CHAPTER III
STATEMENT OF THE PROBLEM AND METHOD OF INVESTIGATION

3.0 Introduction

This chapter is presented under two parts namely statement of the problem and method of investigation.

Part – I

The statement of the problem is confined to the significance of the study, research questions, title of the problem, definition of certain terms used in the study, objectives, assumptions, hypotheses, scope, need and importance, limitations an delimitations of the present investigation.

3.1 Significance of the Research Study

The institution of education is an integral part of society. Quality of learners depends on quality of teachers who constitute the backbone of the entire education system. Teachers have a vital role to play in character building of the students and also preparing them to succeed in their lives. This aspect of education cannot be more relevant than in current times as the demands of knowledge economy driven by experimentation, innovation and creativity require education systems to equip students with different skills. Thus, it is crucial for teachers to be well-rounded and equipped with necessary expertise so that they can build required knowledge and skills in the students to enable them to succeed in a world of tremendous opportunities and also challenges. That said, the role of teacher educators becomes even more important. Teacher development is possible only if there is a robust program, for developing teacher educators. Teacher educators are the key actors in the space of quality education. “When the general consensus is that teacher is the most important in-school factor influencing the quality of their pupil’s learning, it seems to be appropriate to assume that teacher educators are an important factor influencing the quality of the learning student teachers.

Teachers are the kingdoms of any educational system. It is said that teachers affect eternity; nobody can tell where their influence stops. Our New National Policy on Education (1992) says that no nation can rise above the level of its teachers. Therefore, teacher education to produce teachers to high quality is of utmost importance. Detailed and in-depth studies undertaken in recent years have shown that the quality of pre-service and in-service teacher education programs in our country is deteriorating and that the professional
commitment and overall competence of teachers leave much to be desired. Therefore, everything necessary has to be done to ensure that our teacher education institutions produce teachers of high quality and calibre. Conscious initiatives are necessary to influence the quality of teacher education at various level.

Principal whose role is important in the quality of education but overall interest, outlook, healthy environment, unity and cooperation of academic staff, non-academic staff and students is also equally important. As we know any organization, institute or college could not run by without them. So we should try to contribute our best effort to the college as a system (Singh & Singh, 2014).

Principals play a key role in the delivery of quality instruction. Their responsibilities include ensuring educational strategies are in place that support effective learning for all students. They serve as a facilitator, guide and supporter of quality instructional practices.

The principal serves as the educational leader of the campus, it is imperative that they have working knowledge of effective instructional strategies and are able to understand the needs of their students and teachers. Principals should understand that good teaching strategies are appropriate for all students whether they have been identified as requiring support through assessments results.

An additional responsibility of campus principals is to motivate and provide on-going support to their instructional teams. Teachers and paraprofessionals should feel valued. Teaching can be frustrating and lonely. All teachers needs the advice of the other experienced professionals in order to overcome the daily challenges they face (Keefe et al., 2004). Motivated teachers support student achievement and seek out additional learning opportunities to improve their teaching skills.

In today’s climate of heightened expectations, principals are in the hot seat to improve teaching and learning. They need to be educational visionaries; instructional and curriculum leaders; assessment experts; disciplinarians; community builders; public relations experts; budget analyst; facility managers; special program administrators; and expert overseers of legal, contractual, and policy mandates and initiatives. They are expected to broke the often-conflicting interests of parents, teachers, students, district officials, unions, and state and federal agencies and they need to be sensitive to the widening range of student needs. Although the job description sounds overwhelming, at least it signals that the field has begun to give overdue recognition to the indispensable role of and mounting demands on principals (Davis, Darling- Harmmond, LaPointe & Meyerson 2005)
The importance of principals is echoed repeatedly by educators, researchers focused on leadership and organizations concerned with ensuring that all students have access to high-quality schools. “A particular noteworthy finding is the empirical link between school leadership and improved student achievement”. Education research shows that most school variables, considered separately, have at most small effects on learning. The real payoff comes when individual variables combine to reach critical mass. Creating the conditions under which that can occur is the job of the principal (Wallace Foundation, 2011).

Researcher Louis, Leithwood, Wahlstrom, and Anderson (2010) concurred with this assessment and drew finding of a research project that spanned six years: that based on a preliminary review of research, that leadership is second only to classroom instruction an influence on student learning.

The analysis of All India Ssurveys of Educational Research reveals that leadership of educational institutions from primary to higher education in the Indian context has not been studied extensively; majority of the researchers are within the behaviorist paradigm, like whether the principal is task oriented or relationship oriented. Leadership behavior of heads had been studied in relation to the organizational climate, their personal characteristics, teachers’ job satisfaction, morale and alienation. Some of the researchers also deal with the study of supervisory roles of the educational institution leaders. There is a huge research gap in the leadership studies conducted in the Indian context. None of the researches have been done to actually understand indigenous model of educational institutions' leadership. There is a complete absence of studies on the leadership preparation and practices in the schools of India. Training and orientation of educational institutions' leaders is a need of the hour. There should be provisions of In-service training of head teachers for untrained as well as trained head teachers.

Crowther et al. (2002) claimed that where we have seen teacher leadership begin to flourish, principals have actively supported it or, at least, encouraged it.

Foster (2004) conducted a case study on examining the relationship between leadership and school success. He found that competent administration and teacher leadership contributed a lot to the school success.

Competence alone can’t make a leader, but it can undo one. While inaction is a prime problem facing many organizations (and individuals for that matter), there’s the very real possibility that one is doing the wrong thing. An incompetent leader has almost unlimited opportunities to be ineffective. Knowing what to do - professional competence – is vital. While many “leaders” are often selected for their competence alone, competence is
something different from character or leadership competence, and should not be confused. Yet, competence is a critical part of the whole leadership picture.

Timperley (2005) warned, Distributing leadership over more people is a risky business and may result in greater distribution of incompetence.

Socrates believed that the “one who clearly knows best what ought to be done will most easily gain the obedience of the others. Competence engenders confidence in a leader.

In this regard there is a need of systematic study on leadership behavior and teaching competencies of Principals in the College of Education, the context of leadership effectiveness and professional competency exhibited by the Principals of College of Education. The emergence of a globalised world in a frame work of competitions together with the pressure of an exploding knowledge base has given rise to new challenging roles for Principals of College of Education. The study will help to know how far they are effective leaders and competent teachers so as to cope with the challenges in modern education system especially in the final stage of teacher education.

Therefore, the investigator has felt the need and significance of the problem and evolved a research study on leadership behavior and teaching competencies of Principals in College of Education.

3.2 Research Questions of the Study

A thesis statement also called a research question is considered the “main point” in research writing. It brings organization and theme to research writing. The following are the research questions of the present study.

1. How the leadership behavior is influencing the Principals of College of Education as an effective administrative and academic head to attain teacher education task?
2. How the teaching competencies are influencing the Principals of College of Education as an effective teacher educator to attain teacher education task?
3. How the leadership behavior and teaching competencies are giving relational influence on the Principals of College of Education as an effective administrative and academic head to attain teacher education task?
3.3 Title of the Study

“Leadership Behavior and Teaching Competencies of Principals in College of Education”

3.4 Meaning of Certain Terms Used in the Study

The meaning and definitions of the terms used in the present investigation along with their operational definitions by the researcher are given below.

Leadership Behavior

The action of leading a group of people or an organization, or the ability to do this is called leadership. Leadership is both a research area and a practical skill encompassing the ability of an individual or organization to “lead” to guide other individuals, teams or entire organizations.

US academic environments define leadership as “a process of social influence in which a person can enlist the aid and support of others in the accomplishment of a common task” (Chemers, 1995 and Roger, 2015).

York-Barr and Duke (2004) defined teacher leadership is a wide variety of work at multiple levels in educational systems, including work with students, colleagues and administrators and work that is focused on instructional, professional and organizational development.

Studies of leadership have produced theories involving traits (Lockie et al, 1991), situational interaction, function, behavior (Goldsmith Marshal, 2016), power, vision and values (Richard & Engle 1986), charisma and intelligence among others (Roger, 2015).

Howard Gardner (2016) defines leadership an individual (or, rarely, a set of individuals) who significantly affects the thoughts, feelings and or behaviors of a significant number of individuals”.

Educational leadership involves working with teachers and other education professionals on systemic plans to improve educational programming and outcomes. From K-12 to higher education, leaders in the industry include: teachers, superintendents, principals, administrators, department chairs, provosts and deans.

Bush (2008) refers to three key aspects of these definitions: the central concept is influence rather than authority. Both are dimensions of power but the latter tends to reside in formal positions, such as the principal or head teacher, while the former could be exercised by anyone in the school or college. Leadership is independent of positional authority while
management is linked directly to it. The process is international. The person seeking to exercise influence is doing so in order to achieve certain purposes. Influence may be exercised by groups as well as individuals. This notion provides support for the concept of distributed leadership and for constructs such as senior leadership teams. ‘This aspect of leadership portrays it as a fluid process, potentially emanating from any part of the school, independent of formal management positions and capable of residing with any member of the organization, including associate staff and students’

Barker (2002) also reviewed the leadership definitions used to state and also to conclude that leadership is about two things – process and behavior.

Winston and Patterson (2005) says that a leader is one or more people who selects, equips, trains and influences one or more followers who have diverse gifts, abilities and skills and focused the followers to the organization’s mission and objectives causing the followers to willingly and enthusiastically expend spiritual, emotional and physical energy in concerted coordinated effort to achieve the organizational mission and objectives.

For the present investigation, the investigator considered leadership behavior as working and heading with teachers and other education professionals on systemic plans to improve educational programming and outcomes in College of Education which involves chain of process and set of behaviors. This aspect of leadership portrays it a fluid process, potentially emanating from any part of the school, independent of formal management positions and capable of residing with any member of the organization, including associate staff and students.

**Teaching Competencies**

Teaching competency has various dimensions such as content knowledge, instructional planning, student motivation, presentation and communication skills, evaluation competencies and classroom management skills.

A team of teacher educators from NIE, Singapore listed out the core competencies that every trained teacher should have. These competencies were classified into three broad performance dimensions: professional practice, leadership and management and personal effectiveness.

The broader domains of teaching competency of teachers depend upon the introduction which prepared students for a lesson by clarifying its goals relating to student’s prior knowledge and skills through analogies, demonstrations and posting stimulating problems. Similarly motivational skills, including reinforcing student’s behavior, varying the
stimulus, displaying warmth, enthusiasm and recognizing student’s needs. Simultaneously, presentation and communication skills, including explaining, dramatizing, reading, using audio-visual aids closure, using silence encouraging, students feedback, clarity, expressiveness pacing and planned repetition. More over questioning, convergent and divergent questions, stimulating student initiative and skills of small group works, developing independent learning, counselling encouraging, cooperative activity and mutual interaction of students. Similarly, to developing students thinking such as fostering, inquiry-learning, guiding-discovery, concept formation, using simulation, role playing and gaming, to stimulate through developing student problem-solving skills encouraging student to evaluate and make judgments and developing critical thinking (Kounsar Jan, 2016).

The Teacher Education Program at Cedarville University (2016) defined as a connotation of adequate or sufficient skills to perform a particular task. In the Teacher Education Program, competence is much more than simply a skill. It is integrally related to character, leadership and compassionate service. Competence is developed as a result of rigorous academic standards applied at every stage of teacher training, combined with thoughtful and productive reflective practice in collaboration with faculty and mentor professionals.

As far as the present study is concerned, teaching competency refers to a connotation of adequate or sufficient skills to perform a particular task in the Teacher Education Program of B.Ed. colleges and competence is much more than simply a skill. It is integrally related to character, leadership and compassionate service and developed as a result of rigorous academic standards applied at every stage of teacher training, combined with thoughtful and productive reflective practice in collaboration with faculty and mentor professionals.

**Principal**

The most important or senior person in an organization or group. A head teacher (also known as school/college principal, head teacher, headmaster, headmistress or head), is the teacher with the greatest responsibility for the management of a school/college. The person in charge of head a university or college.

As far as this study is concerned, the Principal is considered as the senior person a person in charge of head in the B.Ed. College as per the National Council for Teacher Education (NCTE), New Delhi (1995 and 2014) and the regulations fulfilling the following:  
A. Principal / H.O.D
i) Postgraduate degree in Arts/ Sciences/ Social Sciences/ Humanities/ Commerce with minimum 55% marks; and
ii) M.Ed. with minimum 55% marks; and
iii) Ph.D. in Education or in any pedagogic subject offered in the institutions; and
iv) Eight years of teaching experience in a secondary Teacher Education Institution.
    Desirable: Diploma/ Degree in Educational Administration or Educational Leadership
B. Perspectives in Education or Foundation Courses
i) Postgraduate Degree in Social Sciences with minimum 55% marks; and
ii) M.Ed. degree from a recognized university with minimum 55 % marks.
    OR
i) Postgraduate (MA) degree in Education with minimum 55% marks; and
ii) B.Ed./ B. El. Ed. degree with minimum 55 % marks.
C. Curriculum and Pedagogic Courses
i) Postgraduate degree in Sciences/ Mathematics/ Social Sciences/ Languages with minimum
    55% marks and
ii) M.Ed. degree with minimum 55% marks. Desirable: Ph.D. degree in Education with
    Subject specializations.
(Note: In case of B and C put together, for two faculty positions, a postgraduate degree in
Social/ Psychology/Philosophy with 55% marks and B.Ed./ B. El. Ed. With 55% marks
and three years of teaching experience in a secondary school shall be considered.).

**College of Education**

College of education is an institution which is conducting a Bachelor of Education
(B.Ed.) is an undergraduate professional degree prepares students for work as a teacher in
schools, though in some countries additional work must be done in order for a student to
be fully qualified to teach.

In India, Bachelor of Education (B.Ed.) is a course offered for those interested in
pursuing a career in teaching. The B.Ed. degree is mandatory for teaching at the secondary
(classes 9 and 10) and higher secondary (10+2 or classes 11 and 12). The minimum
qualification required for entry into B.Ed. course in Bachelor of Arts (B.A.) or Bachelor of
Science (B.SC.). While student from the Arts stream are trained to teach subjects like
History, Civics, Geography and languages, the students from the Science stream are trained
to teach Mathematics, physics, Chemistry and Biology.
The NCTE, New Delhi Norms for B.Ed. for 2014 and Course Duration 2 years: The Bachelor of Education Programme, generally known as B.Ed. is a professional course that prepares teachers for upper primary or middle level (classes VI-VIII), secondary level (Classes IX-X) and senior secondary level (classes XI-XII). The programme shall be offered in composite institution as defined in clause (b) of regulations 2. As per the National Council for Teacher Education (NCTE), New Delhi (1995 and 2014) ‘regular institutional programmes of Secondary Teacher Education of two year duration is termed as B.Ed.’

The Government of Tamil Nadu Enacted Act No (33) of 2008 to provide for the establishment and incorporation of Teacher Education University in the State of Tamil Nadu for promoting excellence in teachers education. Further the act came into effect from 1.7.2008 by a Gazette Notification issued in G.O.M.S.256, Higher Education (K2) Department, dated 25.6.2008. This University is unique in nature relatively to the other Universities since its assignment is to promote Excellence in Teacher Education and Produce Dynamic and Smart Teachers for the benefit of the society and the nation at large. Teachers Education University, Chennai has to monitor all the 657 affiliated Colleges of Education including Government, Government Aided and Self-Financing Colleges in the whole of the Tamil Nadu State and to grant affiliation.

As far as this study is concerned, College of Education refers to the institution which is conducting first and second year teacher training graduation courses in Tamil Nadu region with the dual approval of the NCTE, New Delhi and affiliation of Tamil Nadu Teachers Education University, Chennai.

3.5 Variables of the Study

A Variable is either a result of some force or is itself the force that causes a change in another variable. In experiments, these are called dependent and independent.

For the present investigation, the researcher has chosen the following variables for her study:

- Leadership Behavior
- Teaching Competency

The both variables leadership behavior and teaching competency are taken as independent variables of the present investigation.
In addition to that the following variables are taken as personal/demographic variables for the present investigation.

- Age
- Sex
- Community
- Educational qualification
- Subject
- Marital status
- Monthly income
- Years of experience and
- Ailments

### 3.6 Objectives of the Study

The following objectives have been framed for the present investigation.

1. To assess the leadership behavior of principals of college of education in Tamil Nadu.
2. To find out significance differences if any in the leadership behavior of principals of college of education in Tamil Nadu in relation to certain demographic variables such as age, sex, community, educational qualification, subject, marital status, monthly income, years of experience and ailments.
3. To find out the significance contributions of variance in the leadership behavior or principals of college of education in Tamil Nadu in relation to certain demographic variables such as age, sex, community, educational qualification, subject, marital status, monthly income, years of experience and ailments.
4. To assess the teaching competencies of principals of college of education in Tamil Nadu.
5. To find out significance differences if any in the teaching competencies of principals of college of education Tamil Nadu in relation to certain demographic variables such as age, sex, community, educational qualification, subject, marital status, monthly income, years of experience and ailments.
6. To find out the significance contributions of variance in the teaching competencies of principals of college of education Tamil Nadu in relation to certain demographic variables such as age, sex, community, educational qualification, subject, marital status, monthly income, years of experience and ailments.
7. To find out the significance relationship if any between leadership behavior and teaching competencies of principals of college of education in Tamil Nadu.

3.7 Assumptions of the study

The present research study is having the following assumptions:

1. The leadership behavior of principals of college of education in Tamil Nadu may vary and it is assessable.

2. The teaching competencies principals of college of education in Tamil Nadu may vary and it is also assessable.

3. The leadership behavior and teaching competencies of principals of college of education in Tamil Nadu is having relations.

3.8 Hypotheses of the Study

The present research investigation is laid down the following hypotheses.

1. There is a significant difference in the leadership behavior of principals of college of education in Tamil Nadu due to variations in their age, sex, community, educational qualification, subject, marital status, monthly income, years of experience and ailments.

2. There is a significant difference in the teaching competencies of principals of college of education in Tamil Nadu due to variations in their age, sex, community, educational qualification, subject, marital status, monthly income, years of experience and ailments.

3. There are significant contributions of certain demographic variables such as age, sex, community, educational qualification, subject, marital status, monthly income, years of experiences and ailments in the leadership behavior of principals of college of education in Tamil Nadu.

4. There are significant contributions of certain demographic variables age, sex, community, educational qualification, subject, marital status , monthly income, years of experience and ailments in the teaching competencies of principals of college of education in Tamil Nadu.

5. There is a significant correlation exists between the leadership behavior and teaching competencies of principals of college of education in Tamil Nadu.
3.9 Limitations of the Study

Limitations are a statement of the limits or scope of the investigation and at the same time, it mentions the geographical limits of the study (Arunachalam, 2004 and Saravanavel, 1989).

The following are the limitations of the Study:

1. The present assessment of leadership behavior and teaching competencies is confined to the principals of college of education with the dual approval of the NCTE, New Delhi and affiliation to Tamil Nadu Teachers Education University, Chennai in Tamil Nadu region only.

2. The leadership behavior and teaching competencies assessment scales are a teacher educator made one with its item analysis, reliability and validity.

The research methodology followed in the present study is discussed hereunder.

3.10 Methodology and Research Procedure

The present chapter four 'methodology and procedure' deals with the research procedures and design followed in the present research investigation. As per the statement of Best and Khan (1995), the methodology of any investigation describes in detail the activities of research measuring tools to be used, individual participation in the research, sample and data analysis and different methods used in research studies.

For realizing this, the researcher has discussed and presented this chapter under different headings such as: research methods adapted in the present investigation, development and construction of research tools, assessment of leadership behavior and teaching competencies of Principals in College of Education, locale and sample of the study, data collection, scoring procedure and statistical techniques used in the investigation.

3.11 Research Procedures Adopted in the present Investigation

Research method is a systematic procedure in which the desired outcomes are achieved by setting up situation in such a form that the investigator gathers information and draws conclusions on this basis of the collected data (Good & Scates, 1935). Descriptive research is a study designed to depict the participants in an accurate way. The three main ways to collect this information are: Observational, defined as a method of viewing and recording the participants.

Descriptive research can be either quantitative or qualitative. It can involve collections of quantitative information that can be tabulated along a continuum in numerical
form, such as scores on a test or the number of times a person chooses to use a certain feature of a multimedia program, or it can describe categories of information such as gender or patterns of interaction when using technology in a group situation. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass and Hopkins, 1948). Descriptive studies are aimed at finding out “What is,” so observational and survey methods are frequently used to collect descriptive data (Borg and Gall, 1989).

In addition, the conceptualizing of descriptive research (Categorization or taxonomy) precedes the hypothesizes of explanatory research (Shields, Patricia and Rrangarajan, 2013).

Descriptive research is unique in the number of variables employed. Like other types of research, descriptive research can include multiple variables for analysis, yet unlike other methods, it requires only one variable (Borg and Gall, 1989). For example, a descriptive study might employ methods of analyzing correlations between multiple variables by using tests such as correlation, regression or multiple regression analysis.

In this study the leadership behavior and teaching competencies of the principals of B.Ed. Colleges of Tamil Nadu is assessed. The general type of data gathering instrument used in survey research is called questionnaire through which respondents respond to statements given in the questionnaire. It is used to collect factual information from the target population. Investigator considers four basis standards of survey questionnaire. They are; Mode of presentation of items in the questionnaire, Common questions for all individual respondent, Ability to respond the items by the respondents and Willing to respond the items in the questionnaire.

Considering above all discussions of Good (1945), Glass and Hopkins (1984), Borg and Gall (1989) and Shields, Patricia and Rrangarajan (2013), the investigator has adopted the descriptive survey method to assess the leadership behavior and teaching competencies of Principals in College of Education based on the requirements of her study that questionnaire and analyzing correlations between two variables by using tests such as correlation, regression or multiple regression analysis.

3.12 Description, Development and Construction of Leadership Behavior and Teaching Competencies Scale Used in the Study

A successful research’s essential ingredient in the tool relevant data to find a solution is collected with a suitable tool. So, selection of tool is an important process that has to be carried out. In Indian and foreign context, there are various tools available to collect the
necessary data for a research study. The tool/questionnaire is a set of printed or written questions with a choice of answers, devised for the purposes of a survey or statistical study.

A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. Although they are often designed for statistical analysis of the responses, this is not always the case. The questionnaire was invented by the statistical society of London in 1838 (Gault, 1907).

A successful research’s essential ingredient is a tool. Relevant data to find a solution is collected with a suitable tool. So selection of tool is an important process that has to be carried out. Both in Indian and foreign context, there are various tools available to collect the necessary data for a research study. A researcher can select suitable tool for his/her study. In case if there is no tool available it is advisable to prepare necessary tools which are appropriate for the study. There are so many researchers conducted in formal and non-formal education. Major tools used in research studies are rating scale, interview, questionnaire, critical incident blanks, observation, attitude scale etc.,

A researcher can permit to select a suitable tool for his or her investigation. In case, if there is no suitable tool available, the investigator has to prepare a required and necessary tool which is appropriate for the study (Arunachalam,2004; Gopal, 2010; Vijayan, 2011; Moorthy, 2011, Periyasamy, 2011 and Alli, 2012).

As warranted by the survey method, questionnaire is used in the present study to collect relevant data. To study the leadership behavior and teaching competencies of Principals in College of Education is developed and validated by the investigator herself.

Keeping this in mind, the investigator followed to construct the leadership behavior and teaching competencies scale for the principals (LB & TC Scale) of College of Education have been discussed in detail hereunder.

**Pilot Stage**

Leadership Behaviour Descriptive Questionnaire of Mine Snear (2009), Critical Leadership Behaviors Assessment Scale of Hopkin Jeff (2011), educational leadership assessment scale of Shashi Wanja (2014) have been considered for the development leadership behavior and teaching competencies scale for principals (LB & TC Scale) of College of Education for the assessment of leadership behaviours.

The assessment of Gonzalez and Lopez (2010), Goteti Himabindu (2012), Kanupriya Bakhru, Seema Sanghi and Medury (2013) and Thaer Issa Tawalbeh and Nasrah Mohamed Ismail (2014) on teaching competencies have been considered for the development of
leadership behavior and teaching competencies scale for the principals (LB & TC Scale) of College of Education for the assessment of teaching competencies.

The assessment technique of Arul Lawrance (2015) has been considered for the development of leadership behavior and teaching competencies scale for the principals (LB & TC Scale) of College of Education for the assessment of both leadership behaviours and teaching competencies.

Statements to measure the leadership behavior and teaching competencies of Principals in College of Education are formulated and a draft pool of 58 and 42 statements respectively is developed with a five point scale by the researcher by making use of the above reviewed researches. The leadership behavior (42) statements are assigned with Always (A), Frequently (F), Occasionally (O), Seldom (S) and Never (N) with a weight age score of 5,4,3,2 and 1 respectively and teaching competencies (58) statements are assigned with very often, often, Undecided, sometimes and Hardly ever with a weight age score of 5,4,3,2 and 1 respectively. The negative statement items were scored reversely.

Care was taken to state that the 58 and 42 statements representing leadership behavior and teaching competencies of Principals in College of Education respectively are given to a panel of experts consisting of education, educational psychology and educational administers. In addition to the expert panel, it is given to teacher educators with a request to point out the relevance. Further the same is given to Principals in College of Education for try outs. Based on the expert panels’ views, teacher educators’ comments and the Principals in College of Education response, the addition and omissions were made by the investigator in the statements.

Finally 51 and 38 items representing leadership behavior and teaching competencies of Principals of College of Education respectively are given weight age and it was applied with item analysis for finalizing of final format and rest of the items 7 and 4 representing leadership behavior and teaching competencies are omitted.

**Item Analysis**

Item analysis is a general term that refers to the specific methods used in education to evaluate test items, typically for the purpose of test construction and revision. It is a process which examines students response to individual test item (questions) in order to assess the quality of those items and of the test as a whole. (Arunachalam, 2004).
The format consisting of the 51 and 38 items representing leadership behaviour and teaching competencies of Principals of College of Education respectively from the pilot stage is administered to 30 Principals of College of Education for item analysis.

For item analysis, the point bi-serial correlations are computed. The criterion of the co-efficient of correlation, being significant at 0.001 levels is fixed for the inclusion of an item in the final list. Out of 51 and 38 co-efficient of correlation, 41 and 30 items are significant at or beyond 0.001 levels. The items which failed to differentiate between inferior and superior trainees are not included in the final form of the leadership behaviour and teaching competencies scale. Out of 51 and 38 leadership behaviour and teaching competencies statement items, 41 and 30 items representing are finally selected on the basis of the item analysis. Finally, 41 and 30 leadership behaviour and teaching competencies statement items are taken into the final format of the leadership behaviour and teaching competencies scale. The selected and deleted item statements with ‘r’ – values computed in the item analysis used in the study is appended as Appendix-II. The Leadership Behavior and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education constructed by the researcher has been taken by the investigator for his leadership behavior and teaching competencies for Principals in College of Education. Further the reliability and validity of the Leadership Behaviour and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education constructed by the researcher has also been established and it is presented under reliability and validity headings.

3.13 Reliability of the Leadership Behavior and Teaching Competencies Scale of Principals (LB & TC Scale) of College of Education

A test is reliable to the extent that it measure accurately and consistently from one time to another (Best, 1977). If an instrument is unreliable, the information attained is ambiguous, inconsistent and useless (James and Sally, 1984). So, it is necessary to establish the reliability and validity of the tools to be used in any study.

Henry, E. Garrett and WoodWorth (1966) described four methods of establishing the reliability of a test. They are : a) Test-retest method, b) Alternative or Parallel forms c) Split-half method d) Rational equivalence method and e) Kuder’s Richardson Method (K-R-20).

In this study, the Test- Re-test method, Spilt – Half Method and Kuder Richardson Method (K-R-20) is used to establish the reliability of the Leadership Behavior and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education used in the study.
The final format of the Leadership Behavior and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education was given to 30 principals of college of education for establishing the reliability of the tool. After 25 days, again the LB & TC Scale is administered.

To identify the Leadership Behavior, against each statement of LB & TC Scale, Always (A), Frequently (F), Occasionally (O), Seldom (S) and Never (N) with weight age score of 5,4,3,2 and 1 respectively are given. To identify the Teaching Competencies against each statement of LB & TC Scale, Very often, Often, Undecided, Sometimes and Hardly ever with a weight age score 5,4,3,2 and 1 respectively are given. The negative statement items were scored reversely.

The obtained data from first administration and second administration have been used of establishing reliability of the tool. The data obtained were subjected to SPSS-22 package and the following reliability values were obtained.

The reliability of the Leadership Behavior and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education by using Test-re-test method is 0.765.

The reliability of the Leadership Behaviour and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education by using Spilt- Half Method is 0.713.

The reliability of the Leadership Behaviour and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education by using Kunder Richardson Method (K-R-20) is 0.699.

The obtained r-values of the Leadership Behaviour and Teaching Competencies Scale for Principals (LB & TC Scale ) of College of Education to the Leadership Behaviour and Teaching Competencies is high (0.765,0.713 and 0.699) indicating its reliability for the study.

3.14 Validity of the Leadership Behavior and Teaching Competencies Scale for Principals (LB& TC Scale) of College of Education

Validity of the research tool or procedure that measured what it purports to measure. John W. Best (1989) quoted that validity is the quality of a data gathering instrument or procedure that enables it to measure what it is supported to measure. The index of reliability is sometimes taken as a measure of validity (Garret, 1981). For ascertain the validity, the investigator used content validity, face validity and intrinsic validity.
Content Validity

Content validity explains whether the items in a test are constructed around appropriate content. Best (1981 & 1977) measures that there is no numerical way to express the content validity, but it can be assessed by a panel of experts in the field of who could judge its adequacy.

The statement in the Leadership Behavior and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education were listed based on the review of related literature and consultation with related field experts from education, educational psychology and educational administration. Their suggestions have been taken into account to enhance the content and quality of items. Therefore, it can be said that the educationists, educational psychologists and educational administrators used to identify the Leadership Behavior and Teaching Competencies by the investigator possess content validity.

Face Validity

This is the term used to characterize test materials that appear measure what test the author desires to measure. That is, the test contains items that seem to be related to the variable being measured. The investigator here assured that by the opinion of the panel experts, who are familiar with the subject content, the statements for the assessment of Leadership Behavior and Teaching Competencies by using Leadership Behavior and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education do possess face validity.

Intrinsic Validity

Intrinsic validity is stated that as how well obtained scores measured the tests true score component. The square root of the reliability values of the checklist means its intrinsic validity. The obtained intrinsic validity of the for the assessment of Leadership Behavior and Teaching Competencies by using Leadership Behavior and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education is (0.875, 0.844 and 0.836) high and validated.

3.15 Final Format of the Leadership Behavior and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education

The final format of the Leadership Behavior and Teaching Competencies Scales for Principals (LB & TC Scale ) College of Education consists three parts via in Part – I, the
personal variables is given such as age, sex, community, educational qualification, subject, marital status, monthly income, years of experiences and ailments followed by the Leadership Behavior and Teaching Competencies Scale as Part – II and Part – III respectively.

The final format of the tool used in the study is appended as Appendix – I.

3.16. Scoring Procedure

The scoring procedure for the tools used in the present investigation is:

The Leadership Behavior and Teaching Competencies scale for Principals (LB & TC scale) of College of Education of 41 and 30 Leadership Behavior and Teaching Competencies statement items. The subjects required to respond to each items in term of identifying the Leadership Behavior, against each statement, Always (A), Frequently (F), Occasionally (O), Seldom (S) and Never (N) with a weight age score of 5, 4, 3, 2 and 1 respectively are given. To identify the Teaching Competencies, against each statement of LB & TC Scale, Very often, Often, Undecided, Sometimes and Hardly ever with a weight age score of 5, 4, 3, 2 and 1 respectively are given. The negative statement items were scored reversely. The item statement number 3, 5, 6, 11, 16, 20, 23, 25, 26, 28, 32, 35, 39 and 41 are negative in leadership behavior and 4, 9, 14, 18, 20, 23, 26, 28 and 30 are negative in teaching competencies statement items.

3.17 Locale and Sampling Procedure

The locale for the present investigation is: Tamil Nadu

Tamil Nadu is one of the 29 states of India. Its capital and largest city is Chennai (formerly known as Madras). Tamil Nadu lies in the southernmost part of the Indian Peninsula and bordered by the union territory of Puducherry and the South Indian states of Kerala, Karnataka, and Andhra Pradesh. It is bounded by the Eastern Ghats on the north, by the Nilgiri, the Anamalai Hills, and Kerala on the west, by the Bay of Bengal in the east, by the Gulf of Mannar and the Palk Strait on the southeast, and by the Indian Ocean on the south. It also shares a maritime border with the nation of Sri Lanka.

For the purpose of the assessment of the Leadership Behaviour and Teaching Competencies of Principals in College of Education, the investigator adopted following sampling procedures:

The area of the study for of the assessment of Leadership Behaviour and Teaching Competencies of Principals in College of Education is Tamil Nadu.
The Government of Tamil Nadu Enacted Act No.(33) of 2008 to provide for the establishment and incorporation of Teachers Education University in the State of Tamil Nadu for promoting excellence in teachers education. All the Principals of 657 affiliated colleges of Education including Government, Government Aided and Self-Financing Colleges in the whole of the Tamil Nadu are taken as Sample for the investigation under purposive sampling technique.

3.18 Data Collection

The Leadership Behavior and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education were administered to the sample of 657 Principals of Colleges of Education including Government, Government Aided and Self-Financing Colleges in the whole of the Tamil Nadu State under Tamil Nadu Teachers Education University in the State of Tamil Nadu. The investigator has send the Leadership Behavior and Teaching Competencies Scale for Principals (LB & TC Scale) of College of Education by post and courier with a request to fill the same with return envelope. In addition to that the investigator made personal request over phone to all the principals for filling the data. After a month period, all the principals sent back the filled in Leadership Behavior and Teaching Competencies Scale to the investigator by using the enclosed envelop.

3.19 Statistical Techniques Used In the Study

The data thus obtained were analyzed by using appropriate statistical techniques.

In descriptive analysis, the number, mean, percentage and standard deviation have been calculated.

t-test, F test, co- relational test and step by step multiple regression test have been applied in differential analysis. The SPSS-22.0 has been applied to compute all calculations for this investigation.

3.20 Conclusion

The Result and Discussions is followed in the present study is discussed in the next chapter-IV.