SELF-CONCEPT AND ICT-AWARENESS AMONG PROSPECTIVE TEACHERS

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MASTER OF EDUCATION

By

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DECLARATION

I**, K.SARAVANAN** do hereby declare that this dissertation entitled "**SELF-CONCEPT AND ICT-AWARENESS AMONG PROSPECTIVE TEACHERS"**, submitted for the degree of Master of Education has done by me and it is an original work. I also declare that this dissertation has not been submitted fully or partially for the award of any other degree, diploma, and title for recognition before.

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This is to certify that the dissertation entitled **"SELF-CONCEPT AND ICT-AWARENESS AMONG PROSPECTIVE TEACHERS"** submitted to Tamil Nadu Teacher's Education University, Chennai for the award of degree of Master of Education is a record of research work carried by **K.SARAVANAN (Reg.No: M1211401)** under my guidance and supervision. It is further certified that the work is an original one and free from any kind of duplication.

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Date: 10.06.13 **V.S.PAVITHRA KUMAR**

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INTRODUCTION

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"*Education is the all round drawing out of the best in child and men-body, mind and spirit"*

"True education is that which drawn out and stimulates the spiritual, intellectual and physical facilities of children"

- Gandhiji

Education is the powerful force in bringing about desired social changes, changes in knowledge, skills, attitudes, appreciations, and understanding of things which are around us. It means through which the aims and habits of people lives on from one generation to the next. Generally, it occurs through any experience that has a formative effect on the way one thinks, feels or acts. In its narrow, technical sense, education is the formal process by which society deliberately

transmits its accumulated knowledge, skill, customs and values from one generation to another.

Education is very important among all of us, the fact which is commonly nothing to deny among any. It's the education which transforms a person to live a better life and more importantly in society well being. It educates us with all the needed attributes in leading our life in a proper lifestyle. Education does make a remarkable effect on one's personality. Getting educated and finally earning a professional degree prepares you to be a part and contribute in good organizations, companies or institutions. Education is the one which provides us the thrust in getting a head and doing something constructive in our near future.

Education involves gathering of knowledge in whatever aspects. It helps a person to draw the best out of their mind and spirit. Education plays a vital role in the personal growth and social development among all of us.

Self-Concept is multi-dimensional construct that refers to an individuals perception of self in relation to any number of characteristics such as academics, gender roles and sexuality, racial identity and many others while closely related with Self-Concept clarity it pre supposes but is distinguishable from self awareness which is simply an individual's awareness of his self. It is also more general than self esteem, which is the purely evaluate element of the Self-Concept.

Self-Concept is a determine of human behavior and the acceptance as a concise measure of personality are increasingly realized Self-Concept is a required image of the individual. As a result, this image changes like any other dynamic

behavior of the individual from early to large stages of his life. It is actually mounded after some adult within the child's experience. Many theorist wish to distinguish the self as a coherent organized system of behavior from the individuals perceptual reorganization and evaluation himself.

Self-Concept operates as a guide to behavior and a criterion for conduct Self-Concept is a developmental formation in the psychological makeup of the individual consisting of inter related studies that the individual has acquired to his own body and its parts to its capacities and to objects, persons, family, social and regulate his relatedness to them in concrete situation and activation.

Teachers and Teacher educators are of central importance in tapping the potential offered by information and communication technologies (ICT) to enhance the quality of education.

The last decade in the global arena has witnessed a tremendous growth in the area of information technology. Rapid advances in the technologies for communication media like television, computer, internet, printing and publishing has enabled us to get prompt access to required information. The computer is the most versatile machine man has ever made. The use of computer at home has become a reality and the use of computer at work is very common. Computers are now-a-days used in multiple areas ranging from solving intricate scientific problems to art, cultural, historical, accounting, financial, medical and even domestic sectors. Truly, with information technology, the computer has made a significant impact on all dimensions of our day-to-day life, e.g., reservations in

trains and aeroplanes, buying and selling consumar goods through internet, evolution of e-markets, bank transactions on net.

Thus, the Information technology has replaced the conventional methods to solve technical and operational problem by introducing a much faster and more convenient method which is based on its ability to access large and complete pools of data.

1.1 NEED AND SIGNIFICANT OF THE STUDY

One of the aims of educations is to make an individual socially adjusted, emotionally stable, physically fit and vocationally well-prepared. The main purpose of education is to develop personality of the students. Many factors are responsible for developing personality in children. The major factor is Self-Concept.

Self-Concept means individual evaluation about himself or herself. It greatly influences the individuals characteristic behavior. Self-Concept is the dominant element in the personality pattern and it governs. The Self-Concept is important one to improve our talents and abilities. Through the Self-Concept we also realize himself and change our attitudes. Self-Concept varies from one person to another person. If we achieve anything, we must have Self-Concept. The Self-Concept plays on important role in an individuals life. The emergence of a positive Self-Concept will lead a well-developed personality.

The word education was derived from the word educare which is a Latin word meaning to draw out. In India the education system before British people entered was more like drawing out the hidden potential of human. Education refers to the process of learning and acquiring information. Education can be divided into two main types: formal learning through an institution such as a school and self-taught learning or what is often termed life experience.

Information and communication technologies in education deal with the use of Information and communication technologies (ICTs) within educational technology. ICT in education means implementing of its equipment in teaching and learning process as a media. The purpose of ICT in education is to generally make students familiar with its use and how it works.

ICT enhances the initial preparation by giving good teaching and training materials, use of stimulators, recording and feedback in teaching. With the help of ICT, teachers can access with colleagues, schools, institutions and universities, expertise, rich resources in cyber space. It enables interaction with students over physical distance didactic software and intelligent tutoring systems can dramatically reduce the cost of teacher training. It provides lifelong professional development by providing courses in a virtual situation, training on demand, orientation and refresher courses through video conferencing and online. It facilitates sharing of ideas, experience as well as collaborating on projects and exchange materials through virtual communities.

The role of the teacher will change from knowledge transmitter, to that of learning facilitator, knowledge guide, knowledge navigator and co-learner with the student. ICT provides powerful tools to support the shift to student-centered learning and the new roles of teachers and students. A new learning environment can be created with the use of technology. Therefore student teacher should have deep knowledge and strong attitude towards skillful use of ICT. For this study, the student teacher knows the importance of ICT and improves him with the society. So this study is must and useful for future generation also.

1.2 STATEMENT OF THE PROBLEM

The study is entitled as **"SELF-CONCEPT AND ICT-AWARENESS AMONG PROSPECTIVE TEACHERS".**

1.3 OPERATIONAL DEFINITIONS

SELF-CONCEPT

Self-Concept refers to the individuals perception of himself as a person, which includes his abilities, appearance, performance in his job and other phases of daily living.

ICT AWARENESS

In this present study ICT-Awareness refers to the awareness on the knowledge in combination among hardware, software, multimedia and delivery systems.

PROSPECTIVE TEACHERS

In this study prospective teachers refer to the would be teachers who are studying for the B.Ed degree course in the colleges of education affiliated to Tamil Nadu Teachers Education University.

1.4 OBJECTIVES OF THE STUDY

The following are the major objectives formulated for the study.

- To construct and validate a tool to measure ICT-awareness among prospective teachers.
- To study the level of Self-Concept and ICT-awareness of prospective teachers.
- To compare the mean scores of Self-Concept of prospective teachers with respect to
    - Gender
    - Locale
    - Type of Management
    - Community
    - Parental qualification

- To compare the mean scores of ICT-Awareness of prospective teachers with respect to
    - Gender
    - Locale
    - Type of Management
    - Community
    - Parental qualification

- To study the correlation between Self-Concept and ICT-awareness among prospective teachers.

1.5 HYPOTHESES

- There is no significant difference in the mean scores of Self-Concept of prospective teachers based on Gender.
- There is no significant difference in the mean scores of Self-Concept of prospective teachers based on Locale.
- There is no significant difference in the mean scores of Self-Concept of prospective teachers based on type of Management.
- There is no significant difference in the mean scores of Self-Concept of prospective teachers based on Community.
- There is no significant difference in the mean scores of Self-Concept of prospective teachers based on Parental qualifications.

- There is no significant difference in the mean scores of ICT-Awareness of prospective teachers based on Gender.
- There is no significant difference in the mean scores of ICT-Awareness of prospective teachers based on Locale.
- There is no significant difference in the mean scores of ICT-Awareness of prospective teachers based on type of Management.
- There is no significant difference in the mean scores of ICT-Awareness of prospective teachers based on Community.
- There is no significant difference in the mean scores of ICT-Awareness of prospective teachers based on Parental qualifications.
- There is no significant correlation between Self-Concept and ICT Awareness of prospective teachers.

1.6 METHODOLOGY IN BRIEF

A.METHOD USED

The method adopted in the present study is normative survey method.

B.SAMPLE

The present study is conducted on a sample of 400 prospective teachers in various institutions of Salem, Namakkal and Kanyakumari District. For the present investigation random sampling technique was used.

C.TOOLS USED

1. ICT Awareness test constructed and validated by the investigator.

2. Self-concept inventory constructed and validated by Mr.M.Gireesh Kumar & Dr.B.Krishna Prasad (2001).

3. Personal data sheet prepared by the investigator.

D.STATISTICAL TECHNIQUES USED

For the present investigation the following Statistical Techniques are used.

- Percentage
- Arithmetic Mean
- Standard Deviation
- t-test
- ANOVA
- Pearson product moment method of correlation.

1.7 DELIMITATIONS OF THE STUDY

- The sample of study has been limited to 400 prospective teachers only.
- The study is restricted to a limited number of institutions in three districts of Salem, Namakkal and kanyakumari.
- Only B.Ed students were considered as sample for study.

1.8 ORGANISATION OF THE REPORT:

The report of the study will be given under five chapters.

CHAPTER I:

The chapter one presents the need and significance of the study, statement of the problem, operational definitions, objectives of the study, hypotheses, methodology in brief, and statistical techniques used.

CHAPTER II:

Chapter two deals with review of related literature.

CHAPTER III:

Chapter three deals with methodology. This chapter consists of test development, method adopted, tool used and statistical techniques used.

CHAPTER IV:

Chapter four contains analysis and interpretation of data.

CHAPTER V:

Chapter five includes study in retrospect, findings, conclusions, education implications and suggestions.

CHAPTER –II

REVIEW OF RELATED LITERATURE

Section A: Theoretical Overview

Section B: Review of Related studies

- Studies related to Self-concept
  - Studies conducted in India
  - Studies conducted in Abroad
- Studies related to ICT-Awareness
  - Studies conducted in India
  - Studies conducted in Abroad

The phrase 'Review of Literature' consists of two words 'Review and literature'. In research methodology the term 'literature' refers to the knowledge of a particular area of investigation of any discipline, which include theoretical, practical and its research studies. The term 'review' means to organize the knowledge of the specific area of research to evolve an edifice the knowledge to show that the particular study would be an addition to this field.

Before taking up any specific research project in the development of a discipline, the researcher must be thoroughly familiar with previous theory and research. To assure this familiarity every research project in the behavioural sciences has to review the available theoretical and research literature.

2.1 NEED FOR REVIEW

One of the early steps in planning a research work is to review the research. It is very essential for every investigator to be up-to-date in the information provided. Review of literature is considered as the most important pre-requisite to actual planning and conducting the study. It avoids the replication of the study of findings to take an advantage from similar or related literature. The review of literature indicates the clear picture of the problem to be solved.

2.2 SIGNIFICANCE OF REVIEW

The importances of the review are

- ✓ The review of the literature is the basis of most of the research projects in the physical sciences, natural science, social science and humanities.
- ✓ A review of related literature gives the scholar an understanding of the previous work that has been done.
- ✓ The result of the review actually provide the data used in research.
- ✓ It enables us to know the means of getting to the frontier in the field of our problem.
- ✓ A review of the literature would develop the insight of the investigator.
- ✓ It places the researcher in a better position to interpret the significance of their own result.

- ✓ It tells about the methodologies that have proved useful and which seamless promising.
- ✓ The importance of the review is quiet oblivious in delimiting the research problem and in defining it better.

2.3 PURPOSE OF THE REVIEW

- ✓ The review of related literature enables the researcher to define the limits of his field.
- ✓ By reviewing the related literature the researcher can avoid unfruitful and useless problem areas.
- ✓ Through the review of related literature, the researcher can avoid unintentional duplication of well established findings.
- ✓ The review of related literature gives the researcher an understanding of the research methodology.
- ✓ It helps to know about the recommendations of previous researchers listed in their studies for further research.

This chapter is divided into two sections.

Section A: Theoretical overview

Section B: Review of related studies

2.4 SECTION – A: THEORITICAL OVERVIEW

A) SELF-CONCEPT

Self-Concept is an individual's attitude towards his physical self and his own behaviour. The basic Self-Concept- corresponds to James concept of the "real self". It is the person's concept of what he really is. It includes his perception of his appearance his recognition of his abilities and disabilities and of his role and status in life and his value, beliefs and aspiration. The basic Self-Concept tends to be realistic. The person sees himself as he really is not as he would like to be sometimes the basic Self-Concept is to persons liking more often it is not. The person's finds flaws in him which make him unhappy and dissatisfied and which he would like to change even when the treatment he receives from others would seem to encourage greater self acceptance.

The ideal Self-Concept is made up of perception of what a person aspires to be and what he believes bought to be. It may be related to the physical self image, the psychological self image or both. It may be realistic in the sense that it is within the reach of the person, or it may be so unrealistic that it can never be achieved in real life. Almost everyone has an ideal Self-Concept, in addition to his basic and transitory self-concept whether the ideal Self-Concept is realistic or unrealistic is determined chiefly by whether the basic or transitory Self-Concept dominates. The basic Self-Concept dominates the ideal Self-Concept is founded on a more

realistic appraisal or ones capacities and abilities whether an realistic ideal Self - Concept will be unrealistically high or low will depend on whether the transitory Self-Concept are mainly favourable or unfavourable.

a) IMPORTANCE OF SELF-CONCEPT

The importance of self-concept terms its notable contribution to personality formation. Self-concept is how you see yourself, will determine the results and outcome you derive from your goals.

In the area of personal development there is often a lot being said about the need to remain positive or to have a positive mental attitude. However what is less talked about the importance of your self concept how these key factors directly influence your ability to maintain a positive mental attitude.

Without doubt, it is easy for anyone to remain positive and upbeat when things are going well. When they are not, or you feel you have little to no control over undesirable life events, it is a different story all together.

b) CHARACTERISTIC OF SELF-CONCEPT

- Self-concept is organized. An individual organizes a lot of information about himself.
- Self-concept has several dimensions.
- Self-concept is hierarchical.

- Self-concept is stable.
- Self-concept is negative as well as positive.

c) KIND OF SELF-CONCEPT

The four categories of self-concept are

- The basic self-concept.
- The transitory self-concept.
- The social self-concept
- The ideal self-concept

d) ROLE OF THE TEACHER IN THE DEVELOPMENT OF SELF-CONCEPT

Self-concept is based on what children believe their teachers, peers and parents think of them. Positive self-concept is developed through the love, encouragement, positive comments and understanding attitude of the teachers and parents. Teachers should adopt suitable strategies and provide opportunities to children to develop their self-concept. They are more determined to achieve their goals. They have the ability to impress others.

B) INFORMATION AND COMMUNICATION TECHNOLOGY

ICT means information to be stored and shared using the latest technological devices. That is sharing and interchanging information such as knowledge, mental

skills, motor skills and attitudes through the mass media and especially such as satellite transmission, optical fibers, microcomputers, video recording, and through website.

a) THE MAJOR THEMES OF ICT

- Tasks effected
- Refinement assisted
- Ambience altered
- Motivation changed
- Learning reshaped
- Teaching displaced

b) USES

- ICT in teacher education has the capacity to accelerate major changes both in pre-service as well as in-service teacher professional development.
- ICT facilitates the educational transaction between provides and uses by keeping students well informed about the courses enhancing teacher-learner contact through e- mail , chat sessions etc.
- ICT based teaching – learning programmes can overcome as teacher's isolation by breaking down their classroom walls and connecting them to the global teacher community.
- The new ICT enables self- paced learning through various tools with the result the teaching- learning enterprise has become more result oriented.

C) ENHANCING THE USE OF ICT THROUGH THE FOLLOWING WAYS

- All written assignment must be appropriately desktop published.
- Use of web based references should be allowed and encouraged.
- Seminars or presentations by students must make use of multimedia.
- Students must be encouraged to submit some or all of their assignments as E- mail attachments.
- Lesson plans should be based on ICT.
- Blue print and question paper preparation can be documented using computers.
- The analysis and interpretation of the achievement test can be done using computer.
- Students should report their field experiences and project works in a CD form.

SECTION - B

Review of relevant studies which have a bearing on the present investigation are discussed in this section. The studies are presented in chronological order and are placed into two categories.

- Studies related to Self-concept
  - Studies conducted in India
  - Studies conducted in Abroad
- Studies related to ICT-Awareness
  - Studies conducted in India
  - Studies conducted in Abroad

2.5 STUDIES RELATED TO SELF-CONCEPT:

a) STUDIES CONDUCTED IN INDIA:

Seema Rani, (2012) conducted a study on **"Self-Concept and religiosity of students of different denominational schools"**.

Objectives:

- To find out and compare the Self-Concept of students of different denominational schools.
- To find out and compare the religiosity patterns of the students of different denominational schools.

Findings:

- Significant difference is found between Self-Concept of students of D.A.V and convent schools, due significant t-value at 0.05 levels.
- Significant difference is found in the Self-Concept of students of convent schools and Khalsa School as obtained t-ratio is significant at 0.01 levels.
- Significant difference is found in the religiosity level of students of D.A.V and convent school at ratio is found to be significant at 0.01 levels.

Dr.H.Sam Sanandaaj, (2010) conducted a study on **"Self-Concept and perceived parenting style"**.

Objectives:

- To estimate the relationship among the variables of perceived parenting style and Self-Concept.
- To study the difference between male and female students in their perceived parenting style and Self-Concept.
- To understand the difference among the different group of birth in their perceived parenting style and Self -Concept.

Findings:

- The present study implies that there exists an effect of parenting style on the Self-Concept of high school students. The early attachment style, parenting style will determine the person's adjustment with the present world.
- Children spend more time in their home Therefore the parenting style influences to a large extent to the emotional, intellectual, physical and psychological well being of the child.
- The parenting style differs among parents and the Self-Concept of the children also differs in accordance with the parenting style.

Nagavalli, (2009) conducted a study on **"A study on Self-Concept and literacy of female adults".**

Objectives:

- To measure the Self-Concept of female adults.
- To find out the literacy levels of female adults.
- Identify the relationship between Self-Concept and literacy.

Findings:

- The mean scores Self-Concept of female adults educated up to middle school level are very less than all the other groups.

- (i)Female adults educated up to middle school level differ from female adults educated up to primary school level and college level in Self-Concept.

  (ii) Female adults educated up to higher secondary school level differ from female adults, who are illiterate and educated up to primary school level in Self-Concept.

  (iii) Female adults with under graduate degree differ from those with post graduate degree in Self-Concept.

Dorai M.Thambi and Muthuchamy, (2008) conducted a study on **"Impact of teaching practice programme upon the Self-Concept of B.Ed students"**.

Objectives:

- To develop values, attitudes and awareness consistent with sustainable development in education.
- To develop knowledge and skills in teaching practice of B.Ed trainees.
- To appreciate the commonality of needs, rights, values and psychology that bind the B.Ed trainees with teaching practice programme.
- To increase Self-Concept of teachers.
- To link the personality development to educational reforms.

Finding:

- Findings from this research reveals that the level of Self-Concept of women B.Ed trainees increases significantly after the teaching practice programme compared to the Self-Concept level of pre-teaching programme.

Sridevi and Lisha, (2008) conducted a study on **"Relationship of Emotional Intelligence, Adjustment, Self-Concept and Scholastic achievement of higher secondary students".**

Objectives:

- To examine the relationship among Emotional Intelligence, Adjustment, Self-Concept and Scholastic achievement of higher secondary students.
- To find out whether there is significant difference in emotional intelligence of boys and girls.

Findings:

- There exists a positive relationship among emotional intelligence, adjustment, Self-Concept and achievement of higher secondary students.
- Female students (158.80) possess higher emotional intelligence than the male students (144.01).

Girijesh kumar, (2007) conducted a study on **"Self-Concept and modes of frustration in urban and rural scheduled caste female adolescents"**.

Objectives:

- To study the multidimensional Self-Concept and modes of frustration of scheduled caste female adolescents.
- To compare urban and rural female students on models of frustration.
- To determine the relationship between Self-Concept and frustration of scheduled caste rural female adolescent students.
- To determine the relationship between Self-Concept and frustration of scheduled caste urban female adolescent student.

Finding:

- The major focus of this study was the relative influence of dimensions of Self-Concept on different modes of frustration. In all dimensions of self and modes of frustrations both the groups differ with each other, either significantly or insignificantly. In case of Self-Concept, rural scheduled caste girls posses better Self-Concept in comparison to urban group while both the groups were highly frustrated.

Kumar and Ashok, (2006) conducted a study on **"Self-Concept among institutionalized and normal school children".**

Objectives:

- To compare the perceived Self-concept of children studying in juvenile certified residential and normal schools.
- To compare the difference in perceived Self-Concept of the children belonging to forward community and backward community.

Findings:

- The finding has confirmed the hypothesis that the institutionalized school children have low perceived Self-Concept than the normal school children.
- The findings of the present study also show that the backward community children have low perceived Self-Concept than the forward community children.

Sharma and Narayanan, (2006) conducted a study on **"Relationship between Self-Concept, achievement motivation and achievement in mathematics – A gender comparison".**

Objective:

- To find out the relationship between Self-Concept, achievement motivation and achievement in mathematics among boys and girls.

Findings:

- There is no relationship between Self-Concept, achievement motivation and achievement in mathematics among boys, while a significant positive relationship is found between Self-Concept and achievement motivation among girls.
- Boys and girls have shown a significant relationship between Self-Concept and achievement in mathematics.

b) STUDIES CONDUCTED IN ABROAD:

Afolabi.E.R.I, (2007) conducted a study on **"Effects of test format, Self-Concept and anxiety on item response changing behaviour".**

Objective:

- The study examined the effects of item format, Self-Concept and anxiety on response changing behavior of undergraduate students in a Nigerian university.

Findings:

- The study indicated that students having moderate trait anxiety made significantly more changes than those having low or high trait anxiety.
- The study also determined that Academic and general Self-Concept was not found to have significant influence on response changing behavior.

Hsieh T.J, (2005) conducted a study on **"The impact of sex role, Self-Concept and family socio economic level on life adjustment for VI grade elementary school children".**

Objectives:

- This study investigated the situation of Self-Concept and life adjustment of VI grade elementary school children.
- The study was to realize the impact of sex attributes and socio economic level on Self-Concept and on life adjustment for VI grade children.
- It also investigated the relationship between Self-Concept and life adjustment of VI grade children.

Findings:

- There were significant difference in school self, appearance self, body self, emotion self on masculine and feminine attributes of VI grade children. However there were no significant differences in family self and global Self-Concept on their mesculine and feminine attribute.
- There was significant difference among different socio economic levels of VI grade children in family self, school self motion self and global Self-Concept.
- There was no significant difference in life adjustment on masculine and feminine attribute.

- There were no significant differences among different socioeconomic levels of VI grade children in life adjustment grade II differ from grade III, grade IV and grade V.
- Life adjustment got positive correlation and influence with family self, school self, appearance self, body self, emotion self and global self.

Denalil and David, (2005) conducted a study on **"The impact of medical training on the Self-Concept of young adults".**

Objective:

- To determine the effects of medical training on the Self-Concept of participants involved in Wilderness Medical Associates (WMA) Wilderness First Responder (WFR) course.

Finding:

- There was a positive correlation and the study indicated that WFR medical training could be utilized as a form of Self-Concept enhancement.

Leibhan & Elizabeth, (2005) conducted a study on **"The impact of interest on elementary school children's, Self-Concept, Intrinsic motivation, Academic achievement and willingness to broaden knowledge".**

Objectives:

- To investigate the impact of early interest on elementary school children's Self-Concepts, intrinsic motivation, academic achievement and willingness to broken knowledge through a longitudinal.

Findings:

- It approaches that early interest may be an important factor in fostering positive Self-Concepts, intrinsic motivation and higher achievement scores particularly forgives within science domain.

2.6 STUDIES RELATED TO ICT-AWARENESS:

a) STUDIES CONDUCTED IN INDIA:

Dr.Vandana Mehra and Dr.Dilli Raj, (2009) conducted a study on **"School teachers' attitude towards Information and communication Technology"**.

Objectives:

- To compare the attitudes towards ICT of government and private secondary school teachers.

- ❖ To compare the attitude towards ICT of secondary school teachers of various academic streams, viz.language, science/mathematics and social sciences.
- ❖ To study the interaction effect between school type and academic stream of secondary school teachers with regard to attitudes towards ICT.

Finding:

- ❖ On the whole, the school teachers exhibited positive attitude towards ICT. Therefore, ICT must be given higher priority in teacher education curriculum, so that the future teachers can cope with various challenges, in education system move specifically the new roles of teachers in ICT based teaching learning system. Also in services teachers must be given training to teach in ICT based instructional settings.

Sushanta Kumar Pander, (2009) conducted a study on **"Integration of ICT for professional development of elementary teacher – A case study"**.

Objective:

- ❖ The attitude of teachers towards integration of ICT at elementary level. The students participation in classroom when teacher taught through ICT.

Findings:

- ❖ Teachers show attitude towards integration of ICT at elementary level.

- There is active participation in class room teaching when teacher taught through ICT.

Dhamija & Panda, (2007) conducted a study on **"Attitude of postgraduate students towards internet"**.

Objectives:

- To study the attitude of the postgraduate students towards the internet.
- To compare the attitude of the male and female postgraduate students towards the internet.
- To compare the attitude of rural and urban postgraduate students towards the internet.

Finding:

- The findings of the study indicated that almost all the students have favorable attitude towards the internet. These exist no significant difference in the attitude of male and female students towards the internet. The urban and rural students had similar attitude towards internet.

Khirwadkar's, (2006) conducted a study on **"Information and communication technology in education – An integrated Approach"**.

Objectives:

- To measure the effects of ICT in teaching.

- To find out the ways to inculcate ICT in classroom teaching.

Finding:

- The main findings of the study way to integrate technology to the teaching learning process effectively. The present situation fails to integrate technology, pedagogy and content effectively. Non availability of proper infrastructure facilities was found to be the main barrier ICT integration.

Athaide, (2005) conducted a study on **"Effectiveness of Training Programmed by Intel-India for secondary school teachers"**.

Objective:

- To find out the teachers attitude towards ICT.

Findings:

- A majority of Principles and Teachers were to found to have positive reaction to the integration of technology in teaching.
- Facilities alone do not ensure successful integration and adoption of computer knowledge.
- Barriers like back of time, teacher's overloaded work, lack of technical knowledge, absence of internet connection, unavailability of computers, lack of skills and not having a PC at home can prevent the use of computer as teaching tool.

- ❖ Beginner's course for teachers was much sought after by the participants.

Shah, (2005) conducted a study on **"ICT awareness and need of secondary and higher secondary teachers of Tamil medium schools of Vadodara city"**.

Objectives:

- ❖ The ICT awareness of secondary and higher secondary teachers.
- ❖ To find the extent of ICT use of secondary and higher secondary teachers.
- ❖ To identity the variable related with ICT awareness.

Finding:

- ❖ The study found a law degree of ICT awareness and use among secondary teachers. The variable related to ICT awareness of teachers was teaching experience, age and total salary. The variability related to ICT use teachers were total salary and computer training**.**

b) STUDIES CONDUCTED IN ABROAD:

Tutkun,Omar, (2011) conducted a study on **"Internet access use and sharing levels among students during the teaching learning process".**

Objectives:

- ❖ To determine the awareness among students and levels regarding student access, use and knowledge, sharing, during the teaching-learning process.

Findings:

- Instances of knowledge access, use and sharing by students during the teaching-learning process rank high.
- Female students use the internet in a more functional sense than males.
- The levels of students accessing, using and sharing by students during the teaching learning process differ.
- Internet access, use and knowledge sharing level vary between academic departments.
- Internet access, use and knowledge sharing levels differentiate according to type of education.
- The opinion of faculty members and students overlap regarding the level of accessing knowledge via the internet, but differ on the subject of use and knowledge sharing.

Anastasiades,Panagiotes, (2011) conducted a study on **"Promoting Internet safety in Greek Primary Schools the teacher is Role".**

Objective:

- To investigate how teachers evaluate the possible dangers when surfing the web face when the net for educational or interpersonal purpose, and the teachers technological skills in terms of their ability to promote

internet safely awareness when supervising elementary students surfing the web within the school premises.

Finding:

- The current work strongly recommends the importance of a more systematic promotion of internet safely awareness in primary schools as most Greet teachers seem to luck the basic pedagogical skills for exploring cyberspace alongside their students and giving worldly guidance and wisdom screen-by-screen.

Chou; et.al, (2011) conducted a study on **"Promoting Awareness of Internet Safety in Taiwan In-service Teacher Education A Ten-Year Experience".**

Objectives:

- To evaluate the development of the TAIS (Teacher Awareness of Internet Safety) project over its ten-year history (2000-2009).
- To present the process and products of the TAIS (Teacher Awareness of Internet Safety) projects.

Finding:

- The Taiwan Ministry of education has regonised the Internet's possible risks and has initiated the island wide "Teacher Awareness of Internet

Safety (TAIS)" project for elementary and middle school teachers since 2000.

Fass Daniel; et.al, (2008) conducted a study on **"Awareness Prevalence and Awareness of violent Behaviors in the Intimate Partner Relationships of college students using Internet Sampling".**

Objectives:

- To investigate the occurrence and awareness of violence in intimate partner relationships as reported by college students recruited by e-mails from a small Midwestern University.
- To find out the violent behaviors in their intimate partner relationship as well as awareness of victimization and perpetration behaviors.

Findings:

- This findings reveal that 22% of the students who have been perpetrations or victims of violent physical acts are still unaware that these violent behaviors constitute relational abuses.
- The study concern with the prevalence of physical, sexual and psychological violence. Implications about Internet sampling and the prevalence and awareness of intimate partner violence are discussed.

Wishar.J.M; et.al, (2007) conducted a study on **"Using online Role Play to Teach Internet Safety Awareness".**

Objective:

- To evaluate the net detectives, a creative online role play activity aimed at 9-12 years old. Net detectives awareness programme aimed at school children.

Findings:

- The findings reveals that gaining understand of their motivations and practiced the ICT skills being taught, they particularly enjoyed being "detectives and interacting with others outside their school". However, the role of the "Hosts" in preparing participants and it moderating their communications is key to the success of the online role play.
- Recommendations suggested by this study for hosting an online role play school environment.

Asemi, (2005) conducted a study on **"Information Searching habits of Internet users: A case study on the medical Sciences University of Isfaham".**

Objective:

- To access the use of the Internet by the researchers of the University of Isfaham.

Findings:

- To study shows that all the respondents were using the internet frequently because all facilities were provided connection to the internet.
- It was revealed that the researchers of the University were getting quality information through the Internet 55% of the respondents searched for scientific information through the Internet because the University library had provided access to various data bases and online journals for all the students and staff.

Askwi Asan, (2005) conducted a study on **"Computer elementary schools in terms of availability of computers, percentage of computer internet of teachers. A case study from Trukey".**

Objectives:

- To access the computer use in Trahzon elementary school in terms of availability of computers, percentage of computer literate teachers and the level of computer interest of teachers.
- To study the influence of gender, majoring area, years of teaching and school status in computer technology Awareness.

Findings:

- Many teachers are not computer uses and the computer literacy level of teachers in very low.

- Significance differences was found it exist between males and females in their familiarity with some type of computer technologies.
- To amount of teaching experience have effect on teachers familiarity with computer technology.
- The school status has effect on teacher's familiarity with computer technologies. Teacher who work in CBES schools were more familiar with computer technologies than traditional school teacher.
- The position of teachers have no significant relationship in familiarity with computer technologies.

2.7 CRITICAL REVIEW:

The researcher reviewed twenty five studies totally, fourteen Indian studies and eleven abroad studies. Of these studies twelve studies were related to self-concept and thirteen studies related to ICT-Awareness. The population taken in these studies was elementary school children, secondary school students, normal school students, female adults, adolescents, school teachers, secondary school teachers, and prospective teachers.

The researcher critically reviewed the reports and studied the design and method of researches, sampling techniques, adopted tools used, variable defined and their recommendations for further research.

CHAPTER – III

METHODOLOGY

INTRODUCTION

Section A:

- Test development

Section B:

- Plan and Procedure
- Method adopted for the present study
- Percentage wise distribution of samples
- Tools used
- Statistical Technique

"Research is a systematized effort to gain new knowledge".

-Redman and Mory

Research is an essential and powerful tool in leading man towards progress. Research is an endless quest for knowledge or unending search for truth. It brings to light new knowledge or corrects previous errors and misconceptions and adds in an orderly way to the existing body of knowledge. The knowledge obtained by research is scientific and objective and is matter of rational understanding, common verification and experience.

According to John W.Best (1978) "Research is considered to be more formal, systematic, intensive process, of carrying on the scientific method of analysis. It

involves a more systematic structure of investigation, usually resulting in some sort of formal record of procedures and a report of results on conclusion".

According to Travers (1985) "Educational research is the activity which is directed towards development of a science of behavior in any educational situation, the ultimate aim of such a science is to provide knowledge that will permit the educator to achieve the goals by the most effective methods".

The procedure by which researchers go about their work of describing, explaining and predicting the phenomena is called methodology. A well planned and well executed educational research programme saves time, money and energy. It avoids a lot of frustration and leads us to the path of progress. The reliability and validity of the findings depend upon the method adopted.

The decision about the method to be employed always depends on the nature of the problem. A researcher should have a thorough understanding of all research methods, with particular reference to their strengths, limitations, appropriateness and applicability.

Research is the activity of solving problems which leads to new knowledge using methods of inquiry which are currently accepted as adequate by scholars in the field. Educational research, like any social science research uses different methods for studying different kinds of educational phenomena. A pre-planned and well described methodology is necessary for arriving at reliable and valid

findings. (Mouly 1970) “Methodology is a logic of scientific investigation”. The role of methodology is to carry out research work in a scientific and valid manner.

Methodology deals with procedures and techniques for conducting a study. It helps to enhance the efficiency and validity of the research “ through research methods a researcher attempts to acquire knowledge and understanding of the problem and make concrete suggestions towards its solution”. (Hugher 2002)

This chapter deals with details regarding the method adopted for the study, tool construction, standardization and administration procedures, sample selected and statistical techniques used in the study. The details are put under two section A and section B.

Section A: Deal with Test development

Section B: Includes plan and procedure of the study

3.1 SECTION A: TEST DEVELOPMENT

The most important step in the research is the collection of relevant data. For this appropriate tool is essential. The tool for the present study prepared by the investigator is for measuring, ICT-Awareness. The related literature on ICT-Awareness and study of various related tests on this area helped the investigator to develop the present tool.

The tool which is developed for the present investigation is named as ICT-Awareness test for prospective teachers. The steps followed in the development of the tool are presented below under various heads.

- Planning of the test
- Item writing
- Item editing
- Arrangement of the items
- Preliminary try out
- Final try out
- Scoring
- Item analysis and item selection
- Final scale
- Reliability of the test
- Establishing validity

3.2 ICT-AWARENESS TEST:

Planning of the test:

The ICT-Awareness test prepared by Saravanan.K and Mr.Pavithra kumar.V.S aims at measuring the ICT-Awareness of prospective teachers in Salem, Namakkal, Kanyakumari district.

Item writing:

One of the most important steps in the tool construction is the writing of the suitable item. After the careful study of the collected materials regarding the ICT-Awareness the investigator prepared the questions.

In this test four options are given for making the response. The subjects are expected to select only one according to their interest.

Item editing:

Item editing is the process of checking and scrutinizing the items. The item were referred to the expert for the modification. The ambiguous items were written in simple and meaningful language. After collecting maximum number of questions related to ICT-Awareness the investigator made a deep study of questions. Critical examination and careful revision of items are done here. Items which are overlapped in meaning were eliminated. The items were written in simple language, so that the students can understand it easily.

The items prepared by the investigator are given to the experts for verification. Based on their suggestion, the total numbers of items were reduced to 50. A sample copy of the draft is given in Appendix-C.

Arrangement of items:

All the items were grouped, ordered and located in a random manner in order to maintain attention for responding.

Preliminary Try out:

To find out the weakness and workability of items, preliminary try out of the test and rough estimate of the item limit for responding the item were noted. In this step the investigator modified the items which are vague. For the purpose the test was given to 60 students.

Final Try out:

The present investigator selected 10 institutions from Salem, Namakkal, and Kaniyakumari districts. Then the total of 400 prospective teachers was selected as the sample. The researcher met the students in their class room and gave the following instructions. Each question has four options and the investigator asked them to put a tick (√) mark against the answer which your think appropriate for yourself. After giving response to all questions, the investigator collects the 400 response sheets. A sample copy of the final form of the test is given in Appendix-D

Scoring:

The collected data were scored systematically using a scoring key prepared by the investigator. The tool consists of 50 objective items. Each item consists of four answers. To score the test item each correct response was given “one” mark and each wrong response received “zero” mark. All the points are added to get the awareness of ICT score. The high scores correspond to high level of awareness. The scoring is done in the following way:

Table No: 3.1

Scoring for ICT-Awareness scale

Question No	Correct Answer
1	D
2	C
3	C
4	D
5	A
6	B
7	B
8	C
9	B

10	**C**
11	**A**
12	**D**
13	**A**
14	**A**
15	**B**
16	**B**
17	**B**
18	**A**
19	**D**
20	**A**
21	**A**
22	**B**
23	**B**
24	**B**
25	**A**
26	**D**
27	**A**
28	**B**
29	**C**
30	**C**

31	**C**
32	**D**
33	**B**
34	**A**
35	**D**
36	**A**
37	**B**
38	**A**
39	**A**
40	**D**
41	**B**
42	**B**
43	**D**
44	**B**
45	**A**
46	**C**
47	**D**
48	**C**
49	**A**
50	**A**

Item analysis and item selection:

"The validity and reliability of any test depend upon the characteristics of its items. Item analysis makes it possible to increase the validity and reliability of a test" (Anastasi 2003). Item analysis helps to improve tests through the selection, substitution or revision o f items.

For the validation of ICT-Awareness test, the investigator used (Anastasi) item analysis method. The procedure is listed below

- The total scores for 50 questions for all the items were found at first.
- The questions were divided into 3 arbitrary defined groups. The response sheets were arranged in the ascending order on the basis of the total score of the component variable. The top 20 response sheets were taken from the upper group (U). The 20 lowest scores were taken as lower group (L), and the remaining 20 scores in between, were taken as the middle group (M).
- The number of respondents who marked the desired response for each item was counted for upper group, middle group and lower group separately and recorded under U, M and L category respectively. Then U+M+L were calculated for each item; U-L were also calculated.

The final scale:

U+M+L is used to find the difficulty index and U-L is used to find out the discriminative power. The details of items selected in given below.

Table: 3.2

Details of item selected in the ICT-Awareness Test

Item no	Upper group (U)	Middle group (M)	Lower group (L)	U+M+L	U-L	Selected Items
1	20	14	11	45	9	
2	17	7	8	32	9	*
3	19	9	7	35	12	*
4	20	13	8	41	12	*
5	20	16	8	44	12	
6	17	6	9	32	8	*
7	18	8	4	30	14	*
8	17	5	3	25	14	
9	20	10	7	37	13	*
10	18	5	2	25	16	
11	20	12	3	35	17	*
12	20	15	5	40	15	*
13	18	6	4	28	14	*
14	19	4	4	27	15	*
15	17	7	6	30	11	*

16	20	18	7	45	13	
17	18	3	4	25	14	
18	17	12	3	32	14	*
19	20	16	1	37	19	*
20	18	14	5	37	13	*
21	20	18	10	48	10	
22	17	11	6	34	11	*
23	19	5	6	30	13	*
24	20	17	3	40	17	*
25	18	6	4	28	14	*
26	17	12	2	31	15	*
27	20	17	4	41	16	*
28	18	7	9	34	9	*
29	20	13	5	38	15	*
30	17	6	5	28	12	*
31	20	3	5	28	15	*
32	19	18	2	39	17	*
33	18	8	7	33	11	*
34	17	12	4	33	13	*

35	20	18	1	39	19	*
36	20	10	4	34	16	*
37	18	8	6	32	12	*
38	17	11	3	31	14	*
39	20	16	3	39	17	*
40	20	16	2	38	18	*
41	17	1	6	24	11	
42	20	15	5	40	15	*
43	18	8	2	28	16	*
44	20	13	2	35	18	*
45	17	9	3	29	14	*
46	18	6	5	29	13	*
47	19	6	2	27	17	
48	18	7	5	30	13	*
49	19	2	1	22	18	
50	20	15	3	38	17	*

Star (*) indicates selected items.

Selected items:

From the table it shows that the dotted 40 items are selected and the items which were not dotted are not selected.

Reliability of the Test:

Reliability refers to the degree of consistency of score yield by the test on repeated occasions.

In the present investigation the reliability was found by split-half method. The score of odd items and even items were taken separately and correlation were calculated by using spearman, formula of correlation. The reliability of the whole test was found as 0.62.

Establishing validity:

A test is valid when it meets the purpose for which it was designed. The two types of validity established for this tool were face validity and content validity.

(i) **Face validity:**

Face validity means that the given tool appears or seems to measure what it measure. The tool was submitted to a panel of experts and their opinion were taken to measure the relevant objectives of the tool. A close look on the items of the tool reveals that each and every item is capable of measuring ICT-Awareness. This provided face validity for the test.

(ii) **Content validity:**

Content validity of the test was also established by verifying the comprehensiveness of coverage of the content of the test using authentic literature and opinion of experts. They ascertained that the tool has moderate content validity. Internal validation of internal consistency was ensured through item analysis.

3.3 SECTION – B: PLAN AND PROCEDUCE

Methodology is the technique used in research study. Research methodology is a scientific investigation used by the researcher to carry out any research work. Research methods are of almost importance in a research process. Mainly methodology consists of tools, procedure and technique followed by the researcher; mostly three methods are commonly used.

They are,

- Historical method
- Experimental method
- Normative survey method

(i)Historical method

It is a method of investigation to discover and interpret what existed in the past.

(ii)Experimental method

Experimental research is the description and analysis of what will be or what will occur, under carefully controlled conditions.

(iii)Normative survey method

Which provide a method of investigation, to study, describe and interpret what exists at present.

3.4 METHOD ADOPTED FOR THE PRESENT STUDY

The present study attempts to find out the "Self-concept and ICT-Awareness among prospective teachers". Since the problem selected is concerned with 'survey' type, the investigator has selected the 'Normative survey method' for conducting the study.

3.5 NORMATIVE SURVEY METHOD

Normative survey or descriptive approach of research is also a recent development in the field of investigation. In using this method many a times researcher gains insights into other aspects of the problem which otherwise may not be within the scope of his research performance. He also gains invaluable experience of conducting such enquiries systematically and accurately. It is the method of investigation, which attempts to describe and interpret, what exists at present in the form of condition that exist practices that prevail, beliefs, points of

view or attitudes that are held process, that are going on influence, that are being felt and trends that are developing.

According to Good Bar and scales (1952), "The term Normative survey is generally used for the type of research that attempt to find out the normal or typical conditions of practices at the present time".

Survey method attempts to describe and interpret what exists at present in the form of condition, practices, process, trends, effects, attitudes, belief etc. It is an organized attempt to analysis interprets and reports the present status of social institution, group or area.

3.6 CHARACTERISTICS OF NORMATIVE SURVEY METHOD

- It gathers data from a relatively large number of cases.
- It is generally cross sectional.
- It involves clearly defined problems.
- It provides information useful to the situation of local problem.
- Survey may be quantitative and qualitative.
- It requires expert imaginative planning.
- It is more reliable.
- It requires careful analysis and interpretation of the data gathered.
- It determines the present trends and solves current problems.

- ❖ The existing theories and laboratory findings can easily be put to test in real situation.

The methodology deals with the various aspects of the method followed in the investigation which includes,

- ❖ The population and sample
- ❖ Tools used for the study
- ❖ Data collection procedure
- ❖ Scoring and tabulation
- ❖ Statistical techniques used

3.7 THE POPULATION AND SAMPLE

POPULATION

J.W.West(1996) says, "A population is any group of individuals that have one more characteristics in common that are of interest to the researcher".

The population for the study is the prospective teachers in the three revenue districts of Salem, Namakkal and Kanyakumari in Tamil Nadu.

SAMPLE

J.W.West(1996) defines, "A sample is a small portion of a population selected for observation and analysis".

The investigator used stratified random sampling technique for selecting the sample. The stratification has been done on the basis of Gender, Locale, Type of management, Community, Parental qualification. The investigator randomly selected 10 colleges in Tamil Nadu. The prospective teachers were selected from every college randomly. Thus, the sample consists of 400 prospective teachers in the three districts of Salem, Namakkal, and Kanyakumari in Tamil Nadu.

3.8 DESCRIPTION OF THE SAMPLE:

TABLE 3.3

LISTS OF COLLEGES SELECTED

S.No	Name of the college	No of students
1	N.V.K.S.D College of Education, Attoor	97
2	Sri Vidhya Mandir College of Education, Rasipuram.	40
3	Shree Amirtha College of Education, Tiruchengode.	25

4	Kalaimagal College of Education, Namagiripetti.	30
5	Ganamani College of Education, Pachal.	48
6	Saradha College of Education, Salem.	25
7	Padhmavani College of Education, Salem.	25
8	Rasi College of Education, Rasipuram.	35
9	Paavai College of Education, Namakkal.	25
10	Kasthooribha Gandhi College of Education, Masakalipatti.	50

Table No: 3.4

Gender wise distribution of the sample

S.No	Gender	No of Students	Percentage
1	Male	165	41.25
2	Female	235	58.75
	Total	400	100

The sample consists of both male (165) and female (235). The percentage corresponding to male and female Prospective teachers are 41.25 and 58.75 percentage respectively.

Table No: 3.5

Locale wise distribution of sample

S.No	Locale	No of Students	Percentage
1	Rural	229	57.25
2	Urban	171	42.75
	Total	400	100

The sample consists of both Rural (229) and Urban (171). The percentage corresponding to Rural and Urban Prospective teachers are 57.25 and 42.75 percentage respectively.

Table No: 3.6

Type of Management wise distribution of sample

S.No	Type of Management	No of Students	Percentage
1	Aided	97	24.25
2	Unaided	303	75.75
	Total	400	100

The sample consists of both aided (97) and unaided (303). The percentage corresponding to aided and unaided prospective teachers are 24.25 and 75.75 percentage respectively.

Table No: 3.7

Community wise distribution of sample

S.No	Community	No of Students	Percentage
1	BC	123	30.75
2	MBC	105	26.25
3	SC/ST/FC	172	43
	Total	400	100

The sample consists of BC(123), MBC(105), and SC/ST/FC(172). The percentage corresponding to BC, MBC, SC/ST/FC prospective teachers are 41.25 and 58.75 percentage respectively.

Table No: 3.8

Distribution of sample based on Educational Qualification of fathers

S.No	Educational Qualification of Fathers	No of Students	Percentage
1	Below S.S.L.C	165	41.25
2	S.S.L.C – HSC	141	35.25
3	Graduate	94	23.50
	Total	400	100

The sample consists of below S.S.L.C (165), S.S.L.C – HSC (141) and Graduate (94). The percentage corresponding to prospective teachers father educational qualification of below S.S.L.C, S.S.L.C – HSC and Graduate are 41.25, 35.25 and 23.50 percentage respectively.

Table No: 3.9

Distribution of sample based on Educational Qualification of Mothers

S.No	Educational Qualification of Mothers	No of Students	Percentage
1	Below S.S.L.C	216	54
2	S.S.L.C – HSC	118	29.5
3	Graduate	66	16.5
	Total	400	100

The sample consists of below S.S.L.C (216), S.S.L.C – HSC (118) and Graduate (66). The percentage corresponding to prospective teachers father educational qualification of below S.S.L.C, S.S.L.C – HSC and Graduate are 54, 29.5 and 16.5 percentage respectively.

3.9 TOOLS USED FOR THE STUDY:

The tools used in the present investigation are the following

1. Self-concept inventory constructed and validated by Mr.M.Gireesh kumar & Dr.B.Krishna Prased (2001).
2. ICT Awareness scale prepared and validated by the investigator.
3. General data sheet.

3.10 DESCRIPTION OF THE TOOLS:

Self-Concept:

The Self-Concept inventory was constructed and validated by K.Gireesh kumar and Dr.B.Krishna Prasad (2001).

In this inventory Self-Concept conceptualized as one of the important non-cognitive variable which affect the performance of the students in classroom situations.

Variable like self confidence, self acceptance, worthiness, belief and conviction, sociability were considered as important aspects to be measured under the Self-Concept. This inventory has 26 statements.

The reliability of the test was established by split half method. This has been considered to be one by the adequate methods for finding reliability of a test. The reliability co-efficient was found to be 0.73 showing satisfactory reliability.

The test is said to be valid if it measures what it intends to measure. Among the different types of validity face validity and content validity are important ones. The face validity means how the experts 'look' at the test. The face validity of the present one was found by submitting the tool before a panel of experts. It is reasonable to claim that the test has face validity.

ICT Awareness scale constructed by the investigator:

The investigator went through many journals and books related to information and communication technology. Then the investigator prepared compiled 50 objective type questions related to computer peripherals, hardware, and software, internet and artifical intelligence. The questions were given to experts in the field of Information and Communication technology. Some questions were deleted and some others were modified on suggestions given by the experts.

These questions were given to a sample of 400 prospective teachers in Salem, Namakkal, Kaniyakumari in Tamil Nadu. Their responses were analyzed with the help of the item analysis.

The answer papers of the teachers were arranged in descending order of scores in the awareness scale.

General data sheet:

The general data sheet serves to collect personal information. Prospective teachers were asked to write their Name, Name of the Institution, Gender, locale, Type of Management, Community and Parental qualification.

3.11 DATA COLLECTION AND SCORING

After finalizing the sample, the general data sheet, Self-concept scale and ICT-Awareness were administered to the subjects individually. The instructions given in the questionnaire were strictly, explaining the expected task, mode and responding etc,

The collected data were scored systematically using a scorning key prepared by the investigator. For scoring of personality Self-concept scale, for positive items, the scoring of one is given for agree and zero for disagrees. For negative items, the scoring was done in the reverse order. A separate scoring sheet was prepared for the ICT-Awareness. After scoring the data were organized and tabulated for analysis.

3.12 STATISTICAL TECHNIQUES USED FOR ANALYSIS

The following statistical techniques were used by the investigator for the present calculation.

- Percentage
- Arithmetic Mean
- Standard Deviation
- t-test
- ANOVA
- Pearson's product moment method of correlation

STATISTICS USED

The investigator has used the following statistical techniques for the present study.

1) PERCENTAGE:

Percentage helps in the comparative study of fractions. It always means per hundred and hence it is calculated on 100.

2) ARITHMETIC MEAN:

The Arithmetic mean is the best known measure of central tendency. It may be defined as the sum of the separate scores or other measure divided by their numbers.

Mean is the most stable and it is suitable for statistical calculations.

$$\mathrm{M} = A + \left(\frac{\sum fd}{N}\right) XC$$

Where,

M - Arithmetic mean,

A - Assumed mean,

f - Frequency of each class interval,

d - Deviation of scores from the assumed mean,

C - Class interval of the frequency distribution,

N - Total frequency.

3) STANDARD DEVIATION:

The square root of average of squares of all deviations of scores from the mean of a given series or frequency distribution is the standard deviation. The investigator used following formula to calculate standard deviation.

$$\sigma = C\ X \sqrt{\frac{\sum f d^2}{N} - \left(\frac{\sum f d}{N}\right)^2}$$

Where,

σ = Standard deviation,

f = Frequency,

d = Deviation,

N = Total frequency,

C = class interval.

4) CRITICAL RATIO TEST (t-test):

This test is used to find out the significant level of difference between two groups of populations. From the mean and standard deviation of the two groups the t-value are calculated. In the obtained t-value is 2.58 and above, then the

significant level of difference is 0.01 and if the values lies between 1.96 and 2.58 the significance level of difference is 0.05. If the value is below 1.96, the difference is not significant at any level.

The t-test is calculated using the formula,

$$t = \frac{M_1 \sim M_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}}$$

Where,

M_1 - Mean of first sample,

M_2 - Mean of second sample,

σ_1 - Standard deviation of first sample,

σ_2 - Standard deviation of second sample,

N_1- Total no of frequency of the first sample,

N_2- Total no of frequency of the second sample.

5) ANOVA:

Analysis of variance has been used to find out significant difference among the different levels of standard of students with reference to their ICT-Awareness and Self-concept.

$$F = \frac{Variance\ between\ the\ groups}{Variance\ within\ the\ groups}$$

6) Pearson's product moment method of correlation:

Correlation is used for measuring the degree of relationship between two variables. It shows us the extent to which values in one variable are linked or related to values in another variable.

Correlation co-efficient is calculated using the formula,

$$r = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{\left[N\sum x^2 - (\sum x)^2\right]}\sqrt{\left[N\sum y^2 - (\sum y)^2\right]}}$$

Where,

r - Correlation co-efficient,

N - Number of paired scores,

$\sum x$ - Sum of x scores,

$\sum y$ - Sum of y scores,

$\sum x^2$- Sum of x scores squared,

$\sum y^2$- Sum of y scores squared,

$\sum xy$- Sum of product of paired x and y scores.

CHAPTER-IV

ANALYSIS AND INTERPRETATION

- Preliminary Analysis
- Percentage Analysis
- Final Analysis
- Correlation Analysis
- Tenability Hypotheses

This chapter gives the analysis and interpretation of the data collected through the administration of Self-concept and ICT-Awareness among Prospective teachers.

Analysis of data is the essential factor in its relevance to the solution of the problem. For the most accurate handling, all data should be classified analyzed and interpreted for correct meaning. Analysis of the data means studying the organized material in order to discover inherent facts. The data are studied from as many angels as possible to explore new facts. Analysis of the data is most skilled task of all the stages of the research. It is a task calling for the researcher's own judgement and skill.

Prof.Wilkinson and Bhandarkar(1977) said “Analysis of date involves a number of closely related operations that are performed with the purpose of summarizing the collected data and organizing these in such a manner that they will yield answer to the questions of suggest hypothesis or questions, if no such questions or hypothesis had initiated the study”. The statistical method helps immensely for description and analysis of the data. In this study, percentage, mean, standard deviation, t-test, and ANOVA are used.

Analysis of data means studying the tabulated material in order to determine inherent facts or meanings. It involves breaking down existing complex factors into simpler parts and putting the parts together in new arrangements for the purpose of interpretation.

After administered the research tool, the data were collected and organized. The collected data are known as “raw data”. The raw data are meaningless unless certain statistical treatment is given to them. Analysis of data means to make the raw data meaningful or to draw same results from the data after the proper treatment. The analysis of data serves the following main function.

- To obtain the significant results.
- To make the raw data meaningful.
- To evaluate parameters.
- To test the null hypothesis.

PRELIMINARY ANALYSIS:

4.1 Self-Concept among prospective teachers:

Table 4.1

Descriptive statistics for Self-Concept

Category	Count	Arithmetic mean	Standard deviation
Prospective teachers	400	17.08	5.13

From the above table it is clear that the total number of sample selected for the present study was 400. The arithmetic mean score obtained for the total sample was 17.08 and the standard deviation value was 5.13.

4.2 PERCENTAGE ANALYSIS FOR SELF-CONCEPT:

Table 4.2

Percentage wise distribution of different level of Self-Concept

Self-Concept	Count	Percentage
Low	105	26.25
Medium	167	41.75
High	128	32.00
Total	400	100

From the above table, it is clear that the number of sample according to low, medium and high levels of Self-Concept was 105, 167 and 128 and the corresponding percentages were 26.25, 41.75 and 32 respectively. This indicates that most of the prospective teachers have medium level of Self-Concept.

FINAL ANALYSIS:

Comparison of Self-Concept based on background variables:

4.3 Comparison of Self-Concept based on Gender:

Null hypothesis: 1

There is no significant difference in the mean scores of Self-Concept of male and female prospective teachers.

Table 4.3

Comparison of Self-Concept based on Gender

Gender	Mean	SD	N	t	Level of significant
Male	17.20	5.57	165	0.393	NS
Female	16.99	4.78	235		

From the above table it is clear that the calculated t-value (0.393) is less than the table value (1.97) at 0.05 level of significance.

Therefore the null hypothesis, “There is no significant difference in the means scores of Self-Concept of male and female prospective teachers” is accepted. i.e, the Self-Concept of prospective teachers does not differ statistically with their gender.

4.4 Comparison of Self-Concept based on Locale:

Null hypothesis: 2

There is no significant difference in the mean scores of Self-Concept of rural and urban prospective teachers.

Table 4.4

Comparison of Self-Concept based on Locale

Locale	Mean	SD	N	t	Level of significant
Rural	17.12	5.16	229	0.193	NS
Urban	17.02	5.08	171		

From the above table it is clear that the calculated t-value (0.193) is less than the table value (1.97) at 0.05 level of significance.

Therefore the null hypothesis, “There is no significant difference in the means scores of Self-Concept of rural and urban prospective teachers” is accepted. i.e, the self-concept of prospective teachers does not differ statistically with their locale.

4.5 Comparison of Self-Concept based on Community:

Null hypothesis: 3

There is no significant difference in the mean scores of Self-Concept of BC, MBC and FC/SC/ST prospective teachers.

Table 4.5

Comparison of Self-Concept based on Community

Community	Mean	SD	Source	Sum of Squares	df	Mean square	F	Remark
BC	17.53	4.76	Between Gp	601.17	2	300.59	0.16	NS
MBC	17.21	4.67	Within Gp	16987.5	9	1887.5		
FC/SC/ST	16.66	5.59	Total					

From the above table it is clear that the calculated F-value (0.16) is less than the table value (19.41) at 0.05 level of significance.

Therefore the null hypothesis, “There is no significant difference in the means scores of Self-Concept of BC, MBC and FC/SC/ST prospective teachers” is accepted. i.e, the self-concept of prospective teachers does not differ statistically with respect to their community.

4.6 Comparison of Self-Concept based on Type of Management:

Null hypothesis: 4

There is no significant difference in the mean scores of Self-Concept of aided and unaided institution prospective teachers.

Table 4.6

Comparison of Self-Concept based on Type of Management

Type of management	Mean	SD	N	t	Level of significant
Aided	17.05	5.44	97	0.048	NS
Unaided	17.08	5.02	303		

From the above table it is clear that the calculated t-value (0.048) is less than the table value (1.97) at 0.05 level of significance.

Therefore the null hypothesis, “There is no significant difference in the means scores of Self-Concept of aided and unaided institution prospective teachers” is accepted. i.e, the self-concept of prospective teachers does not differ statistically with their type of management.

4.7 Comparison of Self-Concept based on Father Educational Qualification:

Null hypothesis: 5

There is no significant difference in the mean scores of Self-Concept of prospective teachers based on father's educational qualification below S.S.LC, S.S.L.C-HSC and graduate.

Table 4.7

Comparison of Self-Concept based on Father Educational Qualification

Father Educational Qualification	Mean	SD	Source	Sum of Squares	df	Mean square	F	Remark
Below S.S.L.C	16.77	4.43	Between Gp	652.17	2	326.09	0.51	NS
S.S.L.C – HSC	16.85	5.61	Within Gp	5717.34	9	635.26		
Graduate	17.95	5.40	Total					

From the above table it is clear that the calculated F-value (0.51) is less than the table value (19.41) at 0.05 level of significance.

Therefore the null hypothesis, “There is no significant difference in the means scores of Self-Concept of prospective teachers based on father’s educational qualification below S.S.LC, S.S.L.C-HSC and graduate” is accepted. i.e, the self-concept of prospective teachers does not differ statistically with respect to their father educational qualification.

4.8 Comparison of Self-Concept based on Mother Educational Qualification:

Null hypothesis:6

There is no significant difference in the mean scores of Self-Concept of prospective teachers based on mother’s educational qualification below S.S.LC, S.S.L.C-HSC and graduate.

Table 4.8

Comparison of Self-Concept based on Mother Educational Qualification

Mother Educational Qualification	Mean	SD	Source	Sum of Squares	Df	Mean square	F	Remark
Below S.S.L.C	16.89	4.50	Between Gp	2900.67	2	1450.34	0.58	NS
S.S.L.C – HSC	16.50	5.77	Within Gp	22518	9	2502		
Graduate	17.77	5.72	Total					

From the above table it is clear that the calculated F-value (0.58) is less than the table value (19.41) at 0.05 level of significance.

Therefore the null hypothesis, "There is no significant difference in the means scores of Self-Concept of prospective teachers based on mother's educational qualification below S.S.LC, S.S.L.C-HSC and graduate" is accepted. i.e, the self-concept of prospective teachers does not differ statistically with respect to their mother educational qualification.

PRELIMINARY ANALYSIS:

4.9 ICT-Awareness among prospective teachers:

Table 4.9

Descriptive statistics for ICT-Awareness

Category	Count	Arithmetic mean	Standard deviation
Prospective teachers	400	22.5	9.62

From the above table it is clear that the total number of sample selected for the present study was 400. The arithmetic mean score obtained for the total sample was 22.5 and the standard deviation value was 9.62.

4.10 PERCENTAGE ANALYSIS FOR ICT-AWARENESS:

Table 4.10

Percentage wise distribution of different level of ICT-Awareness

ICT-Awareness	Count	Percentage
Low	78	19.5
Medium	228	57.0
High	94	23.5
Total	400	100

From the above table, it is clear that the number of sample according to low, medium and high levels of ICT-Awareness were 78, 228 and 94 the corresponding percentage were 19.5, 57.0 and 23.5 respectively. This indicates that most of the prospective teachers have medium level of ICT-Awareness.

FINAL ANALYSIS:

Comparison of ICT-Awareness based on background variables:

4.11 Comparison of ICT-Awareness based on Gender:

Null hypothesis: 7

There is no significant difference in the mean scores of ICT-awareness of male and female prospective teachers.

Table 4.11

Comparison of ICT-Awareness based on Gender

Gender	Mean	SD	N	t	Level of significant
Male	26.17	8.98	165	6.84	S
Female	19.88	9.2	235		

From the above table it is clear that the calculated t-value (6.84) is greater than the table value (1.97) at 0.05 level of significance.

Therefore the null hypothesis, “There is no significant difference in the means scores of ICT-awareness of male and female prospective teachers” is rejected. i.e, the ICT-Awareness of the prospective teachers differ statistically with their gender. Male prospective teachers possess more awareness compared to that of female prospective teachers.

4.12 Comparison of ICT-Awareness based on Locale:

Null hypothesis: 8

There is no significant difference in the mean scores of ICT-awareness of rural and urban prospective teachers.

Table 4.12

Comparison of ICT-Awareness based on Locale

Locale	Mean	SD	N	t	Level of significant
Rural	20.91	9.50	229	3.84	S
Urban	24.56	9.38	171		

From the above table it is clear that the calculated t-value (3.84) is greater than the table value (1.97) at 0.05 level of significance.

Therefore the null hypothesis, “There is no significant difference in the means scores of ICT-awareness of rural and urban prospective teachers” is rejected. i.e, ICT-Awareness of prospective teachers differ statistically with their locale. The mean value shows that urban area prospective teachers posses more awareness compared to that of rural area prospective teachers.

4.13 Comparison of ICT-Awareness based on Community:

Null hypothesis: 9

There is no significant difference in the mean scores of ICT-awareness of BC, MBC and FC/SC/ST prospective teachers.

Table 4.13

Comparison of ICT-Awareness based on Community

Community	Mean	SD	Source	Sum of Squares	df	Mean square	F	Remark
BC	19.73	8.36	Between Gp	601.17	2	300.59	0.96	NS
MBC	21.98	9.95	Within Gp	2833.5	9	314.83		
FC/SC/ST	24.74	9.70	Total					

From the above table it is clear that the calculated F-value (0.96) is less than the table value (19.41) at 0.05 level of significance.

Therefore the null hypothesis, "There is no significant difference in the means scores of ICT-awareness of BC, MBC and FC/SC/ST prospective teachers" is accepted. i.e, the ICT-Awareness of prospective teachers does not differ statistically with respect to their community.

4.14 Comparison of ICT-Awareness based on Type of Management:

Null hypothesis: 10

There is no significant difference in the mean scores of ICT-awareness of aided and unaided institution prospective teachers.

Table 4.14

Comparison of ICT-Awareness based on Type of Management

Type of management	Mean	SD	N	t	Level of significant
Aided	26.32	8.81	97	4.84	S
Unaided	21.24	9.55	303		

From the above table it is clear that the calculated t-value (4.84) is greater than the table value (1.97) at 0.05 level of significance.

Therefore the null hypothesis, “There is no significant difference in the means scores of ICT-awareness of aided and unaided institution prospective teachers” is rejected. i.e, the ICT-Awareness of prospective teachers differ statistically their type of management. The mean value shows that aided institution prospective teachers posses more awareness compared to that of unaided institution prospective teachers.

4.15 Comparison of ICT-Awareness based on Father Educational Qualification:

Null hypothesis: 11

There is no significant difference in the mean scores of ICT-awareness of prospective teachers based on father's educational qualification below S.S.LC, S.S.L.C-HSC and graduate.

Table 4.15

Comparison of ICT-Awareness based on Father Educational Qualification

Father Educational Qualification	Mean	SD	Source	Sum of Squares	df	Mean square	F	Remark
Below S.S.L.C	18.50	8.56	Betwee n Gp	652.17	2	326.09	0.76	NS
S.S.L.C - H.SC	25.07	9.06	Within Gp	3862.5	9	429.17		
Graduate	25.50	9.79	Total					

From the above table it is clear that the calculated F-value (0.76) is less than the table value (19.41) at 0.05 level of significance.

Therefore the null hypothesis, “There is no significant difference in the means scores of ICT-awareness of prospective teachers based on father’s educational qualification below S.S.LC, S.S.L.C-HSC and graduate” is accepted. i.e, the ICT-Awareness of prospective teachers does not differ statistically with respect to their father educational qualification.

4.16 Comparison of ICT-Awareness based on Mother Educational Qualification:

Null hypothesis: 12

There is no significant difference in the mean scores of ICT-awareness of prospective teachers based on mother’s educational qualification below S.S.LC, S.S.L.C-HSC and graduate.

Table 4.16

Comparison of ICT-Awareness based on Mother Educational Qualification

Mother Educational Qualification	Mean	SD	Source	Sum of Squares	df	Mean square	F	Remark
Below S.S.L.C	20.50	9.34	Between Gp	2900.67	2	1450.34	3.73	NS
S.S.L.C - H.SC	24.74	9.13	Within Gp	3496	9	388.44		
Graduate	24.89	9.98	Total					

From the above table it is clear that the calculated F-value (3.73) is less than the table value (19.41) at 0.05 level of significance.

Therefore the null hypothesis, “There is no significant difference in the means scores of ICT-awareness of prospective teachers based on mother’s educational qualification below S.S.LC, S.S.L.C-HSC and graduate” is accepted.

i.e, the ICT-Awareness of prospective teachers does not differ statistically with respect to their mother educational qualification.

Table 4.17

Correlation between Self-Concept and ICT-Awareness of prospective teachers

Variable	Pearson Correlation	Remark
Self-Concept	0.11	Significant at 0.01 level
ICT-awareness		

The correlation coefficient between Self-Concept and ICT-Awareness of total sample is 0.11 which is significant at 0.01 level and verbally interpreted as positive or indifferent negligible i.e, there exists positive negligible correlation between self

concept and ICT-Awareness of prospective teachers, i.e, as Self-Concept of sample increase ICT-Awareness of prospective teachers also increases.

4.18 TENABILITY OF HYPOTHESES:

- The first hypothesis, “There is no significant difference in the means scores of Self-Concept of male and female prospective teachers” is accepted.
- The second hypothesis, “There is no significant difference in the means scores of Self-Concept of rural and urban prospective teachers” is accepted.
- The third hypothesis, “There is no significant difference in the means scores of Self-Concept of BC, MBC and FC/SC/ST prospective teachers” is accepted.
- The fourth hypothesis, “There is no significant difference in the means scores of Self-Concept of aided and unaided institution prospective teachers” is accepted.
- The fifth hypothesis, “There is no significant difference in the means scores of Self-Concept of prospective teachers based on father’s educational qualification below S.S.LC, S.S.L.C-HSC and graduate” is accepted.
- The sixth hypothesis, “There is no significant difference in the means scores of Self-Concept of prospective teachers based on mother’s educational qualification below S.S.LC, S.S.L.C-HSC and graduate” is accepted.

- The seventh hypothesis, “There is no significant difference in the means scores of ICT-awareness of male and female prospective teachers” is rejected.
- The eighth hypothesis, “There is no significant difference in the means scores of ICT-awareness of rural and urban prospective teachers” is rejected.
- The ninth hypothesis, “There is no significant difference in the means scores of ICT-awareness of BC, MBC and FC/SC/ST prospective teachers” is accepted.
- The tenth hypothesis, “There is no significant difference in the means scores of ICT-awareness of aided and unaided institution prospective teachers” is rejected.
- The eleventh hypothesis, “There is no significant difference in the means scores of ICT-awareness of prospective teachers based on father’s educational qualification below S.S.LC, S.S.L.C-HSC and graduate” is accepted.
- The twelfth hypothesis, “There is no significant difference in the means scores of ICT-awareness of prospective teachers based on mother’s educational qualification below S.S.LC, S.S.L.C-HSC and graduate” is accepted.

CHAPTER-V

FINDINGS, CONCLUSIONAS AND SUGGESTIONS

- The Study in Retrospect
- Findings
- Conclusion
- Education Implications
- Suggestions

5.1 THE STUDY IN RETROSPECT:

The study under investigation is entitled as “Self-concept and ICT-Awareness among prospective teachers”. In the chapter an attempt is made by the investigator to summarize all findings and conclusion drawn from the present study. The investigator also has given educational implications of the present study and suggestions for further research.

5.2 THE OBJECTIVES FRAMED FOR THE PRESENT STUDY:

- To construct and validate a tool to measure ICT-awareness among prospective teachers.
- To study the level of Self-concept and ICT-awareness of prospective teachers.

- To compare the mean scores of Self-concept of prospective teachers with respect to
    - Gender
    - Locale
    - Type of Management
    - Community
    - Parental qualification
- To compare the mean scores of ICT-Awareness of prospective teachers with respect to
    - Gender
    - Locale
    - Type of Management
    - Community
    - Parental qualification
- To study the correlation between self-concept and ICT-awareness among Prospective teachers.

5.3 THE HYPOTHESES FORMULATED:

- There is no significant difference in the mean scores of self-concept of prospective teachers based on gender.
- There is no significant difference in the mean scores of self-concept of prospective teachers based on locale.

- There is no significant difference in the mean scores of self-concept of prospective teachers based on type of management.
- There is no significant difference in the mean scores of self-concept of prospective teachers based on community.
- There is no significant difference in the mean scores of self-concept of prospective teachers based on parental qualifications.
- There is no significant difference in the mean scores of ICT-Awareness of prospective teachers based on gender.
- There is no significant difference in the mean scores of ICT-Awareness of prospective teachers based on locale.
- There is no significant difference in the mean scores of ICT-Awareness of prospective teachers based on type of management.
- There is no significant difference in the mean scores of ICT-Awareness of prospective teachers based on community.
- There is no significant difference in the mean scores of ICT-Awareness of prospective teachers based on parental qualification.
- There is no significant correlation between self-concept and ICT-Awareness of prospective teachers.

5.4 METHODOLOGY IN BRIEF:

The present study was under taken to assess the self concept and ICT-Awareness among prospective teachers. The sample comprised of 400 prospective teachers randomly selected from ten Institutions locked in the Salem, Namakkal and Kanyakumari District. Normative survey method was adopted in the present study. Tools used in the present study were General data sheet, Self-Concept Inventory and ICT-Awareness questionnaire. After the collection of data the sample ware subjected to different types of statistical treatments like Percentage, Arithmetic Mean, Standard Deviation, t-test, ANOVA, Pearson product moment method of correlation.

5.5 THE FINDINGS OF THE PRESENT STUDY:

1. There is no significant difference in the mean scores of Self-Concept of male and female prospective teachers (t= 0.393).
2. There is no significant difference in the mean scores of Self-Concept of rural and urban prospective teachers (t= 0.193).
3. There is no significant difference in the mean scores of Self-Concept of BC, MBC and FC/SC/ST prospective teachers (F= 0.159).
4. There is no significant difference in the mean scores of Self-Concept of aided and unaided institution prospective teachers (t=0.048).

5. There is no significant difference in the mean scores of Self-Concept of prospective teachers based on father's educational qualification below S.S.LC, S.S.L.C-HSC and graduate (F= 0.513).
6. There is no significant difference in the mean scores of Self-Concept of prospective teachers based on mother's educational qualification below S.S.LC, S.S.L.C-HSC and graduate (F= 0.58).
7. There is significant difference in the mean scores of ICT-awareness of male and female prospective teachers (t= 6.84).
8. There is significant difference in the mean scores of ICT-awareness of rural and urban prospective teachers (t=3.84).
9. There is no significant difference in the mean scores of ICT-awareness of BC, MBC and FC/SC/ST prospective teachers (F= 0.96).
10. There is significant difference in the mean scores of ICT-awareness of aided and unaided institution prospective teachers (t= 4.84).
11. There is no significant difference in the mean scores of ICT-awareness of prospective teachers based on father's educational qualification below S.S.LC, S.S.L.C-HSC and graduate (F= 0.76).
12. There is no significant difference in the mean scores of ICT-awareness of prospective teachers based on mother's educational qualification below S.S.LC, S.S.L.C-HSC and graduate (F= 3.73).

5.6 CONCLUSION:

It can be stated that self-concept and ICT-awareness are found to be positively correlated at 0.01 level. So, it can be concluded that a positive Self-Concept, Creates better ICT-awareness among prospective teachers with regard to the background variables such as gender, locale, community, type of management and parental qualification. The study reveals that there is significant influence of Self-Concept on ICT-awareness among prospective teachers.

5.7 EDUCATIONAL IMPLICATIONS:

The present investigation has certain educational implications.

- The present study highlights the need of creating a better ICT-awareness among prospective teachers to deal with the present generation.
- The findings of study helped to create on awareness among higher authorities in the field of education about the importance of ICT-awareness among the prospective teachers.

5.8 SUGGESTIONS FOR FURTHER RESEARCH:

Based on the findings of the study the investigator suggests the following areas for further research.

- The present study can be extended to other districts of Tamil Nadu.
- Similar studies can be conducted at the higher secondary and college level.

- The present study is limited to two variables Self-Concept and ICT-awareness, Similar studies can be conducted by taking more variables and more number of sample.
- Similar studies can be conducted by selecting different population and sample such as college students, college students and other professionals in various fields.

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APPENDICES

APPENDIX-A

N.V.K.S.D. COLLEGE OF EDUCATION

ATTOOR, K.K. DIST

PERSONAL DATA SHEET

2012-2013

INSTRUCTIONS:

Certain personal data regarding you are required for my research purpose. The information given by you will keep confidential and will be used for the research purpose only.

PERSONAL DATA

Name of the student	:	
Name of Institution	:	
Gender	:	Male / Female
Locality	:	Rural / Urban
Community	:	FC / BC / MBC /SC /ST
Types of management	:	Aided / Unaided
Father Educational Qualification	:	Below S.S.L.C/S.S.L.C-H.S.C/ Under Graduate/Post Graduate
Mother Educational Qualification	:	Below S.S.L.C/S.S.L.C-H.S.C/ Under Graduate/Post Graduate

APPENDIX-B

N.V.K.S.D.COLLEGE OF EDUCATION

ATTOOR, K.K.DIST

Questionnaire

SELF – CONCEPT INVENTORY

Mr.M.Gireesh Kumar and Dr.B.Krishna Prasad(2001)

2012-2013

INSTRUCTIONS:

The following statements are related to the self concept of prospective teachers. Kindly read statement and respond by putting a tick marks (√) against **Yes/ No**. please do not omit any statement.

1. I should have the ability to discuss subject matters with other students of my college.

2. Generally I believe that I am a useful person.

3. Frequently I think that my actions are not disciplined and systematic.

4. I wish that I were able to study lessons in a better way.

5. I do not believe that I am capable of attracting others.

6. I think that my actions are always perfect.

7. I do not consider myself to be an advanced person.

8. I should not feel restless while attending the class.

9. I realize that I am punished for no fault of mine.

10. Sometimes I consider myself to be useless person.

11. I am not able to recall my childhood experience.

12. I believe that I can create a good impression among my friends.

13. I am not capable of suppressing my anger.

14. I am not training myself to achieve my aim.

15. I don’t believe in thinking and brooding over the past.

16. I don’t wish I had been the most well-dressed student of my college.

17. I am not able to recall the works, I have to do.

18. I should be able to solve even the most difficult tasks assigned to me.

19. Many times I have not completed my job due to my inefficiency.

20. With a feeling of responsibility I face all the situations.

21. I wish that others will accept me as the most efficient individual.

22. With a relaxed mind I go to bed every day.

23. I do not wish I were able to share my sorrows with others.

24. In times of misfortune I pray to god for mental peace.

25. I believe that for all our actions we ourselves alone are responsible.

26. I do not wish I had the courage to oppose my enemies.

RESPONSE SHEET: SELF-CONCEPT

S.No	YES	NO
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APPENDIX-C

N.V.K.S.D.COLLEGE OF EDUCATION

ATTOOR, K.K.DIST

Questionnaire (Draft)

ICT - AWARENESS SCALE

2012-2013

INSTRUCTIONS:

The following statements are related to the ICT-Awareness of prospective teachers. Kindly read each statement and respond by putting a tick marks (√) against **A/B/C/D**. Please do not omit any statement.

1. The function of Information and Communication Technology is_____

(A) Collection and storage of the informations

(B) Communication of informations

(C) Processing of informations

(D) All the above

2. Data and information are_____

(A) Similar concepts (B) Data retains informations in it

(C) The information takes birth from data (D) Can not say

3. The objective of ICT is_____

(A) To propagate more and more the material related to education and research

(B) To usher the present generation in Cyber Age

(C) To disseminate and propagate the informal education

(D) All the above

4. The need of ICT in education is_____

(A) To satisfy the growing demand of education and to form knowledge-based Society

(B) To make educational material more interesting and comprehending

(C) To give support to various mediums of instruction

(D) All the above

5. The role of ICT in education is _____

(A) To give face-to-face counselling

(B) To give counselling through telephone

(C) To use audio-visual cassettes in counselling

(D) All the above

6. The computer cannot perform any job without _____

(A) Chip (B) Programme (C) Memory (D) Output device

7. The term computer is generally used for CPU and _____

(A) External memory (B) Internal memory

(C) Input device (D) Output device

8. The group of instructions which directs computer, is called _____

(A) Storage (B) Logic (C) Memory (D) Programme

9. Who is called the grandfather of computer among the following?

(A) Blaize pascal (B) Charles Babbage

(C) Herman Holirath (D) Joseph Jaequard

10. For booting a computer related informations are stored in _____

(A) Random Access Memory (B) CD-ROM

(C) Read only Memory (D) All the above

11. In the following the fastest computer constituent is _____

(A) CPU (B) Magnetic Tape

(C) Video Terminal (D) Sensors and Mechanical controllers

12. Two main types of computer chips are _____

(A) External Memory Chip (B) Primary Memory Chip

(C) Microprocessor Chip (D) Both B and C

13. The Computer Monitor is joined with _____

(A) A Cable (B) A Buss (C) A Wire (D) A Modem

14. Which of the following does not use in Local Area Network (LAN)?

(A) Modem (B) Printer (C) Calse (D) Computer

15. Generally Modem is connected with telephone line and _____

(A) In middle of Network (B) communication Adopter

(C) Serial port (D) Computer

16. A byte is equal to _____

(A) 2 Bits (B) 8 Bits (C) 16 Bits (D) 32 Bits

17. The clock speed of a computer measured through _____

(A) Megabytes and Gigabytes (B) Megahartz and Gigahartz

(C) Bits and Megabits (D) Nano seconds and Pico seconds

18. A computer performs its all mathematical and logical calculations through _____

(A) CPU (B) Memory unit (C) Output unit (D) visual Display unit

19. RAM in reference to computer stands for _____

(A) Random Awareness Memory (B) Read All Memory

(C) Read Any Memory (D) Random Access Memory

20. The meaning of the term Programme is _____

(A) List of informations

(B) Internal design of computer

(C) Informations collected in Memory

(D) Informations processed by computer

21. C, C++ and JAVA are the example of_____

(A) Programming language

(B) Secondary memory device

(C) Internal parts of a computer

(D) Brands of professional computers

22. The computer is used through multimedia devices for _____

(A) Automation (B) Entertainment

(C) Military use (D) Medicinal use

23. Machine language and Assembly language are the examples of _____

(A) High level language (B) Low level language

(C) Both of the above (D) None of the above

24. The first webpage of any organisation is called _____

(A) Portal (B) Home page (C) Vortal (D) Web site

25. The abbreviation DNS stands for _____

(A) Domain Name System (B) Dependent Name Server

(C)Defense Nuclear System (D) Downloadable New Software

26. The mechanical digital calculator was invented by _____

(A) Human Hollirith (B) Blaize Pascal

(C) Charles Babbage (D) Howard Icons

27. The father of modern computer is called _____

(A) Charles Babbage (B) Blaize Pascal

(C) Howard Icons (D) William Wordsworth

28. The name of the first Electronic computer is _____

(A)EDVAC (B) ENIAC (C) EDSAC (D) UNIVAC

29. Which of the following is measured in Bits and Bytes?

(A) Computer Memory (B) Computer speed

(C) Computer storage Capacity (D) None of the above

30. Which of the following Network had developed first of all in the field of Education?

(A) NICNET (B) MAN (C) WAN (D) None of the above

31. MODEM is used for communicating data_____

(A) In LAN (B) In MAN (C) In WAN (D) None of the above

32. The advantage of internet to a teacher is_____

(A) He can modernize his knowledge and enrich it

(B) He can counsel the students

(C) He can prepare teaching aid material

(D) All the above

33. Web client is called_____

(A) Web Server (B) Web browser

(C) Both of the above (D) None of the above

34. MS Word is an example of_____

(A) Application software (B) system software

(C) Operating system (D) Translating programme

35. The advantage of MS WORD is in_____

(A) Letter writing (B) Preparing lecture

(C) Preparing question paper (D) All the above

36. A teacher can develop Question Bank with the help of _____

(A) MS Word (B) Excel (C) Power point (D) All the above

37. In MS WORD last action can be reversed by_____

(A) 'Repeat' (B) 'UNDO' (C) 'REDO' (D) All the above

38. Headers and Footers are exhibited_____

(A) In print layout (B) In normal view

(C) In web layout (D) In all the above

39. The presentation package and slides are prepared by_____

(A) Power point (B) Excel (C) MS Word (D) All the above

40. A person can make out presentation for _____

(A) Sales promotion (B) Teaching

(C) Orientation training of employees (D) All of the above

41. Font size can be changed through _____

(A)Insert menu (B) Tools menu (C) Format menu (D) Edit menu

42. We can prepare Report card through_____

(A) MS Word (B) Power point (C) Excel (D) All the above

43. We can draw a pie graph in _____

(A) Excel (B) Power point

(C)Both of the A & B (D) None of the above

44. Generally all the formulae in Excel start with the sign of _____

(A) Astrix (*) (B) And (&) (C) Dollor ($) (D) Equivalent (=)

45. Multimedia is _____

(A) A technology (B) A software

(C) A media (D) A popular computer game

46. The limitation of a traditional computer is _____

(A) The handling of the text (B) The handling of numbers

(C) Effective communication (D) None of the above

47. The father of the linear programming is_____

(A) B.F.Skinner (B) Sydney pressy

(C) Norman A. Crowder (D) Thomas F.Gilbert

48.Computer Assisted Instruction (CAI) is generally used to fulfill_____

(A) Cognitive objectives (B) Affective objectives

(C) Psycho-motor objectives (D) Only A and B

49. CAI is model of_____

(A) Hardware approach (B) Software approach

(C) System analysis (D) All the above

50. The meaning of MODEM is_____

(A) Modulator – Demodulator

(B) Essential equipment for Internet

(C) An Electronic device

(D) None of the above

APPENDIX-D

N.V.K.S.D.COLLEGE OF EDUCATION

ATTOOR, K.K.DIST

Questionnaire (Final)

ICT - AWARENESS SCALE

2012-2013

INSTRUCTIONS:

The following statements are related to the ICT-Awareness of prospective teachers. Kindly read each statement and respond by putting a tick marks (√) against **A/B/C/D**. Please do not omit any statement.

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(C) The information takes birth from data

(D) Can not say

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(B) Essential equipment for Internet

(C) An Electronic device

(D) None of the above

RESPONSE SHEET: ICT-AWARENESS SCALE

S.No	A	B	C	D	S.No	A	B	C	D
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
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