, 17% teachers teach Marathi subject, 13 % of teachers teach computer and mathematics subject each. While 10 % of teachers teach social sciences.

7. From *graph6*, the researcher finds that the teachers with academic qualification B.Sc, B.Ed are competent in inserting text in slide as it is a very easy task. Teachers from arts and commerce background are also competent but comparatively less as compared to teachers with commerce and science background.

8. From *graph7*, the researcher finds that the teachers with academic qualification B.Sc, B.Ed are moderately competent in moving graphics in a presentation as compared to teachers from arts and commerce background. Commerce background teachers are very little competent as compared to teachers with arts background.

9. From *graph8*, the researcher finds that the teachers with academic qualification B.Sc, B.Ed are very competent in changing templates within a presentation as compared to teachers from arts and commerce background. Commerce background teachers are very little competent as compared to teachers with arts background.

10. From *graph9*, the researcher finds that the teachers with academic qualification B.Sc, B.Ed are moderately competent in deleting slides from presentation as compared to teachers from arts and commerce background. Commerce background teachers are at least competent as compared to teachers with arts background.

11. From *graph10,* the researcher finds that the teachers with academic qualification B.Sc, B.Ed are moderately competent in adding slides in a presentation as compared to teachers from arts and commerce background. Commerce and science background teachers are at least competent as compared to teachers with arts background.

10. Limitations of the study:

This study was limited to selected schools from Karad city. The teachers did not find time to fill the questionnaire due to heavy workload.

12. Conclusion:

The opinion of many teachers is that although the PowerPoint presentation gives a very nice and effective presentation of concepts to the students, but only presentation will not make students intelligent. The use of computer in teaching learning process is time-consuming as teachers already have heavy workload in the schools. Even though teachers have identified its importance in teaching learning and are also motivated and confident to use presentations for teaching in

schools. Also those teachers who are not competent think that they can increase their competency by attending a training program regarding computer applications in school. The future teachers can become hi-tech teachers.

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