Research Paper

Integrating Web 2.0 Tools into Classrooms By Prospective Teachers

Education

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ABSTRACT *The paper focuses on the competency of the prospective teachers in integrating the web 2.0 tools into their classrooms. The sample consisted of 740 prospective teachers from three districts of Kerala. A competence scale was used to collect the data. The statistical techniques used were mean, standard deviation, t- test, and ANOVA. The result showed that there exists significant difference in the competence of web 2.0 integration with respect to the gender and type of management of the prospective teachers.*

INTRODUCTION

The world has now become a global village in all aspects. Technology plays a very important role in shaping the needs and demands of the present day world. In such a scenario it is very important that the teachers get equipped with the latest technological tools and digital environments. Today there are many web 2.0 tools which can create interactive virtual environments that support effective teaching and learning in this century. Using these technological resources, the 21st century teaching and training can create a novel classroom atmosphere which excels over the traditional, teacher centered classrooms. Hence it is essential that the prospective teachers get well trained and equipped in the use of web 2.0 tools and resources which serve as a powerful pedagogical resource in the present day world. The web 2.0 tools include YouTube, wikispaces, Google Docs, Edmodo etc. which can be effectively used for educational purposes. These are actually the essential resources that a 21st century teacher must know in order to make the teaching learning process interactive and interesting. Hence it is very essential that the prospective teachers must possess the needed competencies for integrating this web 2.0 tools into the traditional classrooms in which they practice.

NEED AND SIGNIFICANCE OF THE STUDY

In the present day society, social media platforms and other digital technologies are extremely powerful pedagogical resources, but they require special teacher training. Teachers can thus create a multidimensional impact on the student learning through the effective application of innovative technologies into teaching and training. Such a special training increases the teacher competence in handling the web 2.0 resources and other virtual media platforms that serve helpful in student learning and also in the teacher professional development.

Teachers are to possess some essential 21st century skills and competencies which are required for teaching the "tech savvy" students of the modern world. The emergence of the internet and web 2.0 resources in particular, has created really new areas for virtual communication exchanges. With the support of web 2.0 tools and resources in the present century, the social networking has expanded to its zenith. Regardless of time and space, these resources have given way to new modes of relationships, by means of the so called internet social networks.

Hence it is the need of the hour to investigate the pedagogical use of these social networks. The competencies that are needed to merge these pedagogical uses are to be studied and implemented for better teaching and learning process in the present society.

STATEMENT OF THE PROBLEM

"INTEGRATING WEB 2.0 TOOLS INTO CLASSROOMS BY PROSPECTIVE TEACHERS"

OBJECTIVE OF THE STUDY

To investigate the competence of prospective teachers in the effective integration of web 2.0 tools in the traditional classrooms with respect to the sub-samples based on gender and type of management.

HYPOTHESES OF THE STUDY

In order to achieve the above said objective of the study the investigators formulated the following hypotheses:

There exists no significant difference in the competence of the prospective teachers in the effective integration of web 2.0 tools in the traditional classrooms with respect to the subsample based on the gender of the prospective teachers.

There exists no significant difference in the competence of the prospective teachers in the effective integration of web 2.0 tools in the traditional classrooms with respect to the subsample based on the type of management of prospective teachers.

METHODOLOGY

In the present study, survey method was employed in order to know the competence of the prospective teachers in the effective integration of web 2.0 tools into classrooms.

POPULATION AND SAMPLE

The population for the present study consisted of prospective teachers studying in various colleges of teacher education in Kerala.

The total sample for the present study consists of 740 teacher trainees. To obtain sample representatives of population, the investigator follows simple random sampling technique on various teacher education colleges of Palakkad and Thrissur and Malappuram district in Kerala.

TOOL: COMPETENCE SCALE FOR WEB 2.0 INTEGRATION

The investigators constructed and standardized a competence scale for measuring the effective integration of web 2.0 tools into classrooms by the prospective teachers. It is a five point scale with alternatives, Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree.

STATISTICAL TECHNIQUES

Mean, standard deviation, t-value, Anova

DATA ANALYSIS

Hypothesis 1:

There exists no significant difference in the competence of the prospective teachers in the effective integration of web 2.0 tools in the traditional classrooms with respect to the subsample based on the gender of the prospective teachers.

The result of the analysis of significance of difference in the mean

scores of competence in the effective integration of web 2.0 tools into classrooms among male and female prospective teachers in government, self financing, university centre and aided training colleges with respect to their gender are presented in Table 1.
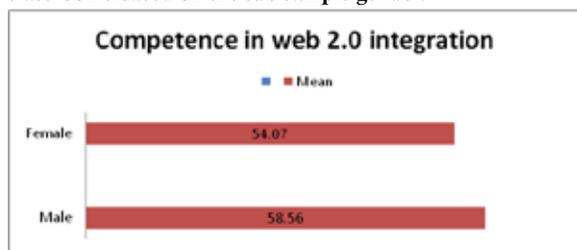
Table 1
Data and result of the significance of difference in the mean scores of competence in the effective integration of web 2.0 tools into classrooms among male and female prospective teachers in government, university centre, self financing and aided training colleges based on the sub sample gender.

Variable	Gender	n	Mean	SD	t
Competence in web 2.0 integration	Male	34	58.56	8.136	2.852*
	Female	706	54.07	8.999	

* Indicates significance at 0.01 level

From Table 1 it is found that the 't' value of the competence in the effective integration of web 2.0 tools into classrooms among male and female prospective teachers in government, university centre, self financing and aided training colleges is 2.852 which is significant at 0.01 level of significance.

Figure 1 Bar diagram showing the significant difference in the competence of effective integration of web 2.0 tools into classrooms based on the sub sample gender.

Hence the hypothesis 1 "There exists no significant difference in the competence of the prospective teachers in the effective integration of web 2.0 tools in the traditional classrooms with respect to the subsample based on the gender of the prospective teachers." is rejected.

Hypothesis 2:
There exists no significant difference in the competence of prospective teachers in the effective integration of web 2.0 tools in the traditional classrooms with respect to the subsample based on the type of management of prospective teachers.

The result of the analysis of significance of difference in the mean scores of competence in the effective integration of web 2.0 tools into classrooms among male and female prospective teachers in government, self financing, university centre and aided training colleges with respect to their type of management are presented in Table 2.

Table 2:
Data and result of the significance of difference in the mean scores of competence in the effective integration of web 2.0 tools into classrooms among male and female prospective teachers in government, university centre, self financing and aided training colleges based on the sub sample type of management.

Variable	Groups	Sum of squares	df	Mean squares	F	p
Competence in web 2.0 integration	Between groups	1523.56	3	507.95	6.40	p< .05
	Within groups	58400.34	736	79.34		
	Total	59924.20	739			

The Table 2 shows that the calculated value of F in the competence of web 2.0 integration is 6.40 which is greater than the table value 2.62 at 0.05 level of significance. It means that there exists significant difference in the competence of effective integration of web 2.0 tools into classrooms by prospective teachers studying in the aided, centre, government and self financing training colleges of Calicut University with respect to the type of management of their colleges. For knowing the difference in the competence of prospective teachers for the subsamples based on their institution's type of management, Scheffie post-hoc analysis was used.
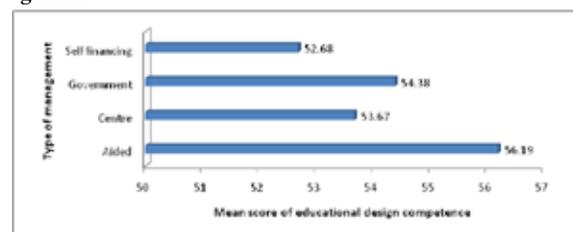
Table 3
Data and results of multiple comparison of Scheffie post-hoc test

Sl.No:	Management types	Mean difference
1	Aided(M=56.19)/Centre	2.528*
2	Aided/Government(M=54.38)	1.819
3	Aided/Self financing(M=52.68)	3.512*
4	Centre(M=53.67)/Government	0.708
5	Centre/Self financing	0.985
6	Government/Self financing	1.693

* indicates the significance at 0.05 level

This can be interpreted graphically as shown in the Figure 2.

Figure 2
Bar diagram showing the significant difference of mean score in the competence of effective integration of web 2.0 tools into classrooms based on the sub sample type of management.

From the Table 3, It can be seen that the competence of prospective teachers in the effective integration of web 2.0 tools for teaching purposes have a significant difference between aided/centre and aided/self financing management types with a value of 2.528, and 3.512 respectively. This result indicates that these management types are having a significant difference in this competence for the effective integration of web 2.0 tools for teaching and educational purposes. Also this suggests that there exists no significant difference between all other groups. It is evident from the table 3, that the aided management is having the highest mean of 56.19.

Hence the hypothesis 2 "There exists no significant difference in the competence of the prospective teachers in the effective integration of web 2.0 tools in the traditional classrooms with respect to the subsample based on the type of management of the prospective teachers." is rejected.

FINDINGS
On the basis of results obtained after the data analysis and result interpretations, the following findings have been drawn:-

There exists significant difference in the competence of the pro-

spective teachers in the effective integration of web 2.0 tools in the traditional classrooms with respect to the subsample based on the gender of the prospective teachers.

There exists significant difference in the competence of the prospective teachers in the effective integration of web 2.0 tools in the traditional classrooms with respect to the subsample based on the type of management of prospective teachers.

CONCLUSION
The major findings of the study reveal that there must be appropriate training and sufficient practice to effectively integrate the web 2.0 resources into the 21st century classrooms. There exist significant differences in the competence of prospective teachers in the practice of effective technology integration into classrooms. Hence it is high time that the 21st century teachers get equipped with the modern pedagogical practices to effectively integrate the technology into present classrooms.

EDUCATIONAL IMPLICATIONS
The technology integration into classrooms through the effective use of web 2.0 tools increases the collaborative skills of the students and can help increase their productivity in working with groups. Networking skills and ability to create new relationships can be increased to a great rate.

Thus the 21st century "tech savvy" children can get benefited in deciding which career suits them better and lead them to that path which they intend to pursue. These all are possible only through the judicious application of social media by the teachers in the process of efficient teaching and learning.

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