CHAPTER 2

REVIEW OF CONCEPTUAL AND EMPIRICAL FOUNDATIONS OF THE STUDY

Conceptual foundations of the study is based on the theoretical knowledge contributed by number of educationists, psychologists and sociologists. Empirical evidences provided through researches conducted by such social scientists, constitute the empirical foundations of the study. Studies on the attitudes toward research have not been conducted that frequently as is the case for the studies on problems. Related research studies done in India and abroad, are reviewed under this section. This chapter has been organised under the following sub-headings :

2.1 Review of conceptual foundations of the study.

- 2.1.1 Educational foundations
- 2.1.2 Psychological foundations
- 2.1.3 Sociological foundations

2.2 Review of empirical foundations of the study.

- 2.2.1 Studies regarding factors hindering/accelerating the research output.

2.2.2 Studies regarding attitudes toward research.

Conclusion

2.1 Review of Conceptual Foundations of the Study

The conceptual foundations of this study rests on educational, psychological and sociological foundations.

2.1.1 Educational Foundations

The educationists try to find out solutions of problems which hinder the educational process by continuous research. A 'problem' as defined in the dictionary is, a matter that causes worry or perplexity. In general, a problem may be thought of as factors, persons, situations or any other objects, psychological or physical, which make a person unable to carry on things as he desires. If an educational institution wants to flourish and achieve its objectives, it must provide the best working conditions, motivation and psychological and physical satisfaction to its teachers.

A teacher in an Agricultural University is expected to perform three types of functions : Teaching, Research and Extension - which is a tripod for any Agricultural

University. Regarding the research done by teachers, it has been pointed out that research output in quantity and quality should be increased.

It may be assumed that there may be some problems which impede the research output of teachers in Agricultural Universities. The present study is an attempt to study the problems of teachers conducting research. Many times the higher authorities perceive that the teachers have all types of facilities, but even then they do not want to carry out research. On the other hand, by actual experience, the teachers face certain problems which in reality make their research output low. The problems related to conducting research will be studied in the following categories :

1. Physical
2. Psychological
3. Sociological
4. Problem due to administration duties
5. Personal

2.1.2 Psychological Foundations

It is almost 78 years, that many attitude researches have been conducted to show whether the attitudes are related to one's overt behaviour. A

number of psychologists are of the opinion that with the knowledge of attitudes, the behaviour can be predicted. Before, the studies showing the relationship between attitudes and behaviour and not showing the relationship, are reviewed; a brief historical review of the concept of attitude is presented here.

2.1.2.1 The Concept of 'Attitude'. One of the earliest psychologists to employ the term 'Attitude' was Spencer (1862) who wrote :

> Arriving at correct judgements on disputed questions, much depends on the attitude of mind we preserve while listening to, or taking part in the controversy: and for the preservation of a right attitude, it is needful that we should learn how true and yet how untrue, are average human beliefs (Vol.1, pp.1-i).

> The forces of the mind may have got into a set track of attitude, opposing a certain resistance as someone subject engrosses our attention, so that even during a break in the actual current of thoughts, other subjects are not entertained (Bains, 1868, p.158).

> An attitude is readiness for attention or action of definite sort (Baldwin, 1901-1905).

> The attitude, or preparation in advance of the actual response, constitutes an important determinant of the ensuring special behavior. Such natural settings, with their accompanying conscientiousness, are numerous and significant in social life (Allport, F.H., 1924, p.320).

An attitude is a tendency to act toward or against something in the environment which becomes thereby a positive or negative value (Bogardus, 1931, p.62).

Attitude as the affect for or against a psychological object (Thurstone, 1932).

Attitudes are literally mental postures, guides for conduct to which each new experience is referred before a response is made (Morgan, 1934, p.47).

Attitude is a learned pre-disposition to respond to an object or class or objects in a consistently favourable or unfavourable way. This bipolarity in the direction of an attitude (favourable vs the unfavourable) is often regarded as the most distinctive feature of the concert which is unidimentional (Allport, 1935).

Attitude is a learned pre-disposition to respond (Doob , 1947).

2.1.2.2 Attitudes and Behaviour. Psychologists have attempted to investigate the relationship between attitudes and behaviour. As Fishbein (1967, p.477) puts it:

> More often than not psychologists have attempted to predict some behaviour from some measure of attitude and found little or no relationship between these variables.

Kiesler (1969) stressed that attitudes contribute to overt behaviour. If we hold the stimulus conditions constant, individual differences in behaviours should correspond to individual differences in attitudes. By this reasoning all behaviours are measures of attitudes.

DeFleur and Westie (1958) in their study on 'verbal attitudes and overt acts': an experiment on the salience of attitudes, used summated differential scale which was administered to 250 students in introductory sociology classes. The findings revealed that verbally expressed attitudes were significantly related to the direction of the action taken by the subjects.

Thus, it is assumed that attitudes and behaviours are closely related in natural settings. Therefore, from attitude study, the behaviour could be predicted. Nonethe-less there are several studies often cited to demonstrate an inconsistent relation between attitude and behaviour.

LaPiere (1934) took several extensive automobile trips with a Chinese couple to find out the sentiments toward Chinese in U.S.A. Unknown to his companions, he took notes of how travellers were treated, and he kept a list of Hotels and Restaurants where they were served. Only once they were denied service and the author judged their treatment to above average in 40% of the restaurants visited. Later LaPiere wrote to the 250 Hotels and Restaurants on his list asking if they would

accept Chinese guests. Over 90% of the 128 proprietors responding indicated they would not serve Chinese inspite of the fact that all had previously accommodated Lapiere's companions.

The study highlighted that it was impossible to make direct comparison between the reactions secured through questionnaires and from actual experiences.

A brief summary of the studies of attitude related/ not related to behaviour has been shown in Table 2.

In short, there are data on both sides of the question. Some studies seem to indicate no relationship between behaviour and attitudes, whereas others indicate a positive relationship. It may be generalised that it is possible to predict behaviour from attitudes but without a great deal of precision. Because a person's behaviour is the sum of many forces (Young, 1961). Beliefs,values, standards, attitudes, interest result in a certain type of behaviour.

Beliefs and attitudes are closely related. According to Katz (1967) all attitudes are beliefs but not all beliefs are attitudes. Beliefs are hypotheses concerning

TABLE 2

SUMMARY OF STUDIES OF ATTITUDES RELATED/NOT RELATED TO OVERT BEHAVIOUR

Investigators	Subjects	Attitude Object	Overt Behaviour	n	Strength of relationship	Remarks
LaPiere (1934)	Hotel and Restaurant Proprietors.	Chinese People	Providing services to Chinese	128	9% were positively related to behaviour	Attitudes were not related to behaviour
Corey (1937)	College students	Cheating	Cheating on self graded examinations	67	r = 0.02	Negligibly related
Newton and Newton (1950)	Maternity ward patients	Breast feeding	Success of breast feeding judged from amount of breast milk taken by the infant.	91	74%	Related
Bernberg (1952)	Aircraft plant employees	One's job	Job absence	890	r = 0.01	Negligibly related
Potter and Klein (1957)	Maternity ward patients	Breast feeding	Observed affection towards infant and efforts to facilitate feeding at time of nursing.	25	r = 0.65	Related
Dean (1958)	Industrial employees	Local labour union	Attendence at local labour union meetings	248	25%	Not related
Defleur and Westie (1958)	College students	Negroes	Willingness to have picture taken with Negro and widely distributed.	46	70% (+)	Related
Vroom (1962)	Oil company employees	One's job	Job absence	489	r = 0.07	Slightly related
Himmelstein and Moore (1963)	College students	Negroes	Immitation of Negro model's petition signing	51	47% (+)	Not related
Linn (1965)	College students	Negroes	Willingness to have picture taken with Negro and widely distributed	34	65% (+)	Related
Green (1968)	College students	Negroes	Willingness to have picture taken with Negro and widely distributed	44	r = 0.43	Related
Wicker (1969)	College students	Participating as a subject in psychological research	Commitment to participate and actual participation as a subject in psychological research.	257	r = 0.17	Related

the nature of an object or class of objects and the types of actions that should be taken with respect to them (Fishbein, 1967, p.257).

The researches of Rosenberg (1956, 1960), Zayonc (1954), Fishbein (1963, 1965a, 1965b) and others; has demonstrated that an individual's attitude towards any object is a function of his belief about the object and the evaluative aspect of those beliefs.

Implications for the Study :

It is theorised that teachers having highly favourable attitudes towards research will have more research out-put than those having less favourable attitudes. Research out-put is termed as the overt behaviour of the teacher related to attitudes towards research. The study intends to add to the existing store of knowledge whether the attitudes are related to the behaviour or not; whether the behaviour could be predicted from the knowledge of attitudes.

2.1.3 Sociological Foundations

Traditionally teachers and administrators have a major share in the continuity and stability of an

educational institution. They are closely bound into the educational system which can exert social control at many points. Therefore, teachers tend to respond positively or negatively to events and issues, depending upon the conditions.

In sociological terms, an Agricultural University itself is a little society with its specified norms, definite social positions and role marked out in advance; authority and formal sanctions. The University has its explicit goals and official ways of achieving them. The authorities try to coordinate the activities especially of teachers and administrators so that an environment is created which will facilitate the participation of teaching, research and extension.

Institutional environment is affected by both administrators and teachers. The administrators in the Agricultural University who are Heads of Departments and Deans of the Colleges affect the environment in the Departments/Colleges. Their behaviour which may be friendly, authoritative, encouraging, considerate to the staff, hindering/accelerating their work, contribute

tremendously to the environment of the Department/ College.

> The most effective educational institutions are able to win a sense of personal commitment on the part of teachers. When the work the teachers do, the initiative they display and loyality they give, go beyond the minimum requirement of keeping a job- the morale is high (Broom, p.367).

It is agreed upon by the sociologists that every organization should (Broom, 1968) :

1. Provide incentives to its members so as to win and sustain their participation ;
2. Set-up an effective system of communication;
3. Exercise control, so that activities will be directed toward achieving the aims of the organization;
4. Adapt itself to external conditions, that may threaten the existence of the organization or its policies, that is to maintain security.

If these requirements are applied to an Agricultural University, the social relations among the teachers, administrators and authorities have to be consistent with these requirements, so that the University can perform its functions successfully.

It cannot be assumed that teachers are solely interested in helping the University to reach its goals. Their personal needs and concerns are also important. To satisfy a need or to reach a certain goal, the teacher has to follow a certain direction of action which will result in satisfaction. The environment of the Department/College and teacher's satisfactions are related. It is assumed that a productive environment can definitely influence the research output of the teacher.

The present investigation is an attempt to find out the relationship between the social environment (which will be studied in 3 aspects : (1) Dean's/Head's consideration to its staff members; (2) Dean's/Head's emphasis on research production as perceived by the teachers of that particular college/department; (3) Degree of intimacy among staff members as perceived by them). It is hypothesised that when the social environment is informal, friendly, motivating and encouraging, the research output of the teachers will be more.

A teacher may be highly motivated; the environment may be encouraging; attitudes may be highly favourable

toward research; and still the research output may not be the optimum. The possibility of some intervening factors impeding the research work of the teachers, are there; which the present study also aims to find out.

2.2 Review of Empirical Foundations of the Study

2.2.1 Review of Studies regarding Factors Hindering/ Accelerating the Research output of Teachers

A study was conducted by Meltzer (1949) to find out the academic influences upon publication productivity. The sample yielding the data for the study was drawn from persons teaching at 30 leading graduate centres. A questionnaire which was sent to nearly 1100 persons instructing in 5 social science fields at these institutions elicited 266 usable returns.

The study highlighted that following factors helped to increase the productivity of the scientist: ability, ambition, emotional stability, freedom from economic difficulties, encouragement by relatives, friends or instructors, good working habits, conception of one's role as an academician. Meltzer emphasised that certain conditions whether psychological or situational or both which influence the early professional activity of social scientists and their productivity, tend to influence

their later professional career.

Jerome (1951) studied the academic influences upon publication productivity of scientists. He utilised the sample and data collected by Meltzer (1949). Some additional information was gathered for the study. The 'productivity' was studied in two aspects : (1) individual's publication, (2) repute or recognition.

The results of the study revealed that statistically there were no significant relationships with regard to either measure of productivity with the following research conditions :

1. Adverse research conditions : Lack of appreciation of the importance of research, imperfect organization of instruction, multifariousness of university studies, poor facilities (other than clerical), minor duties imposed by teaching, inter and intra-departmental politics, total number of adverse research conditions.
2. Division of time
3. Academic interests
4. Personal interference with research; personal short-comings (including family responsibilities), poor general health and vitality, inability to organize time and interest in other matters.

Sibley (1951) undertook an investigation with teachers and researchers in New York to find out the total situations which facilitated or hampered the efforts of individual scholars and scientists to make new discoveries.

Some of the problems encountered by the teachers in doing research found out by the study were : Undesirably heavy loads of teaching and administrative duties, lack of funds, part-time employment, increased competition from non-academic agencies for the services of scholars and scientists, research of scholars and scientists, research problems not of research worker's interest but of the interest of the funding agency, inadequate recognition and the view that the time devoted to research by a teacher constitute a net deduction from the resources devoted to a teacher's teaching.

To find out the internal barriers facing Negro researchers, a survey was conducted by Walker (1956). An opinionnaire asking for opinions about barriers to independent research activities was sent during the 1952-1953 school year to 90 Negro College teachers located

in 13 out of 17 States with separate schools for Negroes and the districts of Columbia. Sixty percent of the Negro educators responded.

The findings of the survey concluded that major problems hindering the research work were : Lack of funds for research and too heavy work loads. Other problems which were stated by the teachers were : Lack of facilities, failure of administration to encourage research activities, lack of training in research methodology, and lack of intellectual environment in the College. The environmental factors affecting the research output included lack of privacy, jealousy on the part of co-workers' and lack of enthusiasm on the part of the college administration.

Babchuk and Bates (1962) in their investigation on 'Professor or Producer' proposed to find out the productivity of the teachers. The sample comprised of 262 sociologists receiving Ph.D. in the period 1945 through 1949. Two hypotheses formed for the study, were tested : (1) high productivity is related with teacher's membership of the American Sociological Association and affiliation with a major University, (2) low productivity

is related to less affiliation to the Association and more affiliation with 4 year colleges (minor universities).

The findings of the study pointed out that the factors of sex and religion were found to be related to the person's productivity and membership in the Association. Women were far less prolific than men and were over represented in the low publication categories. Specifically only 2 out of 37 (5%) women in the sample had published more than 5 articles; this contrasts with 55 out of 205 men (24%) in the sample who had published more than 5 articles. In addition, women were not associated as socialogists with major University. The hypotheses formulated were accepted.

Crane (1965) undertook an investigation to find out the productivity and recognition of scientists located at major and minor Universities. The sample was comprised of 150 scientists from 3 Universities. All the scientists were interviewed who belonged to 3 disciplines: Biology; Political Science and Psychology. The data was compiled and various statistical tests were employed.

It was found that factors which affected the productivity of scientists at major and minor Universities were almost

common. Research environment, the nature of the rewards expected and obtained for scientific work, recognition, motivation and good judgement of the researcher were some of the crucial factors affecting the research productivity. Also a setting in which a scientist received his training had more effect on his later productivity than the setting in which he worked afterwords.

Fincher (1968) conducted a study to investigate the faculty perceptions of the research environment. The main objective of the study was to find out the environmental factors which impede/increase the research productivity as perceived by the teachers themselves. 81 questionnaires were distributed to full time faculty members of the college of arts and science. Only 52 questionnaires were received from 52 teachers.

The teachers perceived the rate of satisfactoriness below average or rather very poor regarding facilities as research funds, clerical assistance, laboratory and technical assistants, the college's purchasing system, equipment and physical facilities, time for planning and evaluation, salaries, publication outlets, administrative

policies, editorial assistance, funds for travel and adjustment in teaching lead, which affected their research output.

The investigation undertaken by Maini and Nordbeck (1969) on 'critical moments in research' employed semi-structured interviews to gather information about critical moments in research work of natural scientists.

The main findings of the study showed that the positive moments which induced motivation and enforced interest in the research work were : research problems decided by the research workers, informal interpersonal relations and satisfaction of the research workers.

The negative moments which resulted in the decline of interest in the research work, were : when certain methods failed, language problem, difficulties in research report writing and lack of competent supervision. Lack of physical facilities like laboratory, chemicals, equipment also hindered the research work of natural scientists.

The younger and less established researchers reported factors of heavy work load and many curricular and co-curricular activities; because of which their research work was hindered. The older and established researchers felt that a major portion of their time was taken up by non-creative and non-productive paper-work and similar other duties.

Gatson (1970) conducted a study to find out whether reward system has any effect on research productivity. Various variables and their relationship with research productivity were also studied. The data were collected by interviews from 203 scientists.

The findings of the study showed that chronological age and professional age were found to be related with research productivity. It was also found that there was a strong relationship (r = .69) between productivity and recognition of the researcher.

Stalling and Singhal (1970) undertook a study with the purpose to investigate the relationship between teaching effectiveness and research productivity and various other selected variables. 128 instructors from University of Illinois and 121 from Indiana University

constituted the sample of the study. The instructors were of the ranks of professors, associate professors, assistant professors and teaching assistants.

The findings put forward that the academic rank of the instructor was found to be significantly correlated with research productivity. All other variables like age, field of teaching , university were insignificantly related to research productivity.

Maini and Nordbeck (1971) conducted another study on 'Motivation for Research'. The data were collected from a sample of established researchers, Ph.D. and Ph.D. candidates from an interdisciplinary and international group of scientists.

The study explored the factors which motivated the scientists to do research. The factors were : Intellectual stimulation i.e. personal involvement, curiosity, fascination and level of task involvement of love of investigating; commitment to research; desire for an original contribution and financial gains.

Blackstone and Fulton (1975) conducted an investigation to find out whether sex and age were related with publication productivity of University teachers of two countries: United

States and United Kingdom.

The findings revealed that in all the subjects and in both the countries, men turned out to have published more articles and books than women. Among men and women belonging to the same age group, the men were found to be more prolific than women. In some subjects, such as humanities, the difference was very substantial with men publishing 2-3 times more than women. Thus, age and sex were found to be related with publication output.

The study of Beam (1977) proposed to find out the factor related with research productivity of graduate faculty members in Home Economic Units. The sample was divided into two groups (1) non-doctoral group and (2) doctoral group.

In the non-doctoral group, the findings showed that work load of a teacher was inversely correlated with research productivity of a teacher. There was a significant relationship between research productivity and professional developmental activities and a significant inverse correlation between research productivity and higher educational experience. A significant positive correlation was found between research productivity and research climate.

In the doctoral group the research productivity was significantly related with work load of a teacher. No significant relationship was found for research productivity with educational experience and research climate.

The investigation undertaken by Crow (1978) sought to explore relationship between publication productivity of University teachers, leadership of departmental chairman and both faculty perceptions and characteristics relating to productivity. A major concern of the study was to find out the relative effect of the leadership behaviours of departmental chairman upon research productivity of teachers. The behaviours defined in the study as modified subscales were : (1) initiation of structure, (2) consideration (3) production emphasis.

The findings of the study presented that only one behaviour i.e. chairman's emphasis on production was significant in predicting the productivity in the applied disciplines only. Perception of teachers regarding chairman's emphasis on production showed a more clear relationship with research productivity.

McGee (1978) conducted his doctoral study with main purpose to ascertain those institutional factors which were

perceived by faculty in doctoral level research as deterrants to their research and creative activities. Three hundred randomly selected faculty members were surveyed from department/school of education (100) music (100) and history (100).

The findings revealed that the major areas of constraints identified by faculty as substantial deterrants to the pursuit of their research and creative interests, clustered in the areas of: funding i.e. early support for research ventures, administration i.e. quasi administrative duties, unscheduled interruptions; support staff i.e. inadequate graduate student assistants and secretarial help and students i.e. student interruptions and teaching loads.

2.2.2 Review of Studies regarding Attitudes Toward Research

A small study was conducted by Shumsky (1958) to explore teachers' attitudes toward research. An 'Attitude finder' was prepared with 5 point scale. The 'attitude-finder' was administered to 25 teachers (graduate students). The attitudes toward research were measured in 3 aspects; teacher's feeling of confidence

in doing or reading research, the importance of research to teachers and feelings toward research course.

The findings presented that majority of the teachers expressed positive attitudes toward research. Teachers also felt that research was a practical activity for them.

Bengel (1969) studied teachers' attitudes toward research as related to professional commitment. Attention was given to the development of an attitude scale to discriminate among teachers' research attitudes in 3 areas: awareness and understanding of research, applying research results and initiating and doing classroom research. Selected personal background variables like teaching experience, level of education, age, sex and marital status related to research attitudes were also explored. Data were collected from 323 secondary school teachers.

The findings from this study revealed that research attitudes were found to be independent of teaching experience, level of education, and sex and marital status. It was found that, however, age did influence the research attitudes i.e. teachers over the age of

40 evidencing less positive research attitudes than those teachers under the age of forty.

2.3 A Resume of Related Research Studies

It was found in several studies that teaching loads, administrative duties, inadequate recognition and motivation, the institutional environment and administrative policies, personal limitations, student interruptions, lack of time, lack of funds, lack of physical facilities, lack of clerical assistance, were the major problems faced by teachers in conducting research (Meltzer, 1949; Sibley, 1951; Walker, 1956; Fincher, 1968; Maini and Nordbeck, 1969, McGee, 1978).

The factors accelerating research work of teachers were : satisfaction, motivation, good institutional environment, researcher's own interest, intelligence, judgement and ability, reward and recognition. Chairman's emphasis on research production was found to accelerate the research output of teachers (Grow, 1978).

Age, Sex, religion (Babchuk and Bates, 1962; Blackstone and Fulton, 1975) recognition of the researcher (Gatson, 1970) academic rank (Stalling and Singhal, 1970) were found to be related with research productivity.

Inverse correlation was found (Beam, 1976) between research productivity and work-load and higher educational experiences. Some studies (Shumsky, 1958; Bengel, 1968) revealed that teachers possessed positive attitudes toward research and only age as a variable was found to be correlated with attitudes of teachers. Table 3 indicates the summaries of the research studies reviewed under this section.

TABLE 3

SUMMARY OF THE REVIEWED STUDIES REGARDING FACTORS HINDERING/ACCELERATING THE RESEARCH OUTPUT OF TEACHERS AND TEACHERS' ATTITUDES TOWARD RESEARCH

Sr. No.	Investigator/s	Objective	Sample	Findings
1.	Meltzer (1949)	To find out academic influences upon publication productivity of teachers.	266 out of 1100 mailed questionnaires.	The factors help to increase the productivity were psychological, personal, motivation, and environmental.
2.	Jerome (1951)	To find out factors influencing the productivity of teachers	266	No effect of the following factors on research productivity: Adverse research conditions, division of time, academic interest and personal interferences.
3.	Sibley (1951)	Situations which hampered or facilitated research work of scientists.		Problems encountered were : Teaching Loads, administrative duties, lack of funds, inadequate recognition
4.	Walker (1956)	To find out internal barriers facing Negro researchers.	54 out of 90 mailed questionnaires.	The factors finding research were lack of funds, too heavy workloads, lack of facilities, motivation, personal and enviromental.
5.	Babchuk and Bates (1962)	To find out the factors effecting the research productivity of teachers.	262	Sex and religion were found to be related to productivity.
6.	Crane (1965)	To find out the productivity of scientists.	150	Factors effecting the research productivity were research; environment, nature of reward motivation, recognition and good judgement of the research worker
7.	Fincher (1968)	To find out the environmental factors which impede/increase the research productivity of teachers.	82 questionnaires distributed, 52 received.	Factors impeding research were lack of research funds, clerical assistance, laboratory and technical assistants physical facilities, and administrative policies.
8.	Maini and Nordbeck (1969)	To find out the critical moments in research of scientists.		Positive factors accelerating research were : research problems of the researcher's interest and his satisfaction and informal inter-personal relations, negative factors impeding research were personal limitations, lack of physical facilities, heavy work load and administrative responsibilities.
9.	Gatson (1970)	To find out the effect of certain variables and rewards on research productivity.	Interviewed 203 scientists.	Chronological age, professional age and recognition were found to be related with research productivity.
10.	Stalling and Singhal (1970)	To find out the relationship between selected variables and research productivity.	249 teachers.	Except academic rank of a teacher, all other variables were insignificantly related with research productivity.
11.	Maini and Nordbeck (1971)	To study factors motivating scientists for research.		The factors motivating the researchers were : intellectual. psychological, sociological. rewards.
12.	Blackstone & Fulton (1975)	To find out whether sex and age were related to publication productivity.	Teachers	Sex and age were found to be related with publication productivity.

(Continued...)

(Table 3 continued...)

Sr. No.	Investigator/s	Objectives	Sample	Findings
13.	Beam (1976)	To study the factors related with research productivity.	Teachers	Inverse correlation between research productivity and (1) work-load, (2) higher education experience. Positive correlation between productivity and research environment and professional developmental activities.
14.	Crow (1978)	To explore the relationship between research productivity and certain behavior pattern of the Chairman.	Teachers	Chairman's behaviour i.e. his emphases on research productivity was related to research productivity.
15.	McGee (1978)	To ascertain the factors deterrants to the creative activities of teachers.	500 Teachers	The factors hindering research work : Lack of funds, administrative duties, lack of supportive staff, teaching loads and student interruptions.
		Studies Regarding Attitudes Towards Research		
16.	Shumsky (1958)	To study teachers' attitudes towards research.	25 Teachers	Teachers' attitudes were found positive toward research
17.	Bengel (1968)	To study teachers' attitudes toward research	323 secondary school teachers.	Attitudes of teachers were found to be independent except age of the teacher.