

**Use Of Technology By The Teachers Of Professional Courses: Impact Of Stages Of Concern
(Stage 0, Awareness)**

Dr. NEETA SAHU

Guest Faculty,

Department of Education,

University of Allahabad

Allahabad, U.P., India

Abstract

Several factors have been identified which affect the use of technology by the teachers of professional courses. These factors may be individual or environmental. Stages of concern for use of technology have also been studied as one of the factors. This research paper has come as a result of a study on stages of concern and use of technology by the teachers of professional courses as B.Ed. and Management. There are seven stages of concern. This paper deals only with one stages of concern i.e. Awareness concern and reveals some interesting results that the teachers having high awareness stages of concern are using less technology as compared to the teachers having low awareness concern for use of technology.

Key words: Use of technology, Professional courses, Stages of concern, Awareness concern, Factors

In the present era, technology has dramatically penetrated into every field of society and every aspect of human lives. It has changed our work style and has made it easier. It is playing an increasing role in the field of education and has brought a movement in changing the scenario of teaching-learning and evaluation at different stages of education all over the world. Technology offers the opportunity to change the roles that teachers and students have traditionally played. Technology adoption in the field of education may help in reducing cost per student, making education more affordable and accessible, increasing enrolments and improving course quality. But the actual scene is, the teachers, and field of education has not taken the full advantages of the technology. In this reference, it has been studied and explored that there are several factors which are affecting use of technology. Stages of concern have also been explored as one of the factors affecting use of technology by the teachers.

Stages of concern- The concept of Stage of Concern is one of the three parts of Concern Based Adoption Model (CBAM) which was developed in the early 1970s at the Research and Development Center for Teacher Education (RDCTE) in the University of Texas–Austin, This model used change theory to explain the innovation adoption process in the educational environment and it was framed around three concepts: Stages of Concern about an Innovation, Levels of Use of an Innovation and Innovation Configuration.

In the present study the first CBAM concept- Stages of Concern about an innovation has been used. Here in the present study hardware and software technology has been used as the innovation, which is being used by the faculty members of higher education. Stages of Concern part consists of seven stages. These stages of concern are named as:

Stage0, Awareness

Stage1, Informational

Stage2, Personal

Stage3, Management

Stage4, Consequence

Stage5, Collaboration

Stage6, Refocusing

Stages of concern expressed by individual about an innovation progresses from lower to higher stages. This progression is developmental in nature. As the individual moves from stage 0 to upwards stages, it indicates individual's increased concerns with technology or involvement with the technology, while the initial stages indicate low concerns or indifference towards technology. Stages of Concerns parts of CBAM analyzes users' feelings, observations, problems, successes and failures while progressing through the change process of innovation adoption.

Emergence of the problem

Liu and Huang (2005) investigated the current trend and pattern of teachers' concerns about technology integration in the classroom. He found that teachers concerns as a whole were very intense in the informational, personal and refocusing stage and there were significant statistical differences in teachers concerns in most stages of concern among the types of perceptions of their implementation status. **Poplos (1999)** conducted a study of stages of concern expressed by college faculty before and after a professional development seminar in the use of educational technology in their curricula. He found that the participants in the professional development intervention group demonstrated some changes in quality of their concerns regarding use of technology. They moved from lower stages to higher stages.

Significance of the study

The study will provide an opportunity to identify the factors that affect the use of technology. By knowing the factors and by manipulating them it will be possible for the teachers, management and government to enhance the technology usage. Study of different stages of concern will give them insight into the benefits of awareness, management and collaboration for use of technology and the study also take the initiative to explore use of technology in terms of stages of concern.

Terms defined

Technology Use: In the present study use of technology refers to both hardware and software aspects of technology in teaching and research.

Professional Courses: refer to following two professional courses:

- B.Ed.
- Management

Concern: Concern refers to a composite description of the various motivations, perceptions, attitudes, feelings and mental gyrations, experienced by a person in relation to technology. **Stages of concern:** There are seven stages of concern which have been identified about use of technology among which awareness stage is considered as the lowest stage of concern it has been described as following:

- **Stage 0, Awareness:** At this stage an individual expresses little concern or involvement with the technology.

Objectives of the study

- To find out the difference in the use of technology between teachers having high and low awareness concern for technology use.

Hypothesis of the study

- There will be significant difference in the use of technology between teachers having high and low awareness concern for technology use.

Methodology

In this study **ex-post facto research design** has been used. A two stage sampling procedure has been used for the selection of the institutions and teachers. In the first stage **systematic random sampling** has been used to select B.Ed. institutes, associated to University of Lucknow and Management institutes, affiliated to Uttar Pradesh Technical University or approved by All India Council for Technical Education. In the second stage, **cluster sampling** technique has been used to select teachers from selected B.Ed. and Management institutes situated in Lucknow city, Uttar Pradesh, India. Sample comprised of 100 teachers from 17 B.Ed institutes and 150 teachers from 20 Management institutes. Sample size was 250. The sample consisted of 118 low awareness concerned teachers and 132 high awareness concerned teachers.

Tool

The researcher has constructed tools in order to meet the requirements of the study. A scale to measure technology use of teachers, and a personal data sheet to get the personal information of the teachers were constructed and standardized. Use of Technology Scale consisted of 45 items and five dimensions regarding use of technology. All the items were positive in nature. Each item was set against five- point scale— “Always”, “Most of the time”, “Sometimes”, “Seldom”, and “Never”.

5,4,3,2,1, points were given in that order of positive items. An individual on an item could score maximum five points and minimum one point. Personal data sheet consisted of 14 items, these were open ended, bipolar items and multiple choice items. Stages of Concern Questionnaire (SOCQ) was used with some modifications to collect the response of the teachers. Modified Stages of Concern Questionnaire (SOCQ) consisted of 32 items. Each item had been rated, in order to indicate degree of concerns an individual had regarding the use of technology. Each item was set against four options—“Irrelevant”, “Not true of me now”, “Somewhat true of me now”, “Very true of me now”.

Data Collection and Organization

Data were collected from the teachers of randomly selected B.Ed. and Management colleges. Filled up scales and data sheets were taken back and were analyzed. Then data were organized variable wise. For various **stages of concern**, 50th percentile was calculated to divide the higher and lower concerned group of each stage of concern. The individuals which were equal or more than the 50th percentile were considered as higher concerned group of that particular stage and the individuals which were less than the 50th percentile were considered as lower concerned group of that stage of concern. Further these groups were compared on the basis of their scores of technology use to see the difference in their technology usage.

Statistical techniques

‘t’ test was applied to compare the groups to find out the difference in their use of technology.

Level of significance

In the present study 0.05 level was taken as a significance criterion. If $p > 0.05$ then ‘t’ values were taken insignificant and if $p < 0.05$ then ‘t’ values were significant.

Results

Results indicated that-

Table 01

Significance of Difference in the Use of Technology between

Teachers Having Low and High Awareness Concern for technology Use

S.No.	Groups	No.	Mean	S.D.	t- value	Significance level
1	Low Awareness Concerned Teachers	118	142.85	30.12	2.47	P<0.05
2	High Awareness Concerned Teachers	132	132.52	36.01		

There is significant difference in the use of technology between teachers having low and the teachers having high awareness concern for technology use. Hence, null hypothesis is rejected ($P < 0.05$) (table 01).

EDUCATIONAL IMPLICATIONS

It is evident from the results that the teachers having low awareness concern are using more technology than the teachers who have high awareness concern. The present results are contrary to expected. Perhaps, personal attributes of the teachers may have been responsible for such kind of results. Interaction of many variables like gender, age and institutional support may be the motivating factor for low awareness teachers, which has resulted in increase of their more use of technology. The reason for low use of technology of teachers having high awareness concern may be the lack of time and low motivation which has hindered their use of technology. It implies that additional motivational strategies should be created for high awareness concerned teachers. They should be encouraged by giving them more opportunities and recognition.

SUGGESTIONS

To increase the technology use of high awareness concerned teachers it is suggested that these teachers should be motivated by their colleagues and management of the institute. Availability of required equipment and facilities must be ensured by the management. Technology use can be made compulsory for all the faculty members.

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