

TEACHING COMPETENCY OF SECONDARY TEACHER EDUCATION STUDENTS IN RELATION TO THEIR MULTIPLE INTELLIGENCE AND ICT AWARENESS

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ABSTRACT

The objective of the study was to find out the influence of multiple intelligence and ICT awareness on teaching competency of the secondary teacher education students through a study entitled as "TEACHING COMPETENCY OF SECONDARY TEACHER EDUCATION STUDENTS IN RELATION TO THEIR MULTIPLE INTELLIGENCE AND ICT AWARENESS". The investigator has reviewed one hundred and twenty six Indian and ninety four foreign studies of total two hundred and twenty studies related to the present study. Among them eighty seven are on teaching competency, sixty four on multiple intelligence and sixty nine are on ICT awareness. From review of literature the investigator couldn't find any study related by has combined of three variables; teaching competency, multiple intelligence and ICT awareness and exclusively focused on the secondary teacher education students. Therefore the present study is a new one and it differs from others in terms of population and sample. Hence it's relevant for the investigator to study the teaching competency of secondary teacher education students in relation to their multiple intelligence and ICT awareness. The investigator has used survey method to study the teaching competency of secondary teacher education students in relation to their multiple intelligence and ICT awareness. The population for the study includes the secondary teacher education students studying in the autonomous, government-aided and self financed colleges of education affiliated to the Tamilnadu Teachers Education University, Chennai from three southern revenue districts of Tamilnadu namely Tirunelveli, Tuticorin and Kanyakumari. From these colleges of education, 1331 secondary teacher education students were selected by stratified random sampling technique. The sample selection was done on the basis of type of college with the stratification on the basis of sex, community and religion. To measure teaching competency, multiple intelligence and ICT awareness of the secondary teacher education students, the investigator developed a teaching competency rating scale, multiple intelligence inventory and ICT awareness scale. To ensure the suitability, this tool is modified and validated by the investigator. The scored data were analysed IBM SPSS Statistics v19 and IBM Amos v19. The findings of the study revealed that there was a significant influence of verbal intelligence and ICT awareness on teaching competency; spatial intelligence and ICT awareness on teaching competency; naturalistic intelligence and ICT awareness on teaching competency; existential intelligence and ICT awareness on teaching competency; interpersonal intelligence and ICT awareness on teaching competency and intrapersonal intelligence and ICT awareness on teaching competency of secondary teacher education students.

INTRODUCTION

Education is regarded as synonymous with learning as an acquired experience of any intellectual, emotional or sensorimotor activity. Gandhi (1945) says education is drawing out the best of the man - body and mind. Dewey (1926) defines education as the development of all those capacities in an individual which will enable

him to control his environment and fulfill his needs. Education means the exposition of man's complete individuality. In the process of education, the teacher tries to shape the behaviour of young children in accordance with the aims and goals of national life. Teacher is one who helps pupils, often in a school, as well as in a family or religious community. A teacher is an

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acknowledged guide or helper in the process of learning. A teacher gives knowledge and bright future to his students. He always tries to help the students and inculcates good habits in them. In short, a teacher inspires and shapes the destiny of the nation in classrooms. Realizing the above facts, teaching profession is considered as the noblest profession in India. So for moulding efficient teachers through teacher education is important for providing not only efficient teachers but also the future citizens of the nation.

Good (1973) defines teacher education as formal and informal activities and its experiences that help a person to assume the responsibility as a member of the educational profession or to discharge his responsibility very effectively. Teacher education is an important means of national development. So effective teachers display skills at creating curricula designed to build on students' present knowledge and understanding and move them to more sophisticated and in-depth abilities, knowledge, concepts and performances. This process will enable learners to become more critical viewers and users of multiple information or experience.

Intelligences usually work together in complex ways and there are many ways to be intelligent within each category. The theory was proposed in the context of debates about the concept of intelligence and methods claimed to measure intelligence. Gardner's theory argues intelligence as it is traditionally defined does not adequately encompass the wide variety of human abilities. In his conception, a child who masters multiplication table is not necessarily more intelligent than a child who struggles to do so. The second child may be stronger in another kind of intelligence and may memorize the concept easily. So it's better to implement multiple intelligence as well as information communication technology in schools for better education. If we want to implement it in schools, then it should be updated or known to the secondary teacher education students.

Multiple Intelligence helps the teachers in

providing technology and its uses for teaching-learning to their students in inculcating multiple intelligences. Multiple Intelligence helps the teachers in planning and executing lessons to their students. They are classified as per their classroom teaching and also the lesson they are going to teach their diverse learners through informational videos and posters, drills, problem-solving exercises, museum visits and outings to concerts. For implementing these types of activities the teacher should know much about technological implementation of the so called ICT.

ICT includes electronic networks embodying complex hardware and software linked by a vast array of technical protocols embedded in networks and services that affect the local and global accumulation flow of knowledge. ICT covers Internet Service, telecommunication services, information technology (IT) services, media broadcasting, libraries, documentation centres, commercial information providers, network-based information services and other related information-communication activities.

SIGNIFICANCE OF THE STUDY

Education is regarded as a process, the interaction of the personality of the educator on that of the educand in a social setting, which affects the modification of the educand's behaviour. Education is an activity that transforms the behaviour of a person from 'instinctive to human behaviour'. The prime function of education is to draw out the potentialities of the child and develop them to meet the challenging situation of their life. Hence education makes the child to be aware of this world and to adjust with the society. The home is the first institution which forms the basis of the child's character and personality. The school provides positive attitude for the personality development of a child. Personality development is the concern of every individual of the society. Next to school, teacher helps to mould the child's personality. Today's younger generations form a

significant part of the future development of a country. In this process of transformation of personality, a teacher attempts to shape the advancement of the coming generations in accordance with preset ideals of life.

If multiple intelligence has been embraced by a secondary teacher education student as a tool to understand effectively the learning environments of different cultures and learning needs of their students, then secondary teacher education students can harvest their students' experiences to share with others as learning in practical, thoughtful and inspiring value to the teaching-learning process at the classroom. The multiple intelligence theory suggests that no one set of teaching strategies will work best for all students at all times. Collaborating the ideas with ICT is needed for an effective teaching-learning process. ICT includes electronic devices like cell phones, digital still and motion cameras, digital devices, computers and its applications like Internet, Web for storing and playing music and videos, robots and so on.

Now-a-days, almost all our education programmes and submitting assignment are carried out through computers and its applications like e-mail, virtual learning, video-conferencing and search engines for solving problems of teaching-learning. So our secondary teacher education students need ICT awareness. ICT awareness includes technical and technological awareness needed for secondary teacher education student to teach effectively at their class. Teaching competency is the competency of the teacher and their planning and preparation of lessons for teaching, classroom management, knowledge of subject, interpersonal relationship, attitude towards the children, usage of teaching aids and time management during their teaching learning.

Understanding the psychology of the learner is very important for secondary teacher education students. The success of education depends on motivation. So, they need an ability to inspire and motivate their students in teaching. The teacher should be a psychologist,

technologist and an expert in the subject. Therefore a study about the secondary teacher education students their intelligence, ICT awareness and teaching competency is needed to evaluate teacher education. So the investigator has selected multiple intelligence and ICT awareness on teaching competency of secondary teacher education students.

STATEMENT OF THE PROBLEM

Statement of the problem is entitled as "TEACHING COMPETENCY OF SECONDARY TEACHER EDUCATION STUDENTS IN RELATION TO THEIR MULTIPLE INTELLIGENCE AND ICT AWARENESS"

OPERATIONAL DEFINITIONS

The investigator adopted the following operational definitions for the terms used in this title.

TEACHING COMPETENCY- In present study, teaching competency refers the ability of the secondary teacher education students to execute a mastery level teaching with all that they handle as part of their teaching by planning and preparation of lessons for teaching, classroom management, knowledge of subject, interpersonal relationship, attitude towards the children, usage of teaching aids and time management for their teaching-learning.

SECONDARY TEACHER EDUCATION STUDENTS- In present study, secondary teacher education students are the student-teachers who are undergoing a pre-service training in teaching-learning process to get experiences for development towards teaching after their graduation in major discipline at colleges of education at Kanyakumari, Tirunelveli and Tuticorin districts affiliated with Tamilnadu Teachers Education University, Chennai.

MULTIPLE INTELLIGENCE- In present study, multiple intelligence is the set of skills allowing individuals to find and resolve genuine problems they face at their environment by perceiving and understanding through; verbal, logical, spatial, musical, kinesthetic, naturalistic, existential,

interpersonal and intrapersonal intelligence.

ICT AWARENESS- In present study, ICT awareness refers to Information Communication Technological awareness about technical and technological skills of utilising electronic devices by browsing, designing, communicating and maintainance of hardware and software.

GENERAL OBJECTIVES

The objective of the study was to find out the influence of multiple intelligence and ICT awareness on teaching competency of the secondary teacher education students

CRITICAL REVIEW OF RELATED LITERATURE

The investigator has reviewed one hundred and twenty six Indian and ninety four foreign studies of total two hundred and twenty studies related to the present study. Among them eighty seven are on teaching competency, sixty four on multiple intelligence and sixty nine are on ICT awareness. Teaching competency of secondary teacher education students are the prime factor of the student-teacher and it's the prime factor for secondary education students to have an effective teaching. Teaching competency in the Indian context of research plays a vital role, so the investigator could find many studies related to teaching competency in review of related literature. In the same way the investigator could find more related literatures on multiple intelligence and ICT awareness were the other successful areas that help the secondary teacher education students to improve their effective teaching. Hence the investigator is able to find lot of related literatures related to teaching competency, multiple intelligence and ICT awareness. From review of literature the investigator couldn't found any study related by has combined of three variables; teaching competency, multiple intelligence and ICT awareness and exclusively focused on the secondary teacher education students. Therefore the present study is a new one and it differs from others in terms of population and

sample. Hence it's relevant for the investigator to study the teaching competency of secondary teacher education students in relation to their multiple intelligence and ICT awareness.

METHODOLOGY OF THE STUDY

The investigator has used survey method to study the teaching competency of secondary teacher education students in relation to their multiple intelligence and ICT awareness. The population for the study includes the secondary teacher education students studying in the autonomous, government-aided and self financed colleges of education affiliated to the Tamilnadu Teachers Education University, Chennai from three southern revenue districts of Tamilnadu namely Tirunelveli, Tuticorin and Kanyakumari. The investigator used stratified random sampling for selecting sample. The sample was randomly selected from twenty colleges of education out of seventy one colleges of education in the population area. From these colleges of education, 1331 secondary teacher education students were selected by stratified random sampling technique. The sample selection was done on the basis of type of college with the stratification on the basis of sex, community and religion.

To measure teaching competency, multiple intelligence and ICT awareness of the secondary teacher education students, the investigator developed a teaching competency rating scale, multiple intelligence inventory and ICT awareness scale. To ensure the suitability, this tool is modified and validated by the investigator. The investigator established the validity of the tools by content validity and test-retest method for establishing reliability of the tools. The correlation co-efficient of the tool were found to be teaching competency self rating scale (0.95), multiple intelligence inventory (0.69) and ICT awareness scale (0.578). Thus the reliability of the tools was established. The scoring was done with the key which was prepared by the investigator for teaching competency self rating scale, multiple

intelligence inventory and ICT awareness scale. In this scale all the items are positive worded and there is no negative item and each item is worded “Strongly Agree”, “Agree”, “Neutral”, “Strongly Disagree” and “Disagree” are of 5, 4, 3, 2 and 1 mark respectively.

A well plan programmed by the investigator helped him to collect the required data in an orderly manner, with the prior permission of head of the institution. The investigator visited the selected colleges of education in three revenue districts namely Tirunelveli, Turicorin and Kanyakumari district and collected the filled questionnaires. Personal data collected were scored as per the norms established and the responded items were scored on the basis of scoring key in the form of matrix table. The scored data were fed into the computer and stored in a compact disc for statistical analysis in IBM SPSS Statistics v19 and IBM Amos v19.

Influence of multiple intelligence and ICT awareness on teaching competency of secondary teacher education students

NULL HYPOTHESIS - 1

There is no significant influence of verbal intelligence and ICT awareness on teaching competency of secondary teacher education students.

Table 1 Multiple Correlation among verbal intelligence and ICT awareness on teaching competency of secondary teacher education students

Influence of verbal intelligence and ICT awareness on teaching competency	Multiple Correlation	'F' Value	Df	Remarks
	0.007	4.355	3, 1327	S

(At 5% level of significance, for 3, 1327 df of freedom the table value of 'F' is 2.612)

It is inferred from the above table-1 that there is a significant influence of verbal intelligence and ICT awareness on teaching competency of secondary teacher education students.

NULL HYPOTHESIS - 2

There is no significant influence of logical intelligence ICT awareness on teaching

competency of secondary teacher education students.

Table 2 Multiple Correlation among logical intelligence ICT awareness on teaching competency of secondary teacher education students

Influence of logical intelligence and ICT awareness on teaching competency	Multiple Correlation	'F' Value	Df	Remarks
	0.003	1.977	3, 1327	NS

(At 5% level of significance, for 3, 1327 df of freedom the table value of 'F' is 2.612)

It is inferred from the above table-2 that there is no significant influence of logical intelligence and ICT awareness on teaching competency of secondary teacher education students.

NULL HYPOTHESIS - 3

There is no significant influence of spatial intelligence and ICT awareness on teaching competency of secondary teacher education students.

Table 3 Multiple Correlation among spatial intelligence and ICT awareness on teaching competency of secondary teacher education students

Influence of spatial intelligence and ICT awareness on teaching competency	Multiple Correlation	'F' Value	Df	Remarks
	0.031	20.966	3, 1327	S

(At 5% level of significance, for 3, 1327 df of freedom the table value of 'F' is 2.612)

It is inferred from the above table-3 that there is a significant influence of spatial intelligence and ICT awareness on teaching competency of secondary teacher education students.

NULL HYPOTHESIS - 4

There is no significant influence of musical intelligence and ICT awareness on teaching competency of secondary teacher education students.

Table 4 Multiple Correlation among musical intelligence and ICT awareness on teaching competency of secondary teacher education students

Influence of musical intelligence and ICT awareness on teaching competency	Multiple Correlation	'F' Value	Df	Remarks
	0.133	0.018	3, 1327	NS

(At 5% level of significance, for 3, 1327 df of freedom the table value of 'F' is 2.612)

It is inferred from the above table-4 that there is no significant influence of musical intelligence and ICT awareness on teaching competency of secondary teacher education students.

NULL HYPOTHESIS - 5

There is no significant influence of kinesthetic intelligence and ICT awareness on teaching competency of secondary teacher education students.

Table 5 Multiple Correlation among kinesthetic intelligence and ICT awareness on teaching competency of secondary teacher education students

Influence of kinesthetic intelligence and ICT awareness on teaching competency	Multiple Correlation	'F' Value	Df	Remarks
	1.298	3, 1327	NS	1.298

(At 5% level of significance, for 3, 1327 df of freedom the table value of 'F' is 2.612)

It is inferred from the above table-5 that there is no significant influence of kinesthetic intelligence and ICT awareness on teaching competency of secondary teacher education students.

NULL HYPOTHESIS - 6

There is no significant influence of naturalistic intelligence and ICT awareness on teaching competency of secondary teacher education students.

Table 6 Multiple Correlation among naturalistic intelligence and ICT awareness on teaching competency of secondary teacher education students

Influence of naturalistic intelligence and ICT awareness on teaching competency	Multiple Correlation	'F' Value	Df	Remarks
	0.039	26.866	3, 1327	S

(At 5% level of significance, for 3, 1327 df of freedom the table value of 'F' is 2.612)

It is inferred from the above table-6 that there is a significant influence of naturalistic intelligence

and ICT awareness on teaching competency of secondary teacher education students.

NULL HYPOTHESIS - 7

There is no significant influence of existential intelligence and ICT awareness on teaching competency of secondary teacher education students.

Table 7 Multiple Correlation among existential intelligence and ICT awareness on teaching competency of secondary teacher education students

Influence of existential intelligence and ICT awareness on teaching competency	Multiple Correlation	'F' Value	Df	Remarks
	0.062	44.004	3, 1327	S

(At 5% level of significance, for 3, 1327 df of freedom the table value of 'F' is 2.612)

It is inferred from the above table-7 that there is a significant influence of existential intelligence and ICT awareness on teaching competency of secondary teacher education students.

NULL HYPOTHESIS - 8

There is no significant influence of interpersonal intelligence and ICT awareness on teaching competency of secondary teacher education students.

Table 8 Multiple Correlation among interpersonal intelligence and ICT awareness on teaching competency of secondary teacher education students

Influence of interpersonal intelligence and ICT awareness on teaching competency	Multiple Correlation	'F' Value	Df	Remarks
	0.017	11.335	3, 1327	S

(At 5% level of significance, for 3, 1327 df of freedom the table value of 'F' is 2.612)

It is inferred from the above table-8 that there is a significant influence of interpersonal intelligence and ICT awareness on teaching competency of secondary teacher education students.

NULL HYPOTHESIS - 9

There is no significant influence of intrapersonal intelligence and ICT awareness on teaching competency of secondary teacher education students.

Table 9 Multiple Correlation among intrapersonal intelligence and ICT awareness on teaching competency of secondary teacher education students

Influence of intrapersonal intelligence and ICT awareness on teaching competency	Multiple Correlation	'F' Value	Df	Remarks
	0.012	8.097	3, 1327	S

(At 5% level of significance, for 3, 1327 df of freedom the table value of 'F' is 2.612)

It is inferred from the above table-9 that there is a significant influence of intrapersonal intelligence and ICT awareness on teaching competency of secondary teacher education students.

FINDINGS AND INTERPRETATIONS OF THE STUDY

The study reveals that there is a significant influence of verbal intelligence and ICT awareness on teaching competency of secondary teacher education students. This may be due to the fact that verbal communication and literary style of the secondary teacher education students are making them to provide good information to the learners in their teaching. Moreover, the modern technology and its application are making an effect on teaching competency of secondary teacher education students.

The study reveals that there is a significant influence of spatial intelligence and ICT awareness on teaching competency of secondary teacher education students. This may be due to the fact that interest in artistic drawing, video editing and performing excellence in graphical software, preparing teaching aids are making them to excel out with high performance in teaching competency of secondary teacher education students.

The study reveals that there is a significant influence of naturalistic intelligence and ICT awareness on teaching competency of secondary teacher education students. This may be due to the fact that interest towards nature, caring of pet animals and birds, environmental activities like trekking, hiking, field trips,

herbarium collection are making them to update innovative ideas of our environment. At the same time, they update details of other country's environment with the help of science and technology innovations like virtual field trip, virtual herbarium, vivarium and other graphical works leads to high performance in teaching competency of secondary teacher education students.

The study reveals that there is a significant influence of existential intelligence and ICT awareness on teaching competency of secondary teacher education students. This may be due to the fact that school education from the missionaries of Hindu, Christian and Muslim institutions and their traditional thoughts through moral education, strict discipline and respect to value system are making the students to be good in philosophical ideas. Moreover, the family brought up with disciplined performance as well as teaching them religious values and ethical values of society along with the cyber rules of utilizing scientific and technological innovations are making them to high concert in teaching competency of secondary teacher education students.

The study reveals that there is a significant influence of interpersonal intelligence and ICT awareness on teaching competency of secondary teacher education students. This may be due to the fact that their habitual nature of helping others, leadership quality and traits, communicating socially with others and modern society's fashioned style of chatting, video conferencing are making them to communicate with others and empathy towards them are making them to communicate easily with their learners and help to improve their learning activities influences the teaching competency of secondary teacher education students.

The study reveals that there is a significant influence of intrapersonal intelligence and ICT awareness on teaching competency of secondary teacher education students. This may be due to the fact that the self-independent activities of an individual and emotional maturity,

experience gathered by self learning by doing and individual courageousness to sort out any problem are making them to perform excellently in their classroom teaching.

SUGGESTIONS FOR EDUCATIONAL ADMINISTRATORS

On the basis of findings, the investigator has given the following suggestions to the educational administrators.

1. Student teachers should be trained to create educational blogs for teaching.
2. Student teachers should be compelled to utilize ICT technologies in their teaching.
3. ICT must be incorporated in teaching-learning processes through web based teaching.
4. Multiple Intelligence based ICT group project works should be encouraged in classrooms.
5. Secondary teacher education students should be trained to teach in multiple intelligence.
6. Student teachers should be practised to prepare multiple intelligence based software materials.
7. Tele-lecture and seminar sessions may be encouraged for improving ICT awareness of student teachers.
8. Video conferencing teaching methods may be encouraged for improving ICT teaching of student teachers.
9. Group discussion sessions may be conducted for developing communication skills among student-teachers.

SUGGESTIONS FOR EDUCATIONAL RESEARCHERS

On the basis of findings, the investigator has given the following suggestions for further research.

1. A study on ICT and scientific attitude of prospective D.T.Ed teachers.
2. Influence of multiple, self efficacy and social competence on surgery skills of doctors.
3. Reflectiveness of teacher educators in relation to their study skills and ICT awareness.

4. Influence of friendship and parenting style on multiple intelligence of higher secondary students.
5. Influence of multiple intelligence and cognitive style on academic achievement of higher secondary students.
6. Science teaching competency of higher secondary school teachers in relation to their thinking styles and study skills.
7. Influence of web 3.0 and emotional intelligence on teaching competency of secondary teacher education students.
8. Academic self concept of higher secondary students in relation to their adolescent attachment style and multiple intelligence.
9. Influence of thinking styles, ICT awareness and emotional intelligence on teaching competency of prospective D.T.Ed teachers.
10. Influence of thinking styles, self efficacy, multiple intelligence and computer efficacy on scholastic achievement of higher secondary students.

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