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COMPARATIVE STUDY OF CSE AND TIBs AMONG SENIOR SECONDARY TEACHERS

Dr. HEMANT BHATT
Assistant Professor
Indo Global College of Education
Abhipur District
Mohali

ABSTRACT

The present research compared the computer self-efficacy and technology integration between Government and private school teachers. The sample of the study comprised of 82 Government and private school teachers. The sample selected randomly from the Govt. Sen. Sec. Schools of Punjab. Computer Self Efficacy Scale (Embi, 2007) and Technology integration and beliefs scale (Brinkerhoff, Ku, Glazewski & Brush, 2001) were used to collect the data. The finding of the study revealed that there was significant difference in the computer self-efficacy of government and private school teachers. The study also determined the difference in the technology integration beliefs of government and private school teachers.

Keywords: Technology Integration Beliefs, Computer Self Efficacy, Teachers

INTRODUCTION

The National Curriculum Framework (NCF) 2005 has highlighted the importance of ICT in era of explosion of information and communication technologies the twenty first century human civilization has gone towards knowledge based society. ICT covers a wide range of scope such as dialects, gestures, books and magazines, radio, television, telephone and the Internet. However, in practice, it refers to those technologies that are operated through the electronics, computers and telecommunication. Hence, ICT can be summarized as the process, method and means of receiving and retrieving, storing and collecting, manufacturing, and communicating and disseminating knowledge and information. This includes hardware and software of computer and other instruments including telecommunication and micro electronic technologies including the multimedia. In more and more schools today, technology is recognized as an instructional tool, not as a subject of instruction. Still, many educators, less familiar and less comfortable with technology than their students, struggle to seamlessly integrate a growing list of technology tools into their regular curriculum. So, to help you make the best use of technology in your schools and classrooms this year, we asked the Education World Tech Team to share some of their favourite technology integration lessons, activities, and strategies with you. A dramatic shift is sweeping through our schools. The signs are all around us. These are not the same 21st century learners we came to know over the first decade of the

new millennium. For these students, simply watching videos or images during class, playing an Internet multiplication game, or even taking turns at an interactive whiteboard is no longer enough. These new 21st century learners are highly relational and demand quick access to new knowledge. More than that, they are capable of engaging in learning at a whole new level. With the world literally at their fingertips, today's students need teachers and administrators to re-envision the role of technology in the classroom.

Throughout the world, ICT is proven as a tool for educational transformation. It can be brought into the schools in three different ways: (i) as a tool for delivering information and or services, including school administration; (ii) as a tool to teach other subjects; and (iii) as an academic curriculum subject to equip the students with skills required to succeed in the knowledge economy. From the curricular perspective we are concerned with the second and the third aspect of ICT at the school level. At present, opportunities for ICT education are very limited both at school and university levels in Nepal. Some private institutions are providing ICT education as computer education. In the case of public schools, colleges and universities even the availability of computer education is very limited. Under the national curriculum, computer education is offered as an optional subject at the secondary level. However, because of resource constrains only a few public schools have been able to offer this course. The demand from the public for ICT education in school is high despite their recognition that present school curriculum is overloaded with subjects and contents. The Tenth Plan has clearly emphasized the need to develop industries and services based on information communication technology. For this, the Plan has policy and strategy for introducing computer education from school level curriculum and providing Internet facilities in public schools and universities. The challenges faced by traditional education system are amplified by the changing skills demanded in increasingly globalized labour market. Insights into the direction in which information societies and technological advances are removing reveal a changing vision and a shift away from traditional practices. The need for computer technology literacy even in our educational system has been considered imperative. There is in fact widespread belief that information and communication technology can empower teacher and learner, transform teaching & learning process from being highly teacher dominating to develop their creativity, problem solving ability, information, reasoning skill and communication skill. ICTs are the technologies used in conveying, manipulation and storage of data by electronic means, they provide an array of powerful tools that may help in transforming the present isolated teacher-centered and text bound class room into rich, student-focused, interactive knowledge environments.

The concept of self-efficacy lies at the centre of psychologist Albert Bandura's social cognitive theory. Bandura's theory emphasizes the role of observational learning, social experience, and reciprocal determinism in the development of personality.

Computer self-efficacy means one's perception of their computer skills about computer use. Nowadays, computers are common tools in most schools, and are being used increasingly in all subject areas. Although some teachers are enthusiastic about using computers, others are more apprehensive.

Computer self-efficacy is also based upon Bandura's self-efficacy theory. It is defined as "a judgment of one's capability to use a computer" (Compeau and Higgins, 1995). In general, it is believed that people who have high self-efficacy in the use of computers will invest more time and be more willing to learn and do new things with computers (Kinzie, Delcourt and Powers, 1994). Computer self-efficacy refers to an individual's self-efficacy specifically toward using computers (Murphy, Coover, and Owen, 1989).

Computer self-efficacy refers to individual confidence in one's capability to use a computer and may help determine ease of skill acquisition. However, self-efficacy about ability to complete computer-related tasks may heighten or weaken performance. Previous computer experience may lead students to believe computer applications courses are easy. Heightened self-efficacy may cause students to expend little effort toward learning new computer concepts. Bandura (1986) stated "in approaching learning tasks, however, those who perceive themselves to be supremely self-efficacious in the undertaking feel little need to invest much preparatory effort in it".

OBJECTIVES OF THE STUDY

- To compare the computer self-efficacy of Government & Private senior Secondary school teachers.
- To compare the technology integration beliefs of Government and Private senior Secondary School teachers.

METHODOLOGY

The descriptive survey method was used by the investigator to collect data from the subject. The method of study of investigation used in the present study was essentially descriptive survey method. Descriptive research describes and interprets existing conditions. It involves some kind of comparison or contact and attempt to discover relationship between existing non manipulated variables. The random sampling technique was used to collect data.

TOOLS

1) Computer Self Efficacy Scale (Developed and validated by Embi, 2007)

2) Technology integration and beliefs scale (Brinkerhoff, Ku, Glazewski & Brush, 2001)

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STATISTICAL TECHNIQUES USED

The raw scores obtained with the help of the above mentioned tools tabulated and treated statistically to analyze the results and interpret them meaningfully and scientifically. The following techniques were used for the analysis of the data in order to test the hypotheses:

(i) Descriptive statistics techniques like mean, standard deviation, skewness and kurtosis were used to determine the nature of distribution of the scores.

(ii) Graphical techniques were used for descriptive analysis and visual perception of the data.

(iii) t- ratios for the significance of differences between the mean scores of the respondent groups i.e. senior secondary teachers of government and private schools were computed.

Table 1

t - ratio for difference in mean scores of government and private school teacher on computer self-efficacy

	School	N	Mean	SD	t-ratio	level of significance
COMPUTER SELF-EFFICACY	GOVERNMENT	42	85.35	7.73	3.30**	0.01
	PRIVATE	42	92.14	10.84		

Significant at 0.01 level

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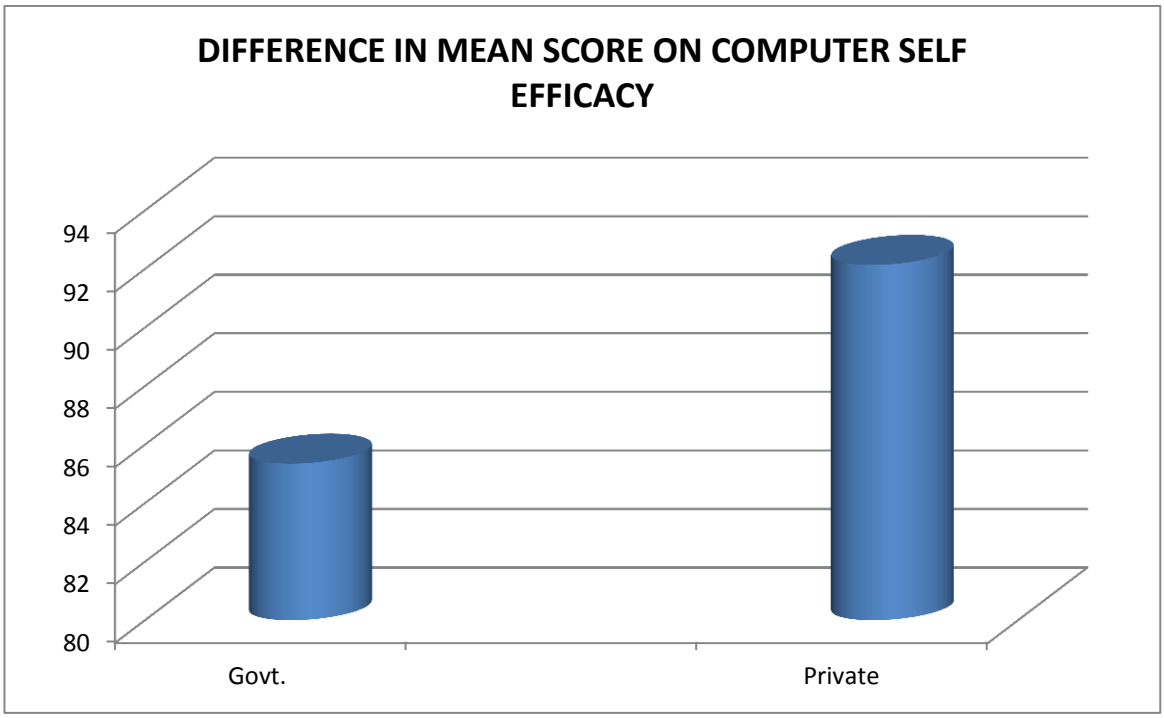

Fig: 1 Graphical Presentation of Mean Score of Senior Secondary Teachers of Government and Private Schools

It is revealed from the table 1and fig 1 that the mean scores of teachers of government and private schools are 85.35 and 92.14 respectively. The t- ratio came out to be 3.30 which are significant at both the levels of significance i.e. 0.05 and 0.01 level. This means there is significant difference between the computer self-efficacy of Government & Private senior Secondary School teachers. However, the mean scores of private school teachers are better than teachers of Government secondary school teachers. It indicates that private school teachers having more computer self-efficacy. Hence, the null hypothesis, There is no significant difference between the computer self-efficacy of Government & Private senior Secondary School teachers is rejected. The result indicates that there is significant difference in computer self-efficacy of government and private school teachers.

Table 2
t - ratio for difference in mean scores of technology integration beliefs of Govt & Private School teachers

	SCHOOL	N	Mean	SD	t-ratio	level of significance
TECHNOLOGY INTEGRATION	GOVERNMENT	42	31.76	3.57	3.53	**0.01**

	PRIVATE	42	34.36	3.15		
TECHNOLOGY BELIEFS	**SCHOOL**	**N**	**Mean**	**SD**	**t-ratio**	
	GOVERNMENT	42	35.52	4.2	2.16	**0.05**
	PRIVATE	42	33.67	3.63		
TOTAL	**SCHOOL**	**N**	**Mean**	**SD**	**t-ratio**	
	GOVERNMENT	42	67.28	6.01	8.48	**0.01**
	PRIVATE	42	68.02	4.32		

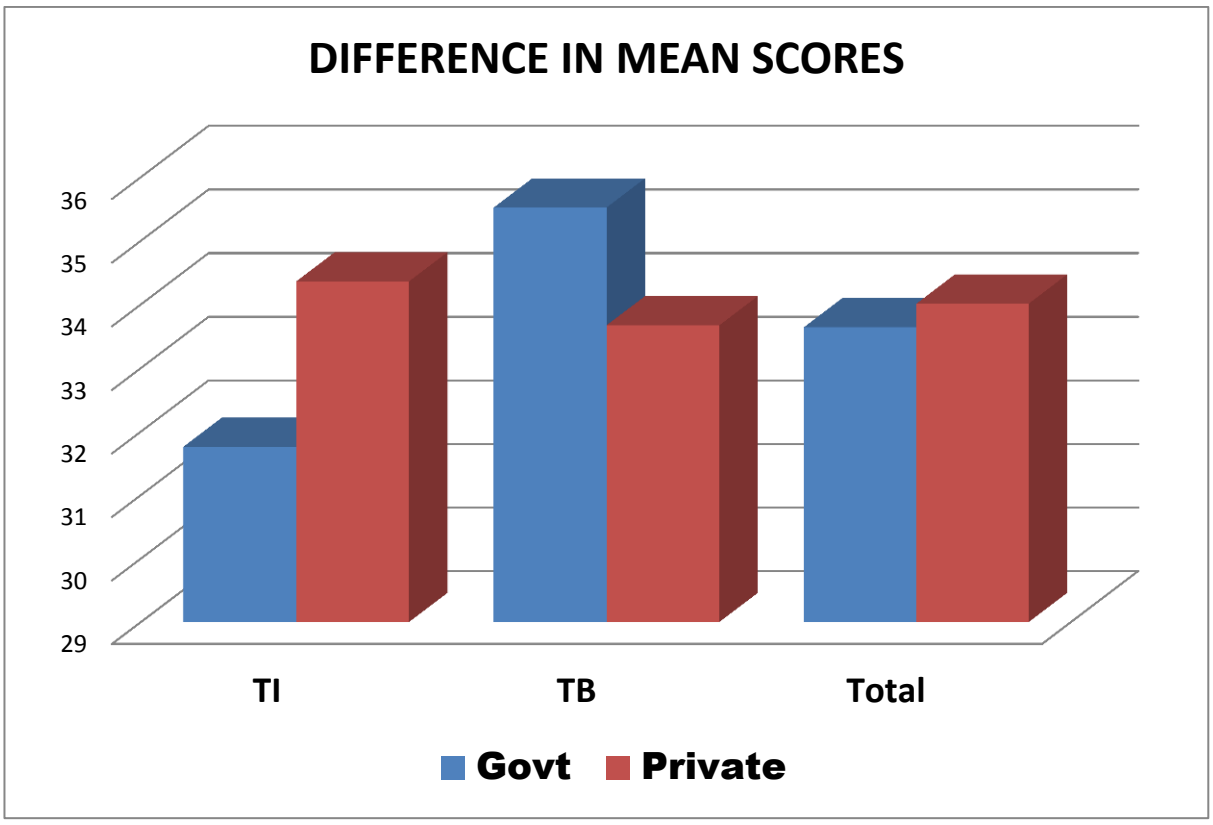

Figure: 2 Graphical Presentation of Difference in Mean Scores of Senior Secondary Teachers of Government and Private Schools on technology integration and beliefs

It is revealed from the table 2 and fig 2 that the mean scores of teachers of government and private schools on technology integration are 31.76 and 34.36 whereas for technology beliefs are 35.52 and 33.62 respectively. The t- ratio came out to be 3.53 which are significant at 0.05 levels for technology integration whereas for technology beliefs t-ratio found 2.16 which are significant at 0.01 levels. This means there is significant difference between the technology integration and beliefs of Government & Private senior Secondary School teachers. Hence, the null hypothesis, There is no significant difference between the technology integration beliefs of Government & Private senior Secondary School teachers is rejected. The result indicates that there is significant difference in technology integration beliefs of government and private school teachers.

SUGGESTIONS

The results of this study suggest that administrators should place emphasis on building student and teachers' perception of their ability to use technology with a view to transform classroom practices. In order to encourage teachers to integrate technology into teaching and learning, they ought to be given opportunities to acquire basic technology skills such as the use of presentation and word processing tools and at the same time, organize courses on the strategies to infuse technology for pedagogical purposes. The present study is significant and relevant for several reasons. First, it offers an important contribution to the exploration of teachers' change when integrating information-rich tasks into school curriculum in the context of a rich, technology-based environment.

- Its theoretical importance lies in the finding that real change occurs in classroom practices, even before the teacher can consciously conceptualize newly established educational beliefs.
- The present results may also mean that during professional growth, there is no need for teachers to relinquish old conceptual ideas in favor of new ones, but rather extend their repertoire of ideological ideas and refine their organization and coherence.
- Thus, the coexistence of contrasting views of learning and teaching, in the individual teacher's thinking and within a group of teachers, may reflect differences in the dimensions of beliefs which teachers simultaneously discern and focus upon.

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