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An Appraisal of the Results of Examination's Boards of Intermediate and Secondary Education in the Province of Sindh, Pakistan

Prof. Dr. Parveen Munshi [*]
Tarique Bhatti[**]

Abstract

The study is carried out to appraise the results of the examinations of the boards of Sindh Province with special reference to the recent initiatives such as introducing different modes of examinations along with the boards' examinations. These initiatives have raised several questions about the creditability of results of the boards. The main objective of the study is to assess the creditability of the results of the examinations of the boards of Sindh province. The subject of the study consisted of 8027 candidates who passed their intermediate examinations from different examination boards of Pakistan and sought admission in the University of Sindh for the academic year 2007.Out of them 7672 candidates who passed pre-entry test and belonged to all the boards of Sindh Province such as Hyderabad Board, Mirpurkhas Board, Larkana Board, Sukkur Board and Karachi Board were included in the subject, Besides this, 200 individuals belonged to education, examination boards, testing agencies, civil society, students and parents from all over the Sindh were also included in the subject. Results showed that the examination system of the board was flawed and it was suggested to improve the examination system through the modern strategies of the evaluation.

Introduction

In Pakistan the low quality of education is one of the major constraints on its development. The critical path to excellence in education passes through the evaluation process. National Education Policy 1979-1982 highlighted: External Examination regarded as the causes of falling

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standard of education. One of the potentially most powerful mechanisms for achieving change in the education is the external examination system, especially examinations taken towards the close of secondary schooling (Eckstein, Noah & Harold, 1992). Minimal use of modern assessment techniques and dependency on traditional learning processes are significant factors in low quality education in the country. Assessment is considered to be one of the most powerful educational tools for promoting effective learning (Assessment Reform Group, 1999 p. 2).

In Pakistan the boards of examinations were established to conduct the Secondary School Certificate and Higher Secondary School Certificate Examinations in the result of Punjab University Commission 1950-52 suggestions. The first Board of Secondary education was established at Karachi in 1950 to conduct examinations. The Karachi board held its first examination in 1951 for which 1461 examinees were registered. Before 1952 examination were conducted by the universities.

In Pakistan general education is divided into three tiers i.e. Elementary Education (grade 1 to 8); Secondary Education (grade 9 to12) and Higher Education (degree oriented) (National Education Policy 1998-2010). The terminal school examination, the Secondary School Certificate (SSC), is conducted in two parts, SSC part I at the end of grade IX and SSC part II at the end of grade X. The SSC certificate is issued on the successful completion of both parts. The Higher Secondary School Certificate (HSC) is issued at the end of grade 12. Now there are 23 public sector boards known as Boards of Intermediate and Secondary Education (B.I.S.Es) these are all non-overlapping regional boards. Students of public, private, NGOs and community based schools sit for these examinations. The main purpose of the examinations conducted by the board was promotion, selection and certification. If the examination stresses the understanding and critical approaches to learning, it is likely that students would adopt deep approaches to learning (Entwistle, 1993)

Examination boards were given the responsibility of ensuring that the curriculum and learning outcomes are properly assessed. “Appropriate assessment preparation activities promote quality, long-term learning. Examinations and assessment bodies the world over should agree that

the best way to promote assessment practices is to help teachers and administrators become aware of what is and is not acceptable practice (Michigan Department of Education, 2005)." There are various shortcomings in examination system, which are driving the quality of education towards, unsatisfactory. Prominent among these are: emphasis on memorization; subjectivity; poor content coverage and administrative shortcomings.

The present examination system encourages students and teachers to adopt an easy way for learning and teaching and to resort to rote learning. Children tend to do better in subjects requiring rote memory but do poorly on basic comprehension and understanding (National Educational Policy, 1992). It is also an impediment in the way of developing a book-reading culture and using libraries for reference purposes. Teachers and students rely only on the board-prescribed syllabus and five-year papers. They do not attempt to create an effective teaching and learning environment in the schools or colleges. The construction of question papers is affected. Similarly The fluctuation in cognitive levels i.e. knowledge, understanding and application, around a major focus on simple recall questions in examinations tends toward rote memorization as an examination strategy. Nevertheless in the absence of a uniform scheme of assessment across the boards, lack of standardization of allocation of marks to cognitive levels brings the credibility of scores and grade into question (Shah and Afzaal 2004-p-20).It has become necessary to check the creditability of the results of the boards. Reliability and validity of examination papers in terms of coverage of curriculum, selection of paper setters, lack of training for the paper setters and examiners, making system dubious (.Greancy and Hasan, 1998).

The above mentioned situation of education in the country created anxiety among the masses regarding the future of their children. This disrepute and low credibility of public examination boards can be highlighted through government sponsored reports and studies, such as: Large scale cheating and other malpractices in examinations have by and large eroded the creditability of public examinations (National Education Policy 1992-2002). "Unfortunately, large scale cheating and other malpractices have by and large eroded the credibility of public examinations. Neither the annual system of examination, nor the

semester system provides a real measure of the achievement of studies….This situation calls for total rethinking and restructuring of examination system at secondary level, and institution of alternative structure (MoE 1994)".

In recent years in our country different modes of examinations have been introduced along with the board's examination. Besides passing intermediate examination, students have to appear and pass another mode of examination known as pre-entry tests for getting admission in all public and private universities. Private examination board has been allowed to function. The Education Sector Reforms 2001-2005 addresses the quality assurance at all levels advocates the examination reforms, setting up of Private Examination Boards and establishment of National Education Assessment System. National Testing Service (NTS) has been launched to conduct tests for admissions in the Professional Colleges and Universities. The National Testing Service will be established to design and administer standardized tests for admission to professional institutions (National Education Policy 1998-2010).

All these moves have raised several questions about the creditability of results of the boards. The education boards are considered solely responsible for the deterioration in the education system. The occurrence of examination irregularities can seriously damage public confidence in the validity and legitimacy of examination results (Glidden, 1996). It is the general thinking in the society that; Why is the need of another testing system felt along with the board examinations? Are the results of boards' examinations not reliable? Is board examination not sufficient for judging the level of achievement of students?

This research study is being conducted to know the causes of introducing different modes of examinations along with the board examination. The research findings will provide clear picture of scores of students in different modes of examinations at different stages.

Objectives of the Study

The following research objectives have been made to solve the problem of the study:

- To assess the results of the examinations of the boards at in the Province of Sindh, Pakistan in terms of
  - **(i)** Comparison of mean percentage marks of students in different boards of Sindh province at different levels.
  - **(ii)** Correlation between the mean percentage marks of the students at different levels.
  - **(iii)** Performance of the students of different Boards in the Pre-entry test.
- To identify drawbacks in the examination system through the perceptions of the experts, teachers, parents and students.
- To suggest recommendations for improvement in the system of boards of Sindh.

Methodology

It is a survey study conducted through the analyzing of data of the pre-entry test 2007 of University of Sindh Jamshoro. And analyze the perceptions of the experts, teachers, parents, and students.

1. The pre-entry test data of 8027 students who passed their intermediate examinations from different boards of examination of the Pakistan and applied for the admission for the academic year 2007, in the University of Sindh were used. Out of them, 7672 students who belonged to all five boards of examinations such as Hyderabad Board, Mirpurkhas Board, Larkana Board, Sukkur Board & Karachi Board were included in the study. This sample caters 23 districts of the Sindh province.

2. Two hundred individuals belonging to different educational institutions, various examination agencies, civil society, students, and parents were also included in the study for inquiring the issues related to boards of examinations. The data was collected though the questionnaire which consists of 20 items.

Data Analysis and Results
Analysis of Pre-Entry Test Data 2007

a. Characteristics of Sample of Pre- Entry Test Data 2007

Table -1

Group wise and Board wise Distribution of the Sample

Board	Group of Study					Total	%
	M	E	C	A	G		
Hyderabad	2580	1641	92	89	72	4474	58.8
Karachi	07	09	----	----	----	16	0.20
Larkana	628	324	26	14	----	992	12.9
Mirpurkha	806	419	02	09	02	1238	16.3
Sukkar	599	341	06	06	----	952	12.40
Total	4620	2734	126	118	74	7672	100
%	60.2	35.6	1.6	1.5	1.0	100	

Source**:** Admission Cell, University of Sindh

M-Medical E-Engineering
C- Commerce A-Arts
G-General science

Table 1 Reflects the number of respondents in different boards among this highest ratio was in Hyderabad Board which was 58.8%. In this 60.2% belonged to the medical group. Total 95.8% were the main medical and engineering groups.

Table -2

Gender and Domicile wise Distribution of the Sample

Board	Gender		Domicile		Total	%
	Male	Female	Rural	Urban		
Hyderabad	3259	1215	2261	2213	4474	58.8
Karachi	13	3	13	3	16	0.20
Larkana	888	104	686	306	992	12.9
Mirpurkha	986	252	932	306	1238	16.3
Sukkar	862	90	814	138	952	12.40
Total	6008	1664	4706	2966	7672	100
%	78.3	21.7	61.3	38.7	100.0	

Source**:** Admission Cell, University of Sindh

Table 2 Indicates that 78.3 % were male students & 21.7 % were female students. Whereas 61.3% students were from rural areas & 38.7 % were from urban areas. They belonged to all examination boards of Sindh.

b. Comparison of Percent Marks of Students in Different Boards of Sindh Province at different levels

Table -3

Percent Marks in Pre-Entry Test, Percent Marks in Matriculation Examination and Percent Marks in Intermediate Examination

Board of Study		Pre-Entry Test	Matriculation Examination	Intermediate Examination
Hyderabad	Mean	15.64	67.64	61.81
	SE	.16	.14	.12
Karachi	Mean	34.84	75.25	62.16
	SE	3.03	2.19	1.80
Larkana	Mean	13.41	67.09	63.39
	SE	.30	.25	.21
Mirpurkha	Mean	13.87	70.88	65.35
	SE	.28	.24	.23
Sukkar	Mean	14.81	68.98	64.71
	SE	.32	.23	.24
Total	Mean	15.00	68.27	62.95
	SE	.12	.10	9.12E-02

Source**:** Admission Cell, University of Sindh

Table -4

Group of Study Wise Percent Marks in Pre-Entry Test, Percent Marks in Matriculation Examination and Percent Marks in Intermediate Examination

Board of Study		Pre-Entry Test	Matriculation Examination	Intermediate Examination
Medical	Mean	15.36	69.25	64.77
	SE	.15	.13	.12
Engineering	Mean	15.04	67.66	60.64
	SE	[illegible]	[illegible]	[illegible]
Arts	Mean	[illegible]	[illegible]	[illegible]
	SE	[illegible]	[illegible]	[illegible]
Commerce	Mean	[illegible]	[illegible]	[illegible]
	SE	[illegible]	[illegible]	[illegible]
General	Mean	[illegible]	[illegible]	[illegible]

Science	SE	1.12	1.11	.63
Total	Mean	15.00	68.27	62.95
	SE	.12	.10	9.12E-02

Source**:** Admission Cell, University of Sindh

Table 3 reveals that the overall marks of the students in matriculation examinations were 68.27% which decreased in the intermediate examination at 62.95% due to change of the medium of instruction from Sindhi\ Urdu in Schools and English in the Colleges. But consistency in the scores of all the examination boards was visible. All the scores of different boards were proportionally decreasing. Like wise the same trend was observed in the table 4, in which different groups of studies also correlate with the decrease of mean percentage from metric to intermediate. Their range was 75.5 % to 67.09% in matriculation and in the intermediate; it was 65.35% to 61.81%.

According to table.3 and table-4 in the pre-entry test there is found the major fall in the marks up to the mean score 15.00%. This did not show the actual measurement of the learning of the students. But at this stage students were evaluated through the objective type testing paper which included negative marking which caused big decrease in the mean percentage marks scores at this level.

C. Correlation between the Mean Percent Marks of Students at Different Levels

Table -5

Mean, Standard Deviation and t-value of the Mean Percentage Marks of Matriculation and Intermediate Examinations Scores

Variable	N	Mean	S.D	T-value	Sing. (2-tailed)	Correlation
Matriculation Examination	7672	68.27	8.85	61.361	.000*	.597
Intermediate Examination	7672	62.95	7.98			

*p<.001 =highly significant

Table 6

Correlations of Mean Percent Marks in Pre-Entry Test with Mean recent Marks in Matriculation Examination and Mean Percent Marks in Intermediate Examination

		Pre-Entry Test	Matriculation Examination	Intermediate Examination
Pre-Entry Test	Person Correlation	1.000	.406(**)	.476(**)

** Correlation is significant at the 0.01 level (2-tailed).

Table 5 shows the significant difference between the mean scores percentage of matriculation and intermediate examinations (t= 61.36, p< .001). The matriculations mean scores percentage was better than the intermediate mean scores percentage. But this could not be related to the actual assessment of the students learning. All the examination boards of Sindh Province used conventional pattern of question paper which is long essay type & at somewhere it is short essay type questions and students gets higher scores in the passing of these question papers not according to their level of learning

he study also shows the higher mean percentage in all the boards in science groups. Thus the table 5 reflects the correlation of about 0.6 in the results of metric & intermediate which reflects good correlation in the results of boards. Likewise table 6 indicated the correlation between the percentage pre-test marks with matric and intermediate marks. This correlation was also decreasing from 0.6 to .40 with matriculation and 0.47 with intermediate. It considered as moderate correlation between the scores with the pre-entry test.

Performance of the Students of Different Boards in the Pre-entry Test

Table -7

Board wise Mean Percent marks in Pre-Entry Test

Board of Study	N	Mean Percent Marks
Larkana	0992	13.41
Mirpurkhas	1238	13.87
Sukkur	0952	14.81
Hyderabad	4474	15.64
Karachi	0016	34.84

Table 7 indicates the performance of the students in the Pre-entry test mean percentage from the different boards. This showed that the performance of the Karachi board students was better and the performance of the Larkana Board students was less among all the boards, which was 13.41 means score percentage in comparison with 34.84 of Karachi district.

Perceptions of the Experts, Teachers, Students and Parents

On the basis of administered questionnaire, following perceptions were hereby made;

- Board system does not fulfill the requirement of the comprehensive evaluation of students at secondary level. It is lacking in the measurement of the learning out comes such as cognitive as well as affective and psychomotor domain of learning. Question paper pattern is promoting only the rote learning. Same pattern and questions are repeated every year. Following the guidelines of Education Policy 1998-2000, the Inter Board Committee of Chairmen (IBCC) suggested: improving quality of question papers, validity, and reliability of

examinations, minimizing unfair means, and establishment of item banks.

- Coaching culture is flourishing due to ineffective learning atmosphere at school and colleges. Coaching centers prepare students only for passing the examinations and adding financial burden to parents.
- Ineffective examination conduct system of the board is one of the causes of cheating in the examinations besides essay type questions.
- Board does not coordinate with the Bureau of Curriculum, Ministry of Education, and Teacher Training institutes etc.
- Services of the testing / examination experts are not hired in last five years and no training is conducted for paper setters and assessors by the boards.
- Officers sitting on the key posts in the Boards have no relevant experience and expertise in the testing and examinations.
- Results of the examination boards of Sindh province are higher than the results of other boards of Pakistan. The range of results is above 80% in Sindh it reflects easy system of conduct and assessment of examination.
- Paper pattern of the boards is totally different from the entry test of the different higher education institutions and National Testing Service (NTS) system of testing. This creates the confusion to measure the learning levels of students.
- Boards of examination in Sindh are not applying modern evaluation techniques in the examinations.
- The research cell which is regarded as main organ of the board of examination became dysfunctional and does not provide training and carry out the research in the field of testing. Vision 2010 suggested: gradual shift to internal system, Linkages among boards, enhancement of research on examinations.
- Most recently B.I.S.E. Hyderabad has given up the practice of deputing external examiners/ superintendents in the examination centers of the Hyderabad district.
- Private boards are needed but improvement is also required in the existing public sector boards.

Discussion

Perusal of the results of the study revel that at different level of examinations; student scorings is significantly different but the correlation in the scoring showed the consistency in the scoring in the board examination due to the same pattern of the question papers (Table 3). According to Crighton, Dar and Bethal (op cit., p-3); "Many question papers contain errors in subject content, language, and technical construction. In addition, they focus on a narrow range of low-level skills and are dominated by the content of the approved textbooks. In consequence, the examinations have a negative effect on the educational process in Pakistan and have poor national and international image". It is therefore suggested in the present study that in the board examination papers setting, there should be introduced variety of questions such as short questions, multiple choice questions etc. Design structured Essay type question it should measure the comprehension, application of the knowledge along with knowledge. Masood Nabi Nur Report, 1992, recommends a mix of short answer, objective, and essay questions.

Results of the pre entry tests have raised several questions about the creditability of the results of the examination boards. Crighton, Dar and Bethel (1995), highlight that: Pakistani examinations are said to be unreliable, because (i) examinations set by different Boards are not comparable; (ii) papers set within the same Board are not comparable, either across subjects or for the same subject over time; (iii) cheating and malpractices invalidate results; (iv) Coordination of marking (scoring of answer books) is insufficient or does not take place at all. (p.24).Therefore there is a need of introducing one pattern of testing at all levels. The results of the present study further reveal that ineffective management system of conduct of examination has given rise to cheating culture and other malpractices in examinations hence they have lost the trust of students, parents and society. The World Bank Group (2001:2) indicates that learners get involved in examination irregularities and malpractice mainly because, success in a public examination can have profound, immediate, and long-term impact on a candidate's life. In many developing countries, examination success and secondary school graduation represents the sole avenue for poor students to secure a non-menial job.

Private boards may be encouraged but with some limitations such as they should adopt the same text books, question paper pattern in their examination system further the private boards generate healthy competition among the boards. There is a gap between the material learned from the schools and colleges and the questions given in the examinations at different levels. Learning material asked in the question paper of the examination does not match with the learning of the students; therefore the hard work of the students went in the vein. Examination and assessment is very essential for the whole education system at all levels but this system is neglected by the concerned quarters hence the whole system is suffering. Public boards and pre-entry tests both systems are not effective to measure the real achievements of the students, so we cannot estimate actual knowledge of the students.

In order to reform the examination and assessment system of the examination boards present study further suggest that questions should be designed to measure objectives of the curriculum not a content of the text books. Shah and Afzaal (2004), in their recent evaluation of paper setting in three subjects and two boards concluded: "There has been increased repetition of questions and only selected contents are tested again and again. No body seemed to take any serious view of this phenomenon which leads towards selective study". Cumulative record of the achievement and progress in the school and colleges should be included in the results of the final examinations and further professional institutes should give weight age to these in the marking of pre-entry test. Special training courses for paper setters and examiners at all levels should be introduced under the auspicious of department of testing and evaluation faculty of Education University of Sindh and National Academy of higher Education for introducing different techniques of testing. Same pattern of examination should be introduced from matriculation to pre-entry test level. And it may be practiced in the schools and colleges for the internal testing.

Assessment system of the essay type examination should be made very strict and transparent. For this purpose assessors should be provided with the answer sheet of the structured essay type answers of the questions. Rules and regulations concerning discipline, transparency in the examination must be applied strictly & impartially Invigilation staff should be given proper training and guidance for the enforcement of code of conduct of examination in the centers. Center superintendents

should be delegated Magisterial Powers and the appointment will be made on merit basis. To avoid leakage of question papers, strict monitoring and checking system should be introduced at all levels of the board system.

Decisions and policies of the examining boards must be taken into considerations and be supported by the high ups of the education department Handing over of secrecy work should be limited to only a number of staff personnel with proven integrity and honesty. Semester system is not alternative but instead of it some weight age should be given to the scores of the internal evaluation. Composite examinations are not necessary but there should be improvement in the existing examination system.

Conclusions

It is therefore concluded that the Boards of intermediate and secondary education have the responsibility to conduct examinations at secondary school level in the Province of the Sindh. The creditability of the result of the examinations of the boards has come under discussion due to the recent moves of introducing different modes of examinations such as pre-entry tests for getting admission in all public and private sector Universities was introduced, National Testing Service (NTS) had been launched to conduct tests for admissions in the professional colleges and universities, and private examination board has been allowed to function.

The occurrence of wide spread irregularities in the boards examinations have seriously damaged public confidence in the validity and legitimacy of examination results. In order to maintain public confidence, educational managers should continuously review the effectiveness of the examination system of the boards including compliance, validation and monitoring procedures It would be in the fitness of things if the government in its endeavor to revamp the entire examination system entrust this important national task to some reputable educationists and intellectuals. This group should sit together and find a way out of our educational mess.

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Relationship Among Job Satisfaction and Selected Variables of Secondary School Teachers

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Abstract

The present study was conducted to determine the relationship among job satisfaction and selected variables of government secondary school teachers. Two questionnaires were used to determine the relationship between organizational climate and teachers' job satisfaction. The findings were drawn after the descriptive and inferential analysis, Means, Standard Deviation, inter-correlation, Pearson correlation,'t' test, post HOC and ANOVA was run to test the hypotheses. There was no significant relationship among organizational climate subscales, which showed that subscales were independent of each other. There was significant relationship between job satisfaction factors that showed that job satisfaction factors were dependent of each other. Supportive principal behavior and directive principal behavior were found to be significantly correlated with job satisfaction; on the other hand restrictive principal behavior was found no significantly correlated with job satisfaction. Collegial teacher behavior and intimate teacher behavior were found to be significantly correlated with job satisfaction; on the other hand disengaged teacher behavior was found no relationship with job satisfaction.

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Introduction

Organizations are ever-present features of modern society. We look towards organization for food, education, employment, entertainment, healthcare, transportation and protection of basic rights. Nearly every aspect of modern life is influenced in one way or another by together to achieve objectives.

Organizational climate is the human environment with in which an organization's employees do their work. It may refer to the environment with in a department or in an entire organization. We cannot see climate or touch it, but it is there. In turn climate is affected by most every thing that is occurring in organization (Davis & Newstrom, 1985).

According to Andrew (1971) the term climate is used to design the quality of internal environment which conditions in turn the quality of cooperation, the development of individual, the extent of member's dedication or commitment to organization purposes, and the efficiency with which that purposes become translated into results. Climate is atmosphere in which individual help, judge, reward, constrain and find out about each other. It influence moral the attitude of the individual toward work and his environment.

The climate of an organization is thought to represent the percep0tion of objective characteristics by organization's members. As an example, the size of and organization is objective but a person's feelings about that size is subjective, it is the perception of these objectives that is represented by the climate of an organization (Landy & Trumbo, 1980).

Davis, K (1985) said, both employers and employees want a more favourable climate because of its benefits. Such as, better performance and job satisfaction. Employees feel that the climate is favourable when they are doing something useful that provides a sense of personal worth. They frequently want challenging work that is intrinsically satisfying. Many employees also want responsibility and the opportunity to succeed. They want to be listened to and treated as it they have value as individuals. They want to feel that the organization really cares about their needs and problems.

Work climate is a perceptual interpretation of how well organizational and managerial practices fit or match employee needs, goals and

expectations at a point in time. In effect, organizational members combine perceptions of their work environments into positive or negative attitudes that is turn influence behavior. Climate produces unfavourable or negative attitude when employees feel abuses or inconsistencies between personal expectations and management practices. Abuses can range from unfair or discriminatory treatment by a supervisor to working conditions that are unsafe, tedious or boring. Climate has positive or favorable manifestations when members are not distracted by frustrations-when organizational practices and events are supportive of personal needs, goals and expectations (Curtis W. Cook 1986).

Job satisfaction is a set of favorable or unfavorable feelings and emotions with which employees view their works (Davis K. & Newstorm (1993). Job satisfaction is an effective attitude-a feeling of relative likes or dislikes (For example, a satisfied employee may comments that "I enjoy being a variety of tasks to do". Job satisfaction can be viewed as an overall attitude, or it can apply to the various parts of an individual's job. If it is viewed only as an overall attitude, however managers many miss seeing some key hidden expectations as they access an employee's overall satisfaction, for example, although Antonio Ortega's general job satisfaction may be high, it is important to discover both that he likes his promotion and that he is dissatisfied with his vacation schedule this year. Job satisfaction studies, therefore, often focus on the various parts that are believed to be very important, since these predispose an employee to behave in certain ways. Important aspects of job satisfaction include pay, one's supervisor, the nature of task performed, and employee's coworkers and the immediate working conditions (Newstrom, 1986).

Job satisfaction refers to a collection of attitude that workers have about their job. Gary (1996) differentiated at least two aspects job satisfaction namely facet satisfaction and overall satisfaction. The tendency for employee to be more or less satisfied with various facets of job. Facets are promotion, recognition, benefits and working conditions. The statement "On the whole I really like my job" indicative of the nature of overall all job satisfaction.

Bootzin (1986) also defined job satisfaction as "An individual's whole philosophy of like reflected in his success and satisfaction in his occupation. An individual has to satisfy his psychological needs, in

these needs may be satisfied only through some kind of job." Job satisfaction is mainly an emotional and effective orientation toward one's work. So it can be measured in terms of worker's overall satisfaction with his or her job.

According to Kuzmits F.E. (1985), job satisfaction is a complex subject. The same kind of work (e.g. typing) may be seen as satisfying to some workers and dissatisfying to others. In addition an employee will often be satisfied with the certain aspects of the job (e.g. supervisor, coworkers) and dissatisfied with others (e.g. pay, benefits, working conditions). Finally an employee's attitude may change over time. A new professor, for example, may initially be satisfied with his or her colleagues; however, coworker relationships could conceivably erode over time t result in a dissatisfying work climate. For these reasons, it is important for managers and personal administrators to understand the dynamic nature of job satisfaction and not to be misled by the casual nature in which the term is often discussed.

Why should a decision maker be concerned about a worker's job attitudes? A common psychological principle holds that attitude effects on behavior. We may present this idea as follows:

Job satisfaction ⟶ Good performance
Job dissatisfaction ⟶ Poor performance

One of the most influential current conceptual schemata for vocational satisfaction has been proposed by Gruenberg (1979), who have identified three different types of satisfaction in work. Firstly, there are the intrinsic satisfactions, which come from two sources

(1) The pleasure which is derived from engaging in work activity (function pleasure) and
(2) The sense of accomplishment, which is experienced from meeting social standards of success and personal realization of abilities through achievement. Secondly, there are the concomitant satisfactions, which are associated with the physical and psychological conditions of person's work. These would include working in a clean, air conditioned plant, having many fringe benefits, enjoying congenial

coworkers, being employed by a company with a "worker orientation," etc. and thirdly, there are the extrinsic satisfactions which are the tangible rewards of work, i.e. pay and bonuses.

Job satisfaction is an attitude, which results from balance, and summation of many specific likes and dislike experienced in connection with the job. This attitude manifests itself in evaluation of job and employing organization. These evaluations may rest largely upon one's success or failure in the achievement of personal objectives and upon the perceived contributions of the job and employing organization to these ends. Thus worker may like certain aspects of his work yet thoroughly dislike others.

Climate can influence motivation, performance and job satisfaction. It does this by creating employee expectations about what consequences will from different actions. Employee expect from certain rewards, satisfactions and frustration on the basis of their perception of the organization's climate.

The human values that compose climate are quite different from economic values in an organization. Economics deals with the allocation of scarce of resources. If you have automobile A, I cannot have it; if you have budget B, those funds are not available to my departments. Economic values are mostly locative, but human values are mostly incremental. They are self-generated, being created, within individuals and groups as result of their attitude and lifestyle. (Davis K. 1985)

People find more satisfaction when there is cooperation and teamwork. They are leaving, growing and contributing, so it can be measured in terms of worker's overall satisfaction with job. The concept of organizational climate and job satisfaction has increasingly become the focus of a wide variety of research studies. The question thus remain to be answered is "does the organizational climate also effects on job satisfaction of secondary school teachers.

Objectives of the Study

1. The broad purpose of the present study is to determine the relationship between organizational climate and job satisfaction of secondary school teachers.
2. To determine the relationship between principals' behavior and teachers' job satisfaction.
3. To determine the relationship between teachers' behavior and teachers' job satisfaction.
4. To investigate different, if any among demographic information (sex, teaching subject, teaching experience and type of school) about job satisfaction.

Research Hypotheses

H01 There is no significant relationship between principals' behavior and teachers' job satisfaction.

H02 There is no significant between supportive principals' behavior and teachers' job satisfaction.

H03 There is no significant relationship between directive principals' behavior and teachers' job satisfaction.

H04 There is no significant relationship between restrictive principals' behavior and teachers' job satisfaction.

H05 There in no significant relationship between teachers' behavior and teachers' job satisfaction.

H06 There is no significant relationship between collegial teachers' behavior and teachers' job satisfaction.

H07 There is no significant relationship between intimate teachers' behavior and teachers' job satisfaction.

H08 There is no significant relationship between disengaged teachers' behavior and teachers' job satisfaction.

H09 There is no significant difference between male and female teachers' job satisfaction.

H010 There is no significant difference between urban and rural teachers' job satisfaction.

H011 There is no significant difference between science and arts teachers' job satisfaction.

H012 There is no significant difference regarding job satisfaction among teachers having different teaching experience.

Methodology

This study is designed to determine the relationship, between organizational climate and job satisfaction, among organizational climate factors of secondary school teachers, and difference among demographic variables and job satisfaction.

Population

The population for this study comprised of all Government Secondary Schools teachers in the district Gujrat.

Sampling

All the urban, rural, male and female secondary school teachers (SST) were selected. There were 785 SST secondary school teachers in this district and all were selected for this study, and questionnaires were administered to them and 550 (70.06%) responses were received.

Instrumentation

Instruments used to collect data for this study were demographic information form, modified version of the Minnesota Satisfaction Questionnaire (MSQ), (weiss, Dawis & Lofquist, (1967)) and Organizational Climate Description Questionnaire-OCDQ-RE (Hoy and Clover, 1986).

Demographic Information Form

Demographic information developed by researcher was used. Form was attached to each mailed questionnaire. Teachers were asked to indicate their demographic information by checking the right side, which has option. Participants were asked to provide individually information about gender, teaching subject, teaching experience and type of school.

Analysis and Interpretation of Data

The purpose of this study was to determine the relationship between organizational climate and job satisfaction of Secondary School teachers and to determine the relationship or difference if any between demographic information and job satisfaction. This chapter deals with the analysis and interpretation of the data collection through all the three instruments of the study and describes the response rates in the data collection procedures, demographic data of surveyed sample, inter correlation among organizational climate subscales, among job satisfaction factors person correlation of organizational climate and job satisfaction, and significance difference of demographic information

about job. Data was analyzed through computer by using SPSS-XII programme. Analysis of the data is presented in two sections, descriptive statistics and inferential statistics.

Table- 2

Distribution of Male and Female Teachers

Sex	Frequency	Percentage	Total
Male	361	65.6	550
Female	189	34.4	

The above table indicates about male and female respondents. Number of male respondents was 394 (65.6 %). Number of female respondents was 207 (34.4 %). Majority of the respondents was male.

Table - 3

Distribution of teaching Subjects

Teaching Subject	Frequency	Percentage	Total
Science	148	27	550
Arts	402	73	

The above table indicates about teaching subjects or science and arts teachers. 162 respondents were teaching science subjects which is 27 % out of 601 and 73 % were teaching arts subjects. Majority of the respondents were teaching arts subjects.

Table- 4

Distribution of type of School Teachers

Type of School	Frequency	Percentage	Total
Urban	262	47.6	550
Rural	288	52.4	

The above table indicates about urban and rural schools teachers. 286 respondents were belong to urban schools which is 47.6 % out of total teachers and 315 respondents (52.4 %) were rural school teachers.

Table -5

Distribution of Teaching Experience

Teaching Experience (in years)	Frequency	Percentage	Total

0-5	48	8.8	550
6-10	69	12.6	
11-15	152	27.6	
16-20	131	23.8	
>21	150	27.2	

The above table indicates that 8.8 % respondents had been teaching from five years. Majority of respondents had been teaching from 11 to 15 years. 12.6 % respondents had been teaching from 6 to 10 years.

Table - 6

Means for Organizational Climate Subscales (N = 601)

Variables	Means	Remarks
Supportive Principal Behavior	2.7	O
Directive Principal Behavior	2.6	O
Collegial Teaching behavior	2.8	O
Intimate Teacher behavior	2.3	SO
Restrictive Principal behavior	2.3	SO
Disengage Teacher behavior	2.2	SO

Note: 0.5--1.5 = RO, 1.6--2.5 = SO, 2.6--3.5 = O, 3.6--4.5 = VFO

The means for organizational climate subscales are provided in table no.5. The results were 2.7 for supportive principal behavior, 2.6 for directive principal behavior, 2.8 for collegial teacher behavior, 2.4 for intimate teacher behavior, 2.3 for restrictive principal behavior and 2.2 for disengage teacher behavior. These results suggest that teachers describe their schools as being high on supportive principal behavior, directive principal behavior and collegial teacher behavior. Principal behavior is more supportive and directive than restrictive. Teachers were supportive of each other and enjoyed working with each other than disengages behavior.

H01 There is no Significant Relationship between Principals' Behavior and Teachers' Job Satisfaction.

Table -7

Correlation between Principals' Behavior and Teachers' Job satisfaction.

Variables	Mean	S.D	N.	P. Correlation	Sig.(2-tailed)

Principals' Behavior	60.62	11.32	550	0.468	.000
Teachers' Job Satisfaction	279.39	34.48	550		

Table No.7 reveals that value (.468) is highly significant at .01 level of significance, so the null hypothesis stating that there is no significant relationship between principals' behavior and teachers' job satisfaction is rejected and it is concluded that there is a significant relationship between principals' behavior and teachers' job satisfaction.

H02 There is no significant relationship between supportive principal behavior and teachers' job satisfaction

Table- 8

Correlation between supportive principal behavior and teachers' job satisfaction

Variables	Mean	S.D.	N	P. Correlation	Sig.(2-tailed)
Supportive Principal Behaviour	24.60	6.31	550	0.499	.000
Teachers' Job Satisfaction	279.39	34.48	550		

Table No. 8 shows that correlation value (.499) is highly significant at .01 level of significance. So the null hypothesis stating that there is no significant relationship between supportive principal behavior and teachers' job satisfaction is rejected. It is concluded that there is a significant relationship between supportive principal behavior and teachers' job satisfaction.

H03 There is no significant relationship between directive principal behavior and teachers' job satisfaction.

Table -9

Correlation between directive principal behavior and teachers' job satisfaction

Variables	Mean	S.D.	N	P. Correlation	Significant (2tailed)
Directive Principal Behaviour	24.62	4.61	550	0.402	.000

Teachers' job satisfaction	279.39	34.48	550		

Table No.9 shows that correlation value (.402) is highly significant at .01 level of significance, so the null hypothesis stating that there is no significant relationship between directive principal behavior and teachers' job satisfaction is rejected and it is concluded that there is significant relationship between directive principal behavior and teachers' job satisfaction.

H04 There is no significant relationship between restrictive principal behavior and teachers' job satisfaction.

Table- 10

Correlation between restrictive principal behavior and teachers' job satisfaction

Variables	Mean	S.D.	N	P. Correlation	Significant (2-tailed)
Restrictive Principal Behaviour	10.76	3.10	550	0.091	.056
Teachers' job satisfaction	279.39	34.48	550		

Table No.10 shows that correlation values (.091) is low which is almost negligible so the null hypothesis stating that there is no significant relationship between restrictive principal behavior and teachers' job satisfaction is accepted and it is concluded that there is no significant relationship between restrictive principal behavior and teachers' job satisfaction.

H05 There is no significant relationship between teachers' behavior and teachers' job satisfaction.

Table -11

Correlation between teachers' behavior and teachers' job satisfaction

Variables	Mean	S.D.	N	P. Correlation	Significant (2-tailed)
Teachers Behaviour	48.44	8.46	550	0.286	.000
Teachers' job satisfaction	279.39	34.48	550		

Table No.11 shows that correlation value (.286) is highly significant at .01 level of significance, so the null hypothesis stating that there is no significant relationship between behavior and teachers' job satisfaction is rejected and it is concluded that there is significant relationship between teachers' behavior and teachers' job satisfaction.

H06 There is no significant relationship between collegial teacher's behavior and teachers' job satisfaction.

Table -12

Correlation between collegial teacher behavior and teachers' job satisfaction

Variables	Mean	S.D.	N	P. Correlation	Significant (2-tailed)
Collegial Teacher Behaviour	23.41	5.51	550	0.401	.000
Teachers' job satisfaction	279.39	34.48	550		

Table No.12 shows that correlation value (.401) is highly significant at .01 level of significance, so the null hypothesis stating that there is no significant relationship between collegial teacher behavior and teachers' job satisfaction is rejected and it is concluded that there is significant relationship between collegial teacher behavior and teachers' job satisfaction.

H07 There is no significant relationship between intimate teacher behavior and teachers' job satisfaction.

Table -13

Correlation between intimate teacher behavior and teachers' job satisfaction

Variables	Mean	S.D.	N	P. Correlation	Sig (2-tailed)
Intimate Teacher Behaviour	15.95	4.32	550	0.208	.000
Teachers' job satisfaction	279.39	34.48	550		

Table No.13 shows correlation value (.208) is significant at .01 level of significance, so the null hypothesis stating that there is no significant relationship between intimate teacher behavior and teachers' job satisfaction is rejected and it is concluded that there is significant relationship between intimate teacher behavior and teachers' job satisfaction.

H08 There is no significant relationship between disengaged teacher behavior and teachers' job satisfaction.

Table -14

Correlation between disengaged teacher behavior and teachers' job satisfaction

Variables	Mean	S.D.	N	P. Correlation	Significant (2-tailed)
Disengaged Teacher Behaviour	9.50	3.66	550	-0.052	.200
Teachers' job satisfaction	279.39	34.48	550		

Table No.14 shows correlation value (-.052) is not significant at .05 level of significance, so the null hypothesis stating that there is no significant relationship between disengaged teacher behavior and teachers' job satisfaction is accepted and it is concluded that there is no significant between disengaged teacher behavior and teachers' job satisfaction.

H09 There is no significant difference between male and female teachers' job satisfaction.

Table -15

Difference between male and female teachers' job satisfaction

Sex	N	Mean	t	df	Sig.
Male	361	276.48	2.255	548	.025
Female	189	283.48			

Table No.15 indicates that 't' value (2.255) is significant at 0.05 level of significance, so the null hypothesis stating that here is no significant difference between male and female teachers' job satisfaction is rejected and it is concluded that there is difference between male and female teachers' job satisfaction. Female teachers have higher mean score

(283.48) than the male teachers (276.48) on job satisfaction questionnaire.

H010 There is no significant difference between urban and rural schoolteachers' job satisfaction.

Table- 16

Difference between urban and rural school teachers' job satisfaction

Type of School	N	Mean	t	df	Sig
Urban	262	277.49	0.893	548	2.68
Rural	288	280.17			

Table No.16 shows that 't' value is not significant at 0.05 level of significance, so the null hypothesis stating that there is no significant difference between urban and rural school teachers' job satisfaction is accepted and it is concluded that there is no difference between urban and rural teachers' job satisfaction. There is no more difference of mean between urban and rural teachers' job satisfaction.

H011 There is no significant difference between science and arts teachers' job satisfaction.

Table- 17

Difference between science and arts teachers' job satisfaction

Teaching Subject	N	Mean	t	df	sig.
Science	148	274.07	1.935	548	.054
Arts	402	280.67			

Table No.17 shows that 't' value (1.935) is significant at 0.05 level of significance, so the null hypothesis stating that there is no significant difference between science and arts teachers' job satisfaction is rejected and it is concluded that there is significant difference between science and arts teachers' job satisfaction. Arts teachers have higher mean score (280.67) than science teachers (274.07) on job satisfaction questionnaire.

H012 There is no significant difference regarding job satisfaction among having different teaching experience.

Table -18

Difference regarding job satisfaction among teachers having different teaching experience

Teaching Experience	N	Mean	df	F	Sig.
0-5 years	48	264.25	4	3.917	.006
6-10 years	69	255.89			
11-15 years	152	271.60			
16-20 years	131	268.80			
>21	150	273.74			

Table No.18 explains that 'F' value (3.917) is significant, so the null hypothesis stating that there is no significant difference regarding job satisfaction among teachers having different teaching experience in rejected, and it is concluded that there is significant different regarding job satisfaction among teachers having different teaching experience.

As the results are significant, it was decided to run LSD Post HOC test of multiple comparison. However only significant means difference are presented here which contribute the most in making the result significant.

Table -19

Summary of multiple comparisons regarding job satisfaction of teachers have indicated different teaching experience

Teaching Experience	Mean Difference	Sig
6-10y Vs 11-15y	15.71	.002
6-10y Vs 16-20y	12.97	.012
6-10y Vs 21>	17.84	.000

As shown in Table No.19 the overall results for the Post HOC test and mean score indicates that teachers having teaching experience between 6 to 10 years have least or less job satisfaction (mean 265.89) thus makes the results of ANOVA significant.

Findings

The following findings were drawn after descriptive and inferential analysis.

1. Out of total 550, number of male respondents was 361 (65.5 %) and number of female respondents was 189 (34.4 %) so majority of the respondents were male.
2. 148 respondents out of 550 were teaching science subjects which is 27 % and 402 respondents were teaching arts subjects which is 73 % out of total respondents, so majority of the respondents were arts subjects teachers.
3. 262 respondents belong to urban schools which is 47.6 % out of total and 288 respondents were rural school teachers which is 52.4 %.
4. Regarding the length of service (experience), the distribution of respondents showed that 48 teachers (8.8 %) had been teaching from 0 to 5 years, 69 teachers (12.6 %) had been teaching from 6 to 10 years, 152 teachers (27.6 %) had been teaching from 11 to 15 years, 131 teachers (23.8 %) had been teaching from 16-20 years, and 150 teachers (27.2 %) had been teaching from 21 or more years, so majority of teachers had been teaching from 11 to 15 years.
5. Mean scores of organizational climate subscales indicated that teaches describes their schools as being high on supportive, directive principal behavior and collegial teacher behavior.
6. Mean scores of job satisfaction factors indicated that teachers were dissatisfy with advancement, compensation and working conditions.
7. There was a significant positive correlation between principal behavior and teachers' job satisfaction.
8. Supportive principal behavior and teachers' job satisfaction was found to be significantly correlated with each other.
9. The null hypothesis No.3 stating no significant relationship between directive principal behavior and teachers' job satisfaction was rejected establishing a significant relationship between directive principal behavior and teachers' job satisfaction.
10. The null hypothesis No.4 stating no significant relationship between restrictive principal behavior and teachers' job satisfaction was accepted. As no significant relationship was found between restrictive principal behavior and teachers 'job satisfaction.

11. The null hypothesis No. 5 stating no significant relationship between teachers' behavior and teachers' job satisfaction was rejected, thus establishing a significant relationship.
12. The null hypothesis No. 6 stating no significant relationship between collegial teacher behavior and teachers' job satisfaction was rejected, establishing a significant relationship between collegial teacher behavior and teachers' job satisfaction.
13. The null hypothesis No. 7 stating no significant relationship between intimate teacher behavior and teachers' job satisfaction was rejected, thus establishing a significant relationship.
14. The null hypothesis No. 8 stating no significant relationship between disengaged teacher behavior and teachers' job satisfaction was accepted, as no significant correlation was found between disengaged teacher behavior and teachers' job satisfaction.
15. The null hypothesis No. 9 stating no significant difference between male and female teachers' job satisfaction was rejected, and it was concluded that there was difference between male and female teachers' job satisfaction Female teachers had higher mean score (283.48) than male teachers (276.48) on job satisfaction questionnaire.
16. The null hypothesis No. 10 stating no significant difference between urban and rural teachers' job satisfaction was accepted, as no significant difference was found between urban and rural teachers' job satisfaction. There was no more difference of mean between urban and rural teachers' job satisfaction.
17. The null hypothesis No. 11 stating no significant difference between science and arts teachers' job satisfaction was rejected, and it was concluded that there was significant difference between science and arts teachers' job satisfaction. Arts teachers have higher mean score (280.67) than science teachers (274.07).
18. The null hypothesis No. 12 stating no significant difference regarding job satisfaction among teachers having different teaching experience was rejected, over all results for the post

HOC and mean score indicated that teachers having teaching experience 6 to 10 years have less job satisfaction.

Conclusions

1. The first general conclusion that could be drawn from the findings of this study is that both principal behavior and teacher behavior are significantly related to teachers' job satisfaction as perceived by govt. secondary school teachers. The relationship between principal behavior and teachers' job satisfaction; however appeared to be relatively stronger than the relationship of teacher behavior and job satisfaction.
2. Supportive principal behavior and teachers' job satisfaction was found to be significantly correlated with each other.
3. Relationship between directive principal behavior and teachers' job satisfaction was found significant.
4. Restrictive principal behavior and teachers' job satisfaction had no significant relationship.
5. Collegial teacher behavior and intimate teacher behavior had significant relationship with teachers' job satisfaction.
6. There was no relationship between disengaged teacher behavior and teachers' job satisfaction.
7. Female teachers were more satisfied than their male counterparts.
8. There was no significant difference between urban and rural teachers' job satisfaction.
9. Arts teachers were more satisfied than science teachers.
10. Teachers having 6 to 10 years experience were less satisfied than teachers having more teaching experience.
11. Generally, teachers were less satisfied with advancement, compensation and working conditions.
12. Majority of the respondents were male teachers.
13. Majority of the respondents were rural teachers.
14. Majority of the respondents were arts teachers.

Discussion

The basic objective of the present study was to explore the relationship between organizational climate and job satisfaction. The finding of this study support it that organizational climate and teachers' job satisfaction are related. Pearson correlation showed organizational climate to be

significantly related to teachers' job satisfaction with different aspect of the job and climate. These finding lend support for the findings by Friedlander and Margulies (1969), Lafollette and Sims (1975), Coughlan (1971) and Azhar(2005). Schneider and Synder (1975) reported significant positive correlation between organizational climate factors and job descriptive index. Downey, Hellriegel, Phelp and Slocum (1974) found a significant positive relationship between organizational climate and job satisfaction. Schneider and Synder (1975), observed relationship among two measure of job satisfaction, on measure of organizational climate an seven production and turnover indexes of organizational effectiveness, it was shown that there is significant correlation between climate and satisfaction.

Craig (1979), Nick (1980), Krishnn (1984), Soloman (1986), Raisani (1988), Mishra (1992), Wagner (1994) and Hayat (1998) indicated that organizational climate and job satisfaction are related.

Supportive principal behavior was found in this study to be significantly but positively related to teachers' job satisfaction. This finding confirms findings of Grassie and Carss (1973) who found supportive and considerate principal leadership positively related to teachers' job satisfaction. Coughlan (1971) and Craig (1979) reported that supportive and considerate principal leadership is related to teachers' job satisfaction.

Intimate and collegial teacher behavior was found in this study to be significantly positively related to teachers' job satisfaction. Donohue (1983) and Amirtash (1983) reported that intimate dimension to be positively related to educators' job satisfaction.

Disengaged dimension of organizational climate was found in this study no relationship with teachers' job satisfaction. Donohue (1983) found the disengaged dimension to be negatively related to job satisfaction for faculties of nursing schools.

The finding from this study indicate female to be more satisfied with job satisfaction than male teachers. These results provide support for the earlier studies. Sergiovanni (1967), Brimingham (1984), Raisani (1988) Azhar (2005) and Doris (2001) showed no significant difference between urban and rural school teachers to job satisfaction. This finding supports

the findings of Hughey and Murphey (1982). They found rural teachers to be satisfied but not significantly.

Finding from this study show that science teachers are less satisfy with job. Their less satisfaction is understandable because of their greater demand for their services, hence increased employability in the market; they have better chances of getting a well paid job. Bromely (1981), provides relevant data to support his explanation.

Finding from this study show that teachers having 6 to 10 years teaching experience are less satisfied. Previous researches relation teachers' teaching experience and job satisfaction suggested two viewpoints. One group of researchers showed more experienced teachers to be satisfied with their job, while another group found no relationship between teaching experience and job satisfaction. Hayat (1998) reported that length of service (experience) of college teachers was significantly related with job satisfaction in open and autonomous climate. He further reported that age category 51 to 55 years was most satisfied with their job.

Recommendations

1. Findings suggest that principals perceived by teachers as facilitating task accomplishments, taking interest in their welfare, principal listens and is open to teacher suggestions, praise is given genuinely and frequently, and criticism is handled constructively, and setting an example by work hard themselves, teachers in that climate expressed satisfaction. Conversely, in climates where teachers perceive their principals burdens teachers with paperwork, committee requirements routine duties, and other demands that interfere with their teaching responsibilities, teachers expressed no relation of organizational climate and job satisfaction. So it becomes more important for principals to be aware of the importance of their supervisory styles in relation to teacher job satisfaction.

2. The finding that female teachers are more satisfied with their job is encouraging, but at the same time, the data indicate that male teachers are less satisfied is disappointing and

require a careful consideration. Efforts should focus on to improve job attractive for talented male population and retain those already in the profession. The data clearly indicate that teachers derive less satisfaction from advancement, compensation and working conditions. Furthermore, an atmosphere of trust, confidence and cooperation should be fostered, where teachers can interact with each other than disengage behavior.

3. Science teachers' dissatisfaction with their job should be a serious concern to educators. At times, when greater emphasis is being placed on science and mathematics education at high school level, the importance of science teachers' satisfaction and retention becomes quite evident.

4. The concept of organizational climate be popularized through media and corresponding awareness regarding attitudes and behavior be developed through holding of seminars educational conferences, symposia, and informal get together of the principals and teachers.

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Effect of Cooperative Learning on Academic Achievement and Retention of Secondary Grader Mathematics Students

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Abstract

This study aimed to assess the effectiveness of cooperative learning on the academic achievement of high and low achievers at secondary level in mathematics in Pakistan. It also focused on the effect of cooperative learning on the retention level of high and low achievers in mathematics at secondary level. The study was experimental in nature and was carried out in district Rawalpindi in 2006. Two sections of 10th class, equally divided on the basis of teacher-made pretest scores were taken as the sample of the study. Each group was further divided into high achievers and low achievers on basis of mean scores of the pretest. A Factorial Design (2 x 2) was used for the treatment of data. Data analysis revealed that both the experimental and the control groups were almost equal in mathematical knowledge at the beginning of the experiment. On retention test no significant difference was found between the high achievers of the experimental and control groups, but it was significant in the low achievers of experimental group and the control group. Hence, cooperative learning appeared to be more favorable for low achievers than high achievers.

Background

According to the National Education Policy (1998-2010), the education system of Pakistan is three tier: elementary (grade 1-8); secondary (9-12), and higher education (year 13 and above). At secondary level, there are four main streams: arts and humanities, science, computer, and commerce. The majority of the students either opt science or arts and humanities group. Mathematics is one of the compulsory subjects for these four streams of the students. The overall performance of students in mathematics and English is low through out the country. This is evident from the results of the Boards of Intermediate and Secondary Education (BISEs) about one-third of the students qualify mathematics with the minimum passing marks i.e. by securing 33% of the total score. Though

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it is difficult to ascertain without evidence, but the researchers have experienced that many students at secondary level leave schools owing to difficulty in English and mathematics. Hence their retention in schools is a major concern in the country. The low performance and high drop out of students in mathematics at secondary level is mainly due to shortage of competent teachers, less opportunity for teachers' INSET and mentoring practices, poor base of students at primary and middle level, and relatively less use of modern methods and approaches of teaching and learning in the classrooms. Therefore it was imperative to investigate the impact of cooperative learning on the students' achievement and retention rate. So far a little research is available in Pakistan in this regard. The findings may be useful for teachers teaching mathematics, teacher trainers, and curriculum experts to enhance the retention and achievement level of students in this core subject at secondary level in Pakistan.

Introduction

Cooperative learning is one of the recommended teaching-learning techniques in which students achieve learning goals by helping each other in a social setting. Teaching and learning both are the main inter-related processes in the classroom. The importance of teaching method or instructional program is measured by its effectiveness, while the value of learning depends upon its application in the daily life.

Literature show four main approaches to cooperative learning: structural approach (Kagan, 1989), group investigation (Sharan and Sharan, 1992), student team learning (Slavin, 1993) and learning together (Johnson and Johnson, and Holubee, 1991, 1992 and 1994). The structural approach is based on using content-free ways of managing classroom interaction called structures which are relatively easy to implement and can be categorized into team and class building. Group investigation divides work among team members, who complete specific tasks and then reconvene to prepare a group presentation. Student team learning includes the Jigsaw method and student team achievement divisions (STAD) method. The Learning Together model organizes instruction according to the principles of positive interdependence, individual accountability, face to face interaction, social and collaborative skills, and group processing.

Mathematics being the mother of all sciences remained as vital as it was in the early days, but the computer revolution has made mathematics a more integral part of research, policy and development. Computer programmes are even used in the clothing industry for creating different sized patterns. Mathematical models of traffic patterns are used to plan road construction. Mathematical illiteracy leads to muddled personal decisions and misinformed governmental policies. Without an understanding of mathematical concepts, news about billion-dollar deficits or discussions about the probability of contracting a disease are meaningless. Children born today will enter a work force where knowledge of mathematics is crucial to their career opportunities, their participation in society, and the conduct of their private lives. Any person who does not have a broad understanding of mathematics will have limited career opportunities (Johnson, 1991). Thus, mathematics has recognized itself as a core subject of curriculum up to secondary level. But its teaching-learning techniques remained always a matter of discussion.

The researchers have argued about the superiority and effectiveness of cooperative learning over competitive and individualistic learning on different grounds. Cooperative efforts result in better preference in problem solving than competitive efforts do. This is true at all grade level, for both linguistic and non-linguistic problems, and regardless of whatever a problem has a clearly defined operation and solution or operations and solutions that are less clear or are ill-defined (Qin, et al., 1995). Cooperative learning is seen as a powerful tool to motivate learning and has a positive effect on the classroom climate which leads to encourage greater achievement, to foster positive attitudes and higher self-esteem, to develop collaborative skills and to promote greater social support (Anonymous, 1997; Sadker and Sadker, 1997).

Roberston *et al.* (1999) presented a rationale why does cooperative learning deserve a central place in mathematics instruction? The study of mathematics is often viewed as an isolated, individualistic, or competitive matter. One works alone and struggles to understand the material or solves the assigned problems. Perhaps it is not surprising that many students and adults are afraid of mathematics and develop math avoidance or mathematics anxiety. They often believe that only a few talented individuals can function successfully in the mathematical realm.

Research shows that cooperative learning has benefits for the students of all the cognitive abilities: talented or gifted, average and below average or slow learners. Slavin (1991b) discovered that gifted students gained just as much from cooperative groups as average or low-achieving students in all areas except language mechanics. In K-12 settings, Slavin (1996b) citied studies that examined the effects of cooperative learning groups on student at different achievement levels and concluded that most studies "found equal benefits for high, average, and low achievers". However, Hampton and Grudnitski (1996) reported low achieving undergraduate business benefited the most from cooperative learning. Kenneth and Young (1999) specifically investigated the effect of cooperative learning groups on the academic achievement of high-achieving pre-service teachers and noted that cooperative learning did not enhance their academic performance. Armstrong-Melser (1999) conducted a study comparing the performance of homogeneously grouped gifted students to heterogeneous ability groups that included gifted, average and low performing learners. All groups experienced a comparable increase in achievement after working together, with the gifted group performing only slightly higher.

Olsen and Kagan (1992) state that cooperative learning increases interaction among learners as they restate, expand, and elaborate their ideas in order to convey and/or clarify intended meaning. In a recent study carried out in Lebanon, Ghaith (2003) investigated that cooperative learning enhances the students' achievement, academic self-esteem and decrease their feeling of school alienation.

The studies of King (1993); Jacobs et al. (1996); and Leikin and Zaslavsky (1997) in the mathematics classrooms resulted that cooperative learning is more effective than traditional teaching-learning styles.

A meta-analysis of cooperative learning methods indicates that by and large 1000 studies have been conducted on cooperative learning in the past. Out of these, only a few studies have been conducted in South East Asia. In this perspective, it seemed very suitable to test and implement cooperative learning in our own culture. Besides this, the importance of mathematics and mathematics phobia of our students have made

incumbent to adopt an effective teaching-learning strategy. Therefore, a study to justify the application of cooperative learning in mathematics was interpretive. This study was aimed at exploring the "Effect of cooperative learning on the academic achievement and retention of secondary grader mathematics students". This study would be helpful for the teachers, students, teacher trainers, curriculum developers, educational planners and managers, and other relevant stakeholders who are engaged in teaching and research in Pakistan and other developing nations of similar socio-economic status in the region.

Objectives of the Study

The study was based on the following objectives:

1. Examine the effects of cooperative learning on the academic achievement of high-achievers in mathematics at secondary level.
2. Examine the effects of cooperative learning on the academic achievement of low-achievers in mathematics at secondary level.
3. Examine the effects of cooperative learning on the retention level of the high achievers in mathematics in mathematics at secondary level.
4. Examine the effects of cooperative learning on the retention level of low achievers in mathematics in mathematics at secondary level.
5. Suggest implications for cooperative learning in our classroom culture at secondary level.

Hypotheses

To achieve the objectives of the study, the following four null hypotheses were designed:

1. There is no significant difference in the achievement of mathematics between high achievers of the control and experimental groups on posttest.
2. There is no significant difference in the achievement of mathematics between low achievers of the control and experimental group.
3. There is no significant difference between the high achievers of the experimental and the control groups on retention test.
4. There is no significant difference between the low achievers

of the experimental and the control groups on retention test.

Research Methodology

The study was experimental in nature. It was conducted in Government High School D.A.V. College Road, Rawalpindi. 53 students of 10th class were divided into two sections on the basis of achievement level determined in the pretest. Section A comprising of 25 students served as the control group and the Section B comprising of 28 students served as the experimental group. Both the groups were further divided into two sub-groups i.e. high achievers and low achievers on the basis of mean scores in the pretest. Within experimental group, students of high and low achievement were mixed for better cooperation.

Two mathematics teachers having equal qualifications and experience were selected. But both differed in the way that one could use the traditional lecture style while the other was capable to teach the students using cooperative learning technique. Hence the former group was control and the latter was experimental. The teacher volunteering for teaching the experimental group was provided two weeks training in cooperative learning i.e. one week for theory and one week for practical teaching by the researchers. Same lesson plans and worksheets were used along with the direct teaching strategy for both the control and experimental groups. One of the groups were provided with cooperative learning method STAD (Students Team Achievement Division) as treatment, and other group was kept under controlled condition by providing traditional competitive learning situation. After instructions and practicing on 18 lesson plans and worksheets covering five chapters, the academic achievement of both the groups was examined through a teacher-made posttest. A gap of six weeks was given to both the groups after first evaluation and they continued working on the next chapters. Then, the same posttest was administered to test the retention of the students of both groups.

Pretest and posttest were used as tools where posttest was a test parallel to pretest. Pre-test and post-test were comprised of MCQs of three cognitive abilities with almost an equal weightage to knowledge, understanding and application or problem solving skills. The judgmental equality of the pre-test and post-test was determined through experts' opinions while true validity and reliability or difficulty level of the items

was determined by using Spearman-Brown's Prophecy Formula; it was investigated as 0.075. Applying t-test, significance of difference between the mean scores of the experimental and the control groups on the variables of pretest, posttest and retention test was tested. To determine the treatment effects for high and low achievers of both the experimental and control groups on posttest and retention tests, the factorial design (2x2) analysis of variance, was applied.

Results

On the basis of mean values and applying t-test, it was found that there was no significant difference between the higher achievers of experimental and control group. Table I indicates almost the same mean values of experimental group (18.71) and control group (18.41) among high achievers in 10^{th} grade mathematics.

Table- 1

Comparison of high achievers of the experimental and control groups on pretest

Group	N	Mean	SD	SE**	T-value
High achievers of the experimental group	12	18.71	2.72	1.21	.19*
High achievers of the control group	13	18.41	3.04		

* Not Significant at 0.05 ** Standard Error

There was found a little difference between the low achievers of experimental and control groups; the mean values remained 10.94 and 10.71 respectively. But t-test did not reveal significant difference between the performance of low achievers of the experimental group and low achievers of the control group on the pretest, as can be seen in Table II.

Table- 2

Comparison of low achievers of the experimental and control groups on pretest

Group	N	Mean	SD	SE	t-value
Low achievers of the experimental group	16	10.94	2.79	1.06	0.22*
Low achievers of the control group	12	10.71	2.82		

* Not Significant at 0.05

Table 3 displays the results in terms of analysis of variance (ANOVA). It shows that the teaching methods used were efficient and the experiment conducted falls under the high level of significance. Teaching method (treatment), achievement level and the interaction between the factors remained significant at 0.05 level of probability.

Table- 3

Treatment affects on high and low achievers of the experimental and control groups in post-test on applying ANOVA

Source of variation	df	Sum of squares	Mean square variation	F
Treatment	1	1873.48	1873.48	5.96*
Achievement level	1	4195.00	4195.00	13.34*

*Significant at 0.05 level

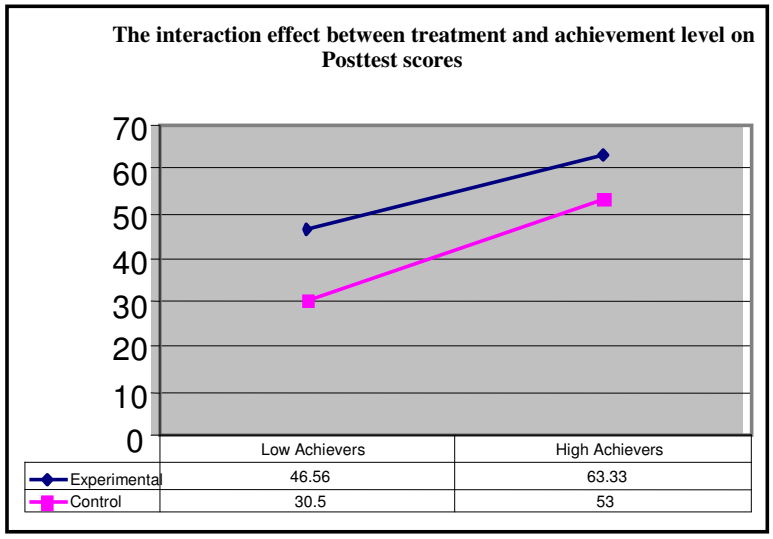
Tabulated value of F-test at 0.05 is 4.04

Results show that the high achievers and low achievers of the experimental group performed significantly better than high and low achievers of the control group. Figure 1 shows the gap difference narrowing towards the high achievers, which revealed that the performance of experimental group was significantly better than control group for low achievers as compared to high achievers. Thus cooperative learning approach promises to be more effective for low achievers. Previous research support this finding (Leikin and Zaslavshy,

1997; Jacob et al., 1998) Most probably it was due to the reason that low achievers did not hesitate to ask any questions to their class fellows rather than their teachers. In this way, they learnt more than those taught by the traditional method.

Figure 1

Interaction effect between treatment and achievement level on posttest Scores



The analysis of variance displayed in Table IV show that the methods used were efficient and the conducted experiment falls under the high confidence level. Teaching methods (treatment), retention and interaction between the factors (retention and achievement level) remained significant at 5%level of probability.

Table 4

Treatment effect on retention for high and low achievers in experimental and control groups

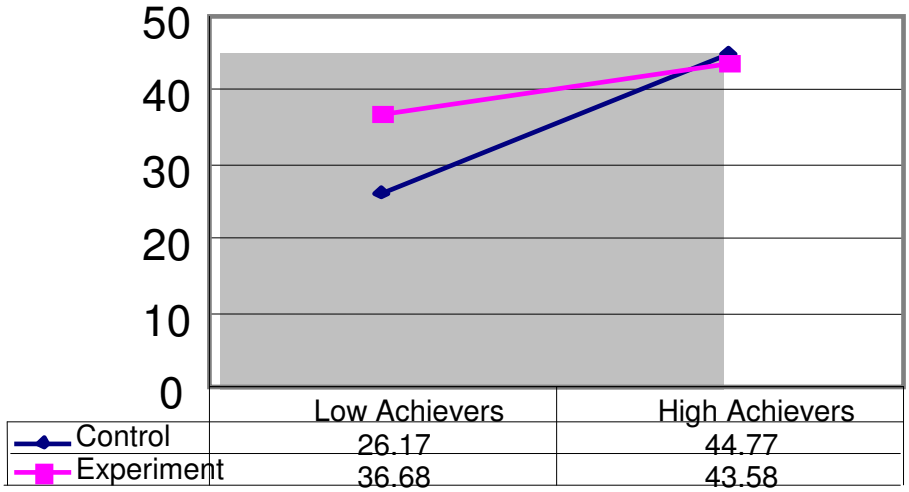
Source of variation	df	Sum of squares	Mean square variation	F
Achievement level	1	1866.25	1866.25	172.64*
Retention	1	184.24	184.24	17.04*

*Significant at 0.05 level

Figure 2 indicates that graph lines intersect near mean score values of high achievers. It reveals that retention of low achievers of experimental group was significantly better than low achievers of the control group. This shows that cooperative learning is a potent contributor to enhance the retention of low achievers. It might be due the reason that low achievers learnt through long-term memory with the help of their class fellows.

The Interaction effect between Retention and Achievement Level

Figure 2



Discussion and Conclusions

The preceding findings of the study show that cooperative learning groups performed relatively better than the group taught by traditional method of teaching. However, cooperative learning proved to be more favorable for low achievers as compared to high achievers. These results support previous researches conducted by Kenneth and Young (1999) and Hampton and Grudnitski (1996). Yet there are some studies (Elavin, 1996b;) which concluded that cooperative learning have same effect on high, middle and low achievers. This difference might be due to variation in the classroom settings - seating arrangements and learning environments; successful implementation of cooperative learning; teaching experience of the teacher implementing cooperative learning;

and/or the subject area as a focus of learning. Whatever may be the source of conflict in this regard, mathematics is the subject, which involves more logic and argumentation for learning. Thus, learners require more scaffolding and help while learning mathematics. In cooperative learning groups, low achievers received more scaffolding and help from more capable peers as compared to high achievers. Which is the connection between cooperative learning and Vygotsky's social interaction theory with reference to the concept "the zone of proximal development (ZPD) i.e. the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Bransford et al., 2000). Consequently, low achievers attain more than high achievers.

Secondly, low achievers seek greater space and pace as well, to show achievement in comparison with high achievers. Thus, higher gain of low achievers was due to cooperative learning can be attributed to above two factors in this study.

Following two conclusions can be drawn from the study:

1. Cooperative learning in different cultures is a more effective mode of instruction for mathematics as compared to traditional method of teaching. Therefore, cooperative learning should be used to improve the academic achievements of students in mathematics. Moreover, mathematics teachers should be provided training in cooperative learning.
2. The results of a few studies are insufficient to decide about the maximum use of cooperative learning in our culture. Particularly in the context of Pakistan, a little research is available in regard to impact of cooperative learning on academic achievement and retention of secondary grader students is available. Thus, a series of action researches on cooperative learning in different situations considering different variables like locality (rural-urban) gender and schools with mixed genders need to be carried out. So that the results could be generalized at national level.

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Study on the Classroom Methodology of Secondary School Teachers Trained Through Distance Education

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Abstract

This paper describes a study that has attempted to evaluate the outcome of an Open University course in teacher education through surveying the competence of the teachers especially in classroom methodology who have attained their Bachelor of Education at Allama Iqbal Open University (AIOU) in Pakistan.An extensive review of the literature established teacher competencies generally agreed as necessary for effective classroom teaching while studies that researched the value and impact of distance education were also examined. To examine the extent to which teachers who obtained their degrees from AIOU possessed these competencies, survey questionnaires were devised to gather data from several perspectives.

Introduction

The quality and the level of excellence in education depend upon the quality and competence of teachers. The competent teacher is possible through a careful program of teacher training. A teacher is trained in both theory and practice and it becomes essential that training should equip them to do a challenging job. Programmes of teacher training are being offered through the traditional face-to-face system of education as well as through distance education.

There are many teacher training institutions teaching through a traditional face-to-face education mode in each country throughout the world. Such systems of education are successful worldwide both in advanced countries as well as in developing ones. But a distance education mode has less recognition in the developing world as that of the traditional mode. To some extent this is due to a digital divide

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whereby not all students or teaching institutions are connected electronically so cannot rely on new forms of technology. Elsewhere, ease of access to information and communication technologies has meant that distance education has become an important form of learning and teaching around the world. The fundamental concept of distance education is simple enough: students and teachers are separated by distance and time. They use various media for interaction, often connecting asynchronously in flexible time frames. This is in contrast with traditional concepts of education in which teacher and individual learner met at the same time and place which has become an accepted mode of education.

For the teacher profession there is a need to upgrade their professional status through high standards of learning and training. For the teachers, learning and training is considered as two sides of the same coin called education. The most important and crucial point in teacher training and education is to promote learning. Effective teachers are those who are able to incorporate their personal and professional characteristics into the classroom. A competent teacher practices certain principles inherent in educational pursuits to conform to professional standards of conduct and performance. The term competency standard refers to "a combination of attributes underlying some aspects of successful performance" (Gonczi et al., 1990, p.9). There are many characteristics and elements of personality that contribute to effective teaching but all characteristics and competencies need training, improvement and development. During the professional preparation of teachers, there is an emphasis on enhancing their competencies through developing new teaching skills. Teaching is a complex profession with both intrinsic and extrinsic rewards; however it is essential that new teachers are trained in specific skills and competencies.

Messick (1994, p.227) clarifies this concept in following words:

> Competence refers to what a person knows and can do under ideal circumstances whereas performance refers to

> what is actually done under existing circumstances. Competence embraces the structure of knowledge and abilities, whereas performance subsumes as well, the processes of accessing and utilizing those structures and a host of affective, motivational, attention and stylistic factors that influence the ultimate responses.

The quality of competent teaching depends upon the nature of teacher training program. The competence of teachers entering the profession is a significant issue for providers of teacher education and the many education bodies who employ graduate teachers. According to the International Board of Standards for Training, Performance and Instruction (IBSTPI),(2007) "...an integrated set of skills, knowledge, and attitudes that enables one to effectively perform the activities of a given occupation or function to the standards expected in employment". The IBSTPI competencies are statements of behavior - not personality traits or beliefs, but they do often reflect attitudes.

The phenomenon of competence is not a recently contested issue, nor one that is unique to the teaching profession. To make the art of teaching more scientific and measurable, a lot of work in respect to teaching competencies has been carried out particularly in Australia, USA and UK. Ingvarson and Chadbourne (1994) mention that "American schools debate the wisdom of regular, compulsory teacher appraisal; teachers in the UK are forced to deal with the effects of mandatory appraisal of competence". Similarly, Australian education bodies are involved in developing a nationally recognized set of professional standards (Board of Teacher Registration, Queensland, 2002). Teacher training institutions devise training programmes that suit their preferred objectives while education bodies that employ teachers have their own criteria and preferences about their competencies. A universal agreement on standards for competencies may not always be possible. Consequently the competence of teachers entering the profession is a significant issue for providers of teacher education and the many employing bodies.

The teaching profession requires a teacher to continuously update their professionalism and learning. A teacher must not only be knowledgeable for their own students but must also continuously improve their own knowledge. In this context, Australian government took an initiative of

devising a national competency framework for beginning teachers for the benefit of the education community.

Davidson College (USA) (2006) has divided the competencies of teachers into two categories i.e. professional and pedagogical competencies:

Pedagogical skills

- Teachers practice effective classroom management.
- Teachers use a variety of methods to teach students, including cooperative learning techniques.
- Teachers use a variety of methods to assess what students have learned.
- Teachers align their instruction with the required curriculum and teach thinking and problem solving skills.
- Teachers plan instruction that is appropriate for a diverse student population, including students with social needs.
- Teachers have strong and technological skills.

Professional skills

- Teachers believe that all students can learn.
- Teachers know and respect the influence of race, ethnicity, gender, religion and other aspects of culture on a child's development in the area of technology.
- Teachers are reflective about their practice
- Teachers work collaboratively with colleagues, families, and the community to support the learning environment).

Teaching requires some characteristics which must be developed during the training period. An ideal teacher practices certain principles inherent in educational pursuits to conform to professional standards of conduct and performance. The teacher, believing in the worth and dignity of each human being, recognizes the supreme importance of the pursuits of truth and the nurture of democratic principles. Essential to these goals is the protection of freedom to learn and to teach and the guarantee of equal educational opportunity for all. The teacher accepts the responsibility to adhere to the highest ethical standards.

Communication skills, motivational techniques and use of technology are important skills for Teaching. The University of Northern Iowa (2007) mentions for the following competencies:

1- Knowledge of Content and Skills areas
2- Knowledge of Learners and the Learning Process
3- Instructional Planning
4- Use of Instructional Strategies
5- Learning Environment and Classroom Management
6- Use of Communication Strategies
7- Assessing/Diagnosing/Evaluating Strategies
8- Use of Motivation Strategies
9- Use of Problem Solving/Decision Making Strategies
10- Home-School-Community Relations
11- Use of Technology
12- Use of Multicultural Gender Fair Strategies
13- Human Relations Skills
14- Professional Characteristics/Personal Qualities

An effective teacher is one who is bringing about intended learning outcomes. They run the classroom in an organized, highly structured manner, emphasizing the intellectual content of the academic disciplines. Enlightened teachers are fair, responsible, steady, poised and confident.

Teaching training through distance education

Distance education is flexible. Traditionally educated individuals can also continue their education through this system whereby the student and learner are at a distance from one another. They share their activities through either correspondence, face-to face contact or through the use of various instructional media.

> Distance education is planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special method of communication by electronic and other technology, as well as special organizational and administrative arrangements (Moore & Kearsley 1996, p.2).

Many developing countries are confronted with crucial problems in the field of teacher education. Teacher education is a multidimensional activity and encompasses various aspects of a teacher's life and work. Its aim is not only to teach the teacher how to teach but to make an effort to develop their initiative, to reshape their professional attitudes and to develop skills to improve their professionalism.

Bennet (2000,p.59) argues that "In order to keep pace with technological changes in society, the teacher education programmes of all levels in a country must be planned in such a way the teachers produced by these programmes are broadly educated, scientific minded, uncompromising on quality, innovative, courageous but sympathetic towards students". Because of the magnitude of problems and scarcity of resources, in many countries it did not seem feasible educate only through exclusive reliance on the formal or traditional face-to-face system. Various factors of this system like overcrowded classrooms, increasing population of students, and high drop out rates meant people were unable to enroll in the traditional or formal education system. On the other hand, distance education has become parallel to formal education. Moreover, distance education has facilitated people enrolling in education and diminished the barriers of time and place.

Distance education depends upon media for synchronous as well as asynchronous communication. Evans (1997) states:

> At the pedagogical level educators are encouraged to see their practices are being mediated, usually through electronic communication, along global lines. It is said that the communication media, both directly and indirectly, are able take their teaching to learners around the globe or, conversely, they may use global resources via these media to foster or enhance their own teaching". (p.12)

Teaching

Teachers represent the ideals and aspirations of the nation and owe to its moral and mental accountability for equipping youth for active participation in the enterprise of creating social order. Teachers have to demonstrate a high level of professionalism to meet the standard required by national policies. This aim can be realized by effective, brilliant teachers, teachers who are equipped with the training that has a direct

bearing on the quality of life. The teacher is a pivot in the entire education system. As James (1977, pp.24-25) states:

> In teaching, you must simply work with your pupil into such a state of interest in what you are going to teach him that every other object of attention is banished from his mind: then reveal it to him so impressively that he will remember the occasion to his dying day; and finally fill him with devouring curiosity to know what the next steps in the subject are.

Effective teaching demands that besides possessing adequate knowledge of the subject matter and techniques of teaching, there are many other components to the teacher's role. According to UNESCO (1987) the teacher's role requires the teacher to:

a. ensure students' physical well-being;
b. promote skills and competency in literacy and numeracy, sensitivity to the environment between the school and community;
c. help growth of basic skills and attitudes for proper and continued development of cognitive, social, moral and emotional growth;
d. transmit the culture of knowledge, and help students become aware of the world community;
e. help each individual achieve full self-actualization and become a fully functional member of society;
f. Provide the students and the community with an admirable role model of the professional teacher; and be accountable to the community and to parents.

The changing role of teachers necessitates that the teacher must grow in the profession. He has to grow both in the 'what' and 'how' of teaching because an explosion of knowledge is adding to 'what' and vast changes in education, its media, its tools and conditions around demand a change in teachers through quality teacher education programmes. The quality of training given to teachers depends upon the professional competency of teacher educators. Moreover, teacher education programmes are responsible for preparing future competent teachers therefore teacher education must be good and effective. Another point that needs emphasis at this juncture is that once trained, teachers would do well to keep on

improving their teaching with fresh learning. Again, as teachers, they must ensure that their students learn when they teach. Eckersley (1995) stresses:

> Quality teachers are needed more than ever to assist students with their learning. Teachers have multi dimensional role in the process of education i.e. in assisting administration, guiding and counseling students both in their effective learning as well as their future role in society as a responsible citizen. Successful or good teaching is the teaching which does bring about the desired learning. The challenge of education thus stresses the need for orientation in skills and methodology for teachers in colleges and universities.

Bransford, Brown and Cocking (1999) also described the nature of an effective and high-quality teacher when they noted the following:

> Outstanding teaching requires teachers to have a deep understanding of the subject matter and its structure, as well as an equally thorough understanding of the kinds of teaching activities that help students understand the subject matter. …expert teachers have a firm understanding of their respective disciplines, knowledge of the conceptual barriers that students face in learning about the discipline, and knowledge of effective strategies for working with students. (p.126)

Procedure

A list of those teachers who have B.Ed degrees from AIOU and are working in ICT was obtained from the office of the Director General Federal Directorate of Education. Islamabad. Data gathering tools were sent to their schools through the Directorate to obtain data from teachers who agreed to participate in this study. Care was taken to include those teachers who qualified from AIOU after 2000 because before 2000 courses of AIOU were not broadcast media based. Consent of the Directorate was sought and approved. Two other target groups i.e. students of these teachers and heads of schools were included from the same school when gathering data. Because the focus of the study is to evaluate the competencies of teachers trained through distance education it was important to seek views from heads and students about the

teachers in the study. A further data gathering tool was administered to academic staff at the Faculty of Education, AIOU to obtain their perspectives.

Research questions

1. What are the competencies necessary for effective teachers?
2. To what extent do school teachers who got their degrees from Allama Iqbal Open University (AIOU) in Pakistan possess these competencies?
3. Does a teacher training program through distance mode inculcate the required competencies?
4. What is the relationship between the skills inculcated through distance mode and those qualities required for teaching the corresponding school level?
5. Does distance education have the potential to train teachers in an effective and efficient way?

Sample and research tool

Once the representative population was carefully defined, a representative sample was drawn. A systematic sampling procedure was applied using Burns' (1990, p.60) method described as "if the population can be listed then a sample can be drawn at fixed intervals from the list…. .In systematic sampling, a starting number between 1 and 3 is chosen randomly and selection continues by taking every third person from that starting number". In this study a 1-in-3 ratio was used to derive a sample.

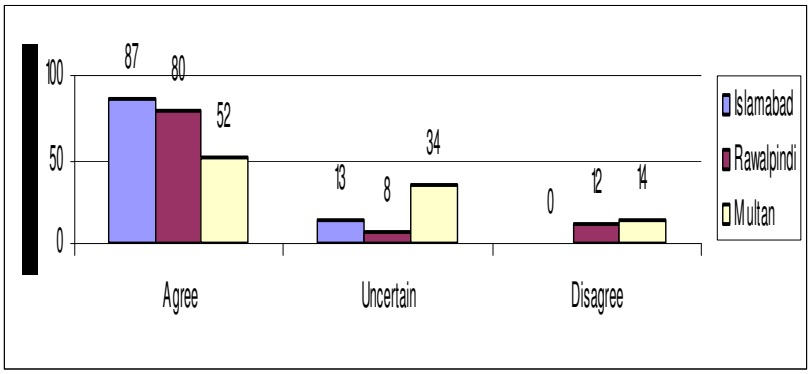
Data analysis and discussion

Students

They were asked; "The teacher uses different methods to increase your learning". They replied with different responses. The large number (87% Islamabad; 80% Rawalpindi and 52% Multan) from each region agreed with the statement. 34% from Multan, 13% from Islamabad and 8% from Rawalpindi was uncertain. There was no one from Islamabad disagreeing with it but 12% from Rawalpindi and 14% from Multan disagreed.

Figure 1

Use of different methods



(N= 141(Islamabad 100; Rawalpindi 80 and Multan 40)

In order to make teaching learning process effective the teacher has to use various methods suiting to the classroom situation as well as the requirement of the content topic.

Teachers mostly use lecture and discussion methods due to the reason they take it granted that it suits to students as well as their students are learning.

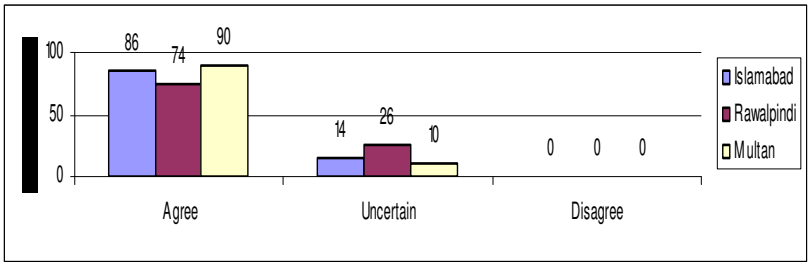
More teachers from Islamabad and Rawalpindi use various methods as compared to those of Multan teachers. This trend is different in the far flung rural area where teacher don't practice what they have learned during their trainings.

Teachers

During B.Ed programme trainees are given extensive knowledge and practice of different methods and strategies of teaching. Therefore, they were asked that, "You are able to use a variety of teaching methods and strategies". Majority of the teachers from all regions (i.e. 90% Multan; 86% Islamabad and 74% Rawalpindi) agreed with it. Small number (Rawalpindi 26%, Islamabad 14% and Multan 10%) was uncertain in this regard.

Figure 2

Ability to use various teaching methods and strategies



(N= 92 (Islamabad 44; Rawalpindi 30 and Multan 18)

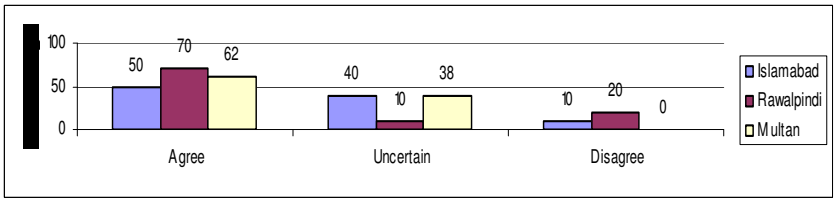
Here the response is different from that of the students. The teachers from Rawalpindi are more uncertain which shows a deficiency during their training. Possibly due to the gap of implementation of various components i.e. tutorial, workshops, assignments etc in different study centres. But the teachers of Multan and Islamabad know various methods but according to their students they don't practice them.

Heads of schools

In order to make teaching interesting, creative and understandable the teacher has to use a variety of strategies. The heads of schools were asked in this regard. "The teacher(s) uses a variety of effective teaching strategies".50% from Islamabad, 70% from Rawalpindi and 62% from Multan agreed that they use various teaching strategies. The noticeable response with uncertainty (Islamabad 40%, Multan 38% and Rawalpindi 10%) and disagreement (Rawalpindi 20% and Islamabad 10%) with the statement shows that the teachers do not imply variety of strategies.

Figure 3

Variety of effective teaching strategies



(N= 33 (Islamabad 10; Rawalpindi 10 and Multan 13)

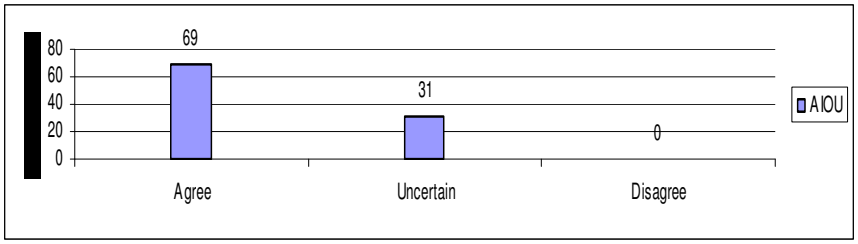
The statement of heads of schools is supporting the view point of the students. And as discussed earlier, the teachers were trained using various methods but they do not apply these in their classroom instructions.

Academics

Similarly it was interesting to ask from the academicians about their vision and approach enshrined in their programme. They were asked, "The B.Ed trainee should be able to use a range of strategies to promote positive relationships, cooperation, and purposeful learning in the classroom". In this regard 69% agreed but more than one forth (31%) were uncertain.

Figure 4

Ability to use a range of strategies



(N=13)

Majority of the academics agreed and that was also evident from the response of the teachers that they were being taught various methods and strategies for making his/her teaching purposeful. However a noticeable number of academicians disagree with this which is difficult to explain.

According to the students their teachers use different methods and strategies to increase learning but they do not use various technologies (computer, overhead projector and model) in teaching as well opportunities for practice. However, the teachers respond to students' behavior effectively and appropriately.

The teachers said that they were able to use a variety of teaching methods and strategies and provide a stimulating learning environment. Their preparation for teaching during training included observation of classroom teaching of other teachers.

The heads of schools agreed with the above view of teachers. The academics agreed that teachers should use a range of strategies of teaching. All of them were not in full agreement about the teachers' ability to use a range of strategies to promote positive relationship, cooperation, and purposeful learning in the classroom. Teachers are not fully competent to present subject matter but difference of this competency in teachers from region to region points out to the action of the university.

Conclusion and recommendations

Teachers need to be well prepared in using various audio- visual- aids and technologies (Computer, Overhead projector and models) in teaching. Moreover, the schools also lack important A.V.Aids. Selection of appropriate instructional strategies/activities and use of additional material and resources for teaching the teacher were not well prepared

Recommendations

- During B.Ed the teachers should be well prepared to use different audio- visual- aids in their classroom teaching. Schools should have adequate provision of audio visual aids to fulfil the teaching requirements of the teachers of each subject.

- During teacher training the trainees should be given an extensive practice of selecting appropriate instructional strategies/activities and the use of additional material and resources for their teaching.

- Teachers use only lecture methods and don't use variety of methods and strategies whereas they learned such skill during their training. AIOU's course provides for various methods and strategies but there appears to be problems in the implementation of its programmes effectively. The preparation of teachers at AIOU included observation of classroom teaching of others.

- AIOU should ensure competency of students in the classroom methodology through its provision of teaching practice.

- The teachers do not use different audio visual aids. They respond to students' behaviour effectively and appropriately

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Need Assessment for Professional Development of Colleges Teachers

Dr. Naveed Sultana [*]

Abstract

The quality of education is the result of the quality of teacher, and the quality of teachers mainly depends upon the professional development. All levels were significant but in the context of this study higher level of education particularly degree colleges were considered as terminal point of those students who were studying in those colleges. Many modern educational reforms require teachers at higher level to change their role and accept new responsibilities. For this purpose professional development was necessary for college teachers to enable them to perform successfully. Keeping in view the significance of professional development these objectives were focused: (a) to examine the teaching quality and need for professional development of college teachers through the opinions of students and teachers. (b) to analyse the efforts of different institutions for providing the professional development of college teachers. This descriptive study comprised of 80 teachers and 200 students from eight model degree colleges (4 male and 4 female) of Islamabad. After analysis it emerged that professional development was the dire need of college teachers.

Introduction

Civilized societies have, for many countries, looked to their institutions of higher learning for the training of leaders in government and in other professions. For this purpose all levels of education are important but the higher education plays an investment for countries. No country has ever been able to make rapid progress without a well-developed system of higher education. Our greatest national asset lies in the potential skills of our people, and our economic and social progress depends on how we develop them. For this purpose higher education can assist a student to become an educated man in a general sense, besides providing training for specialization.

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It is considered that the strategic point in education lies in colleges and universities. These institutions set the tone for primary, secondary and specialized education. They train the teachers, lawyers, doctors, engineers, scientists, philosophers, agriculturists, businessmen and government officials who provide leadership and establish standards for moral, economic and social life. They are responsible for conserving knowledge for keeping abreast of new knowledge and adding to knowledge through research (Quddus, 1979).

By focusing the diligent attention on these functions of higher education, now the question arises what must be the duties of the teachers generally at all levels of education and particularly for higher education in Pakistan. For seeking the good teacher we have to strive for that teacher who possesses the following characteristics, he should be academically well trained in the subjects he teaches; he should have had sound professional training in how to teach his subjects and understand the learners in his charge and he should possess a deep sense of professional honour. Precisely when we speak about the standards of teaching profession then we have in mind something more than simply academic qualifications. Our college teachers must have these, but they should have more besides. They should have a higher sense of vocation, sense of service to the nation, a willingness to help students in constructive work, a determination to find substance for teaching (Qureshi, 1975).

So the reforms which we wish or propose in education and in teaching particularly at higher level need the full preparation of the teachers both in knowledge and pedagogy. Two opinions are given about the teacher. Firstly "teacher is born not made" and secondly, "teacher is made not born". Both are true to some extent but the training is more important for effective teacher because it enhances the perfection and competency. The training now a day is called professional development or staff development. The concepts of these terms are common. Keeping in view the present study two main questions arise; why the professional development is necessary and what is the professional development? First issue leads the need assessment of the professional development of teachers. This study is an innovative in the field of higher education at college level. This aspect is about why? So the need assessment may include (a) improvement of teaching (b) improvement of research performance (c) evaluation of teaching effectiveness (d) enhancement of

learning competence of student, (e) institutional research and investigation, (f) awareness raising and dissemination of information (g) maintenance of a resource centre (h) mobilization of resources (i) curriculum development (j) development of academic knowledge and understanding and (k) community service. After this what, leads to the concept significance and objectives of professional development. Professional development is described in the U.S. Department of Education document (1995), Building Bridges as the bridge that takes practitioners, the new as well as the experienced, from where they are to where they need to be to guide each student in learning.

It has been well stated in the context of professional development that good colleges grow good teachers. Improving colleges are learning organizations in which everybody is engaged in the understanding and development of effective practice. Teachers teach, but they also have to be advanced learners in order to develop new skills and insights. It is the personal and professional growth of teachers that will have the most impact on pupil development (Brighouse and Woods, 1999).
Needs assessment is an information gathering and analysis process which results in the identification of the needs of individuals, groups, institutions, communities, or societies. In education, the Process of needs assessment has been used, for example, to identify the needs of students for instruction in a given subject area; to determine weaknesses in students' overall academic achievement; to determine the needs of teachers for additional training; and to determine the future needs of local, regional, and national educational systems. It is the intent of needs assessments to identify areas in which deficits exist, desired performance has not been attained, or problems may be expected in the future. The results of needs assessments are then used for further action such as planning or remediation to improve the situation.

Quality in education is seen by many to reside in the quality of the learning experiences and the extent to which teaching – Learning activities issue in the outcomes exhibited and successes attained by the students. So for the quality of education we need well-trained teachers (Daling-Hammond, 1996).The need of professional development is felt in response of three trends: Poor student's achievement, bottom-up reform efforts and new view of teaching and learning. Critics argue that improving the performance and

quality of teachers is a crucial and critical prerequisite of improving student achievement (Carnegie Task force on teaching as a profession 1986).

It is often recommended that professional development planning being with a thorough assessment of the needs of those educators who will be involved. Well-designed needs assessment are considered essential in planning well-targeted and highly efficient professional development programs and activities. But although most needs assessments offer valuable information, current evidence indicates that they may be misnamed. Instead of identifying needs, they typically identify problems, dilemmas, concerns, and want. In other words, it is not needs that these surveys identify, but rather symptoms of needs that must be diagnosed more thoroughly and more completely (Jones and Hayes,1980).

Role of College Teacher

A college teacher plays many roles. Some of the roles are Guide, Counsellor, Disciplinarian, Custodian, Evaluator, Curriculum developer, Lifelong learner, Extension worker, Researcher/Innovator, Organiser of co-curricular activities, Administrator, etc.

Guide: An effective teacher is an effective guide. The role of the guide is concerned with providing guidance to the students for learning. Such a teacher knows the level of the students, their academic backgrounds and abilities and suggests suitable methods and materials for their learning.

Counsellor: An effective teacher works as counsellor. He/she knows about different types. Educational programmes and suggests student as per their aptitude, interest and abilities.

Disciplinarian: An effective teacher plays the role of disciplinarian. He/ she maintain discipline not only in his/her classroom but also in the college campus.

Custodian: The teacher is the custodian of the students. When a teacher is appointed as warden of a hostel, the custodian role becomes more prominent. Otherwise, the teacher **is** also responsible for care of the students during their stay in the colleges.

Evaluator: An effective teacher plays the role of evaluator. An ideal evaluator knows the techniques of evaluation and the objectivity, reliability, validity and usability of test items. He/she knows the modern techniques of preparing test items and is skilled in preparing such items. He/she is well aware of tests available in his/her subject and knows the utility of each of these tests. He/she undertakes formative evaluation of the learning of the students for their improvement. He/ she also undertakes summative evaluation of the learning of the students for the purpose of awarding scholarships, placement, etc. and also acts as evaluators on behalf of the universities.

Curriculum Developer: Senior teachers act as members of the Board of Studies of the Universities. They take part in development of courses of studies and in prescribing textbooks for different subjects. They also decide the principles and regulations for various examinations. They suggest panels of examiners.

Lifelong Learner: An effective teacher is a researcher. He/she continuously updates his/her knowledge and skill. It is said that a lamp cannot light another lamp unless it continues to burn its own flame. An effective teacher is never satisfied about the extent of knowledge and skill acquired by him/ her; he/she is always ready to improve.

Extension Worker: An effective teacher plays the role of extension worker. He/she tries to utilize his/her knowledge and skill in helping the community. The extension provides feedback to him/ her. The extension work brings the community and college closer.

Researcher/Innovator: An effective teacher is a researcher and innovator. He/ she utilize his/her classroom situations for carrying and research. He/she is never satisfied with the status quo. He/ she are well aware of the fact that innovations in teaching methodologies contribute to better student learning. The teacher is aware of the fact that because of the change in the nature of the student population, there has to be corresponding changes in the teaching methodologies. There has to be continuous efforts to match the teaching styles to the learning styles of the students.

Organizer of Co-curricular Activities: All teachers are assigned co-curricular activities. Generally, the teachers who are efficient in managing co-curricular activities are assigned more duties. During organization of co-curricular activities, the teacher and students get to know each other better. This is helpful in establishing rapport between the two, useful at the time of classroom instruction.

Administrator: Every teacher is an administrator. The colleges prescribe minimum attendance percentage. The teacher has to take the attendance. The principal assigns various administrative duties to the lecturers, readers and professors of his/ her institution. The administrative duties include office supervision, hostel supervision, conduct and supervision of elections, etc. (Mohanty,1995)

Evaluation of Teaching Competencies

1. As a director of learning, do I

a) Adapt principles of student growth and development to planning of learning activities? b) Plan my teaching-learning situation in accord with acceptable principles of learning? c) Demonstrate effective instructional procedures? d) Utilize adequate evaluation procedures? e) Maintain an effective balance of freedom and security in the classroom?

2. As a counsellor and guidance worker, do I

a) Utilize effective procedures for collecting information about each student? b) Use diagnostic and remedial procedures, effectively? c) Help the student to understand himself? d) Work effectively with the specialized counselling services?

3. As a mediator of the culture, do I

a) Draw on a scholarly background to enrich cultural growth of students? b) Direct individuals and groups to appropriate significant life application of classroom learning? c) Design classroom activities to' develop student ability and motivation for finding democratic- solutions to current social problems and recognizing and identifying key problems? d) Direct students in learning to use those materials from which they will continue to learn after leaving institution? e) Help students develop attitudes and skills necessary for effective participation in a changing democratic society? F) Help my students acquire the values realized as ideals of democracy, such as mutual respect,

willingness and ability to cooperate in the solution of problems and the use of intelligence in problem solving, goals and standards for effective living in our culture?

4. As a link with the community, do I:
a) Utilize available education resources of my community in classroom procedures? b) Secure cooperation of parents in college activities? c) Assist lay groups in understanding modern education? d) Participate in definition and solution of community problems relating

5. As a member of the staff, do I:
a) Contribute to the definition of the overall aims of the college? b) Contribute to the development of a college program to achieve its objectives? c) Contribute to the effectiveness of over-all College activities? d) Cooperate effectively in the evaluation of the college program?

6. As a member of the Profession, do I:
a) Demonstrate an appreciation of the social importance of the profession? b) Contribute to the development of professional standards? c) Contribute to the profession through its organizations? d) Take a personal responsibility for my own professional growth? e) Act on a systematic philosophy, critically adopted and consistently applied? (Beaver,1986)

Keeping in view the college teachers roles and teaching competencies professional development of our colleges' teachers seems compulsory and essential for qualitative improvement of any system of higher education. Professional development is concerned with enhancement of knowledge and skill of the teachers. The individual is the main agency for professional development. The teacher can update his/her knowledge and improve his/her skill if 'he/she is sincere in effort and gets opportunity for development. The main concern of this study is laid on professional development of college teacher in Pakistan for such reasons (a) to improve the quality (b) initiative by teachers to do research on teaching (c) competition among institution compelling the old ones to look for alternative and innovative methods of instruction and (d) diversified student population which is not satisfied by the uniform teaching methods and styles. In Pakistan, teachers are trained through

different training programmes such as PTC, CT, B.Ed, and M.Ed. The nature of all these programmes is pre-service and in-service. But our college teachers possess the academic qualifications of the specified subjects without having professional training. Further there is no proper arrangement for professional development of college teachers. And no significant research work appears for assessing the need and developing the program for professional development of college teachers in Pakistan. So this study was designed to probe this issue at large.

The Objectives of the Study Were:

1. To examine the student's opinions about the teaching competencies of their college teachers.2.To find out teachers perceptions about the need for their professional development.3.To analyze the institutional policies and efforts providing for professional development of college teachers.4.To give workable recommendations for the professional development of college teachers.

The trends of higher education are melded towards globalization, internationalization and universalization. Quality of higher education depends upon quality of faculty, quality of curriculum, quality of students and quality of instructional technology. The report of the Task Force on higher education pointed out that ineffective faculty development is a major issue in Pakistan. This issue needed more and more attention. The study would lead to careful planning for college teacher's professional development. The Higher Education Commission, Universities, Provincial Education Departments and their Training Institutes would be able to utilize the findings and recommendations of this study. The Principals of Colleges, University Teachers and college teachers can enhance and improve their knowledge, competencies, skills and professional development. Ultimately professional development ensures quality education in the country.

Research Methodology

Research demands investigation of problems in a scientific way to find out some workable solution. The main purpose of this study was need assessment for professional development of college teachers in Pakistan. Hence the study was delimited to only federal territory. The nature of the study was descriptive/survey. Total population of government degree colleges in Islamabad consists of eight male and eight female degree

colleges from this population model Govt degree colleges (4 male and 4 female) were sampled. From each college 10 teachers and 20 students were selected randomly. Total sample of the study included: Teachers: 8x10= 80 (40 female+40 male teachers) and Students: 8x25= 200(100 female +100 male Students). For collection of data two questionnaires were developed on three points scale (One for students one for teachers). Collected data was analyzed by applying the mean score.

Results and Discussion

On the basis of mean scores of table.No.1 which, deals with the opinions of students about need assessment for professional development of their colleges teachers at degree level. The items of this table only focus the quality teaching of these teachers through which need assessment for the professional development was analyzed. So the analysis of table No. 1, shows that majority of teachers were not marked as certainly in their dynamic roles during teaching.

Out of 20 items the mean score came out more then 2 in eleven items which indicates although teachers with having good back ground in their subjects but awareness about the latest advancement in their subjects, appropriate lesson planning, giving the real life examples during teaching, using variety of methods, applying their voice effectively, making congenial learning environment, focusing the character building of students creating democratic environment, and motivating the students, for all of these aspects the teachers were rated as seldom. While majority of the respondents opined teachers just use the tests for assessing the students' achievements. All of the students were in favors of the professional development of their teachers. Remaining the 9 items of table No. 1, the mean score came out more then 1which highlights that teachers were never care, for enabling the students in taking away good sets of lecture notes, for appreciating the students' individual abilities, for encouraging the students about asking questions, for improving students thinking skills, for protecting the classroom from disruptions, for treating the students equally and for giving the constrictive feed back to the students. Keeping in view the analysis of all aspects regarding quality performance of teachers in their classroom teaching the over all mean score of table No 1 comes out 1.94. that depicts the need for professional development of college teachers.

Keeping in view the need for professional development of degree colleges teachers, data was collected by the sampled teachers, through questionnaire. On the basis of mean score of table No.2 majority of the respondents were in favor of their professional development through which they can become more competent and proficient.

Out of 25 items of table No. 2 the mean score was calculated more then 2, in twenty items, which shows that although teacher's performance is qualitative but they require their professional development. While focusing the importance of professional development majority of the respondents were in favor of it. Because through their professional training, teachers will be able to acquire social and administrative skills, the need of professional development was ranked as certainly, as it causes for updating the teaches, in their, knowledge, information and pedagogy, for discussing and solving the educational problems and deficiencies, for enhancing the interest in their profession and student, for making them responsible, competent and cooperative and for encouraging the research behavior among the teachers. Majority of teachers opined about the three months pre induction training and one month in-service periodic training after every three years. Hence in-service training should be arranged at district level, which should be followed up by principals.

Remaining 5 items out of 25 items contain more then 1 mean score, which shows the poor quality of responses. Such as incapability of heads for creating good organization behavior, equal chances of professional development for all teaches, no arrangement of professional development at campus, insufficient budget for professional development, and no provision of frequent professional development from different organizations. Keeping in view the analysis of table No.2 the over all mean score comes out 2.52 which emphasizes the dire need of professional development of college teachers.

Students may be tougher judges of teaching them faculty (Lowman, 1984). While focusing the same role of the students about the mastering of teaching of their teachers during this study opinion were gathered form the students of degree colleges. By analyzing the questionnaire, items regarding need assessment for professional development of college teachers. Following conclusion may be drawn as under:

Majority of the teachers with having good back ground in their subjects but mostly they are lacking in effective teaching learning process. They do not have competency about planning and presenting the lesson. Although the same category is emphasized by different educationists, such as Edger, Marlow and Rao (2000), Costa and Liebmann (1996), Beyer (1996), Sadker and sadker (1997) and Brig house & woods (1999) and many others agreed that teaches must posses the academic knowledge, pedagogical knowledge, awareness about the latest advancements in their subjects and enthusiasm for the subjects.

The following details i.e punctuality, manners, discipline, comfortable atmosphere, individual attention, communication skills, motivational skills, evaluation skills, and social skills are involved in improving classroom conduct. As Docking (1990) says that good classroom conducts promotes the good behavior of the students. According to Louis Cohen (1996) for improving the classroom conduct teachers should keep in touch with some of features that make up the classroom environment and some situational factors that impinge on effective teaching and learning. While focusing the importance of classroom conduct our college teachers do not meet the criteria of effective teaching learning process as the results of existing study show that majority of the college teachers are lacking in effective classroom management skills.

Keeping in view the ineffectiveness of our college teachers, their students were in favor of their professional development. Be cause professional development and instructional improvement are intimately related in the sense that they increase the college capacity and performance. (Watson and Bines, 1992, Beerens, 2000, and Gall, 2004)
It may be concluded that professional development of teachers is essential for the qualitative improvement of any system of higher education. As professional development is concerned with development of knowledge and skills of the teachers. The same argument is augmented by Mohanty (1995) UNESCO (1997) Govt of Pakistan (1998) Guskey (2000) and Gall (2004) more or less agreed that teacher training programme should ensure (i) a sound grasp of the subject (ii) knowledge of student psychology (iii) the methodology of teaching and the skill to use up to date techniques and (iv) a high sense of professional ethics.

Conclusions

On the basis of results it may be concluded that major efforts are required from the government, institutions and other organization for providing the professional development of college teaches. For this purpose sufficient budget is the utmost factor. Institutional policies should be enriched regarding the in-service training. As no system is better without their teachers and teachers require their professional development. For enhancing the teachers quality there is need of some institutional policies which focus the arrangements of pre induction den in-service training opportunities equally to all teachers which may be provided at district level. For enhancing the quality of professional development of all teachers, the principals of colleges with having leadership qualities may follow up the professional development programmes.

Conclusion 1:

Teaching facilities are not proper. Teaching techniques used are not effective teachers do not update their knowledge and they do not prove themselves as model as the average mean & case against these each score come 1.86. Any how majority respond that free and conduence academic environment is not available. It can safely be concluded that proper teaching need more attention.

Conclusion 2:

Administration does not develop integrity in teachers. Policies of the universities do not forster good teaching. Teaching evaluation criteria are not clear and effective. Grants for good teaching are not provided. The average mean score against these items came out 1.11. Any how university authorities gave seldom attention to increase effectives of teaching.

Conclusion 3:

Good teaching is not given any weightage in selection of teachers. Sub-standard teachers are selected. Research is professed against teaching. Teacher is not evaluated impartially. Good teachers are not encouraged with any uncertive. As the average mean score against these items came out 1.4.

Conclusion 4:

Conferences seminars and workshops are not properly arranged for updation of knowledge. Institutions do not provide documentary guidance for good teaching and newsletters are not cover issues of good teaching. Teachers are not encouraged to participate in seminars and conferences. The average mean score came out 1.16. Heads of department seldom guide teachers and teachers are not given equal chance for professional development.

Recommendations

Research on teaching should be enhanced and results of such researches should be published. Linkage with national and international institutions should be encouraged. Equal chances of access to latest academic developments should be provided to all teachers. The average mean scores came out 2.97.

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A Study of the Stress of College Lecturers as a Moderator of Path-Goal Relations

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Dr. Nayyar Raza Zaidi[**]

Abstract

This article examines the relationship between leadership styles of degree college principals, stress of the teachers and faculty job satisfaction, acceptance of the leader and job expectancies. The moderator tested in three-way interactions was stress which was investigated as an additional variable. The questionnaire was administered to randomly selected sample comprising of 854 lecturers and 138 principals. MANCOVA was used to find the moderating affect of stress on the relationship of leadership style and subordinates outcomes controlling the effect of role ambiguity and stress of the principals. The findings indicated that stress has the potential to be included as moderator in Path-goal theory because it leaves its grave impacts over time.

Introduction

What we decide to do once, we decide to do that for whole of our life. Work plays a powerful role in people's lives and exerts an important influence on them. Job can be an exciting challenge and it can be a source of stress for many individuals. It is difficult to explain exactly what stress is. It is an umbrella term used to define many situations, ailments, conditions of the self and environment. It is an elusive term used to describe countless others. Most of the common terms which are used frequently in our everyday life are tension, under the weather, anxiety, frustration, depression, worn out and on edge (Akram, 1998).

Long (1995) says that stress is an interaction between individuals and any source of demand (stressor) within their environment. A stressor is the object or event that the individual perceives to be disruptive. Stress results from the perception that the demands exceed one's capacity to cope. The interpretation or appraisal of stress is considered an

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Intermediate step in the relationship between a given stressor and the Individual's response to it.

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There is substantial disagreement over the definition of stress as scholars oftentimes take the meaning that is most suitable to the pursuit of their particular interests. People take this concept differently. As Chaplain (2001) asserts that Stress has proved difficult to define both conceptually and methodologically, not only because of the breadth of areas investigated, but also because of the divergent use of the term in different disciplines. In an attempt to understand and explain the phenomena of stress different scholars had given different definitions. Selye (1982) says stress is a "non specific result of any demand upon the body, be the effect mental or somatic" (p. 7). According to Ellison (1998), "Stress is the body's biochemical response to a threatening situation" (p. 109)

Ellison (1998) adds that although stress is usually seen as something which is negative and threatening, it is important to remember that it can also be stimulating, acting as a valuable human response to challenge and change. Healthy tension helps to improve performance by providing a challenge, while excessive pressure can be distressing which leads to loss of effectiveness and ultimately to ill health and break down. Chaplain (2001) commented that stress is the stuff of life, without stress we would not want to survive, since some degree of stress is invigorating. Success in managing stress therefore depends on the ability to recognize and respond to an individual's position on this continuum. The following figure shows the relationship between pressure and performance with the conditions at the extremes being described as rust out and burnout.

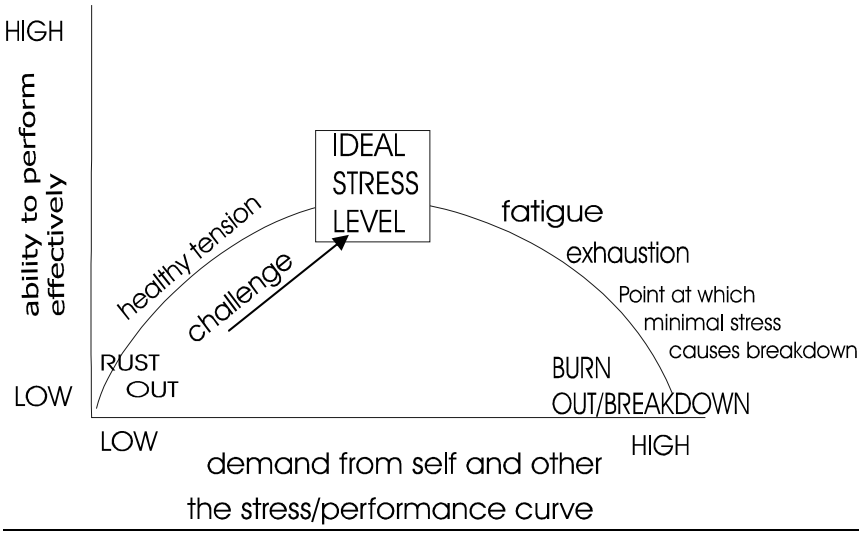


Figure 6: adopted from linda ellison (1998) managing stress in schools .in educational management for the 1990s.

Ellison says that it is important for mangers in schools to be aware of the various positions, which individual staff occupies on the stress and performance curve. This recognition will enable the management to provide increased challenge or to reduce stress factors for individual or the staff as a whole so that they are working at an ideal level and have the best chance of being effective.

There are various factors in the external environment that induce stress among people. Racing to meet a deadline, dealing with a difficult person, or earning a poor grade are all stressful. In order to understand teacher stress, researchers have sought to identify the major sources. Work overload, time restraints, problems with child behaviour, working conditions, relationships with colleagues, lack of resources, and the physical demands of teaching are common stressors. According to Austin, Shah and Muncer, (2000) more than 40% teachers have experienced serious symptoms of stress due to the pressures of excessive workload and abusive parents and pupils which suggests that teachers are suffering from more stress. Furthermore the number of referrals of teachers to occupational therapists with stress-related disorders such as anxiety, depression, and burnout is increasing.

Much has been written over the last 30 years about the specific stressors in teaching. The major stressors that have been identified by Rees (cited in Ellison 1998) can be grouped under the following headings.

(A) Pupils
Large classes and high levels of continuous work, lack of support from senior staff for those experiencing discipline problems.

(B) Working environment - poor maintenance, inadequate heating and lighting, lack of resources, overcrowded class rooms, inadequate staff facilities.

(C) Organizational factors- fruitless meetings, mounting paperwork as a result of bureaucratic procedures, job ambiguity and role conflict

(D) Interpersonal relations –lack of time to maintain good social relationships

(E) External demands on the school from parents and society changing demands causing confusion about precise responsibilities, lack of 88/

(F) Opportunities for career development

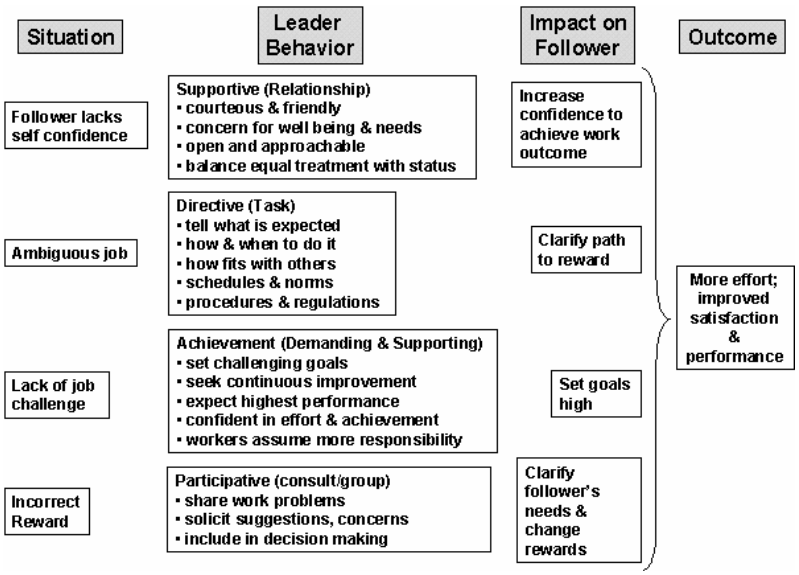
(G) Time i.e. Work overload, excessive workloads, hence the need for evening and weekend work at home, in-service training outside the school day.

Farber (1991) has given an exhaustive list of the work-related stressors for teachers after reviewing more than two hundred research studies and nationwide surveys which include student violence, classroom discipline, administrative insensitivity, unreasonable parents, public criticism, involuntary transfers, overcrowded classroom, public demands for accountability, loss of autonomy and sense of professionalism, inadequate salaries and lack of preparation, role ambiguity, role conflict and work over load.

The ambiguity of the situation can also be a source of stress. Stress occurs to individuals, groups, and organizations when their situation is overly complex, ambiguous and unclear. Path-goal theory asserts that when subordinates' tasks or work environment are dangerous, monotonous, stressful or frustrating, supportive leader behavior will lead to increased subordinate effort and satisfaction by enhancing leader-subordinate relationships based on

self-confidence, lowering stress and anxiety and compensating for unpleasant aspects of the work (House 1996). House argued that when tasks are intrinsically satisfying or environmental conditions are not stressful supportive leader behavior would have little effect on follower satisfaction, motivation or performance.

Path-goal theory is a vehicle for identifying how a subordinate's needs, values, and expectations interact with the individual's job in order to determine the degree of job satisfaction. It can be used to suggest what type of leadership behavior may be most effective under specific situations. It may also be used to explain why a particular type of leadership is most effective under a given set of conditions. The reinforcement of change in the subordinate by the leader is a prominent aspect of path-goal theory (house, 1971; house & dessler, 1974; house & mitchell, 1974; house, 1996).



Swenson (1999) summarized Path-Goal relationships in the following way.

Figure -1

Swenson (1999)
http://www.css.edu/users/dswenson/web/LEAD/path-goal.html

House describes the path-goal theory of leadership as a situational theory that is deliberately phrased and loosely structured so that additional variables can be added as the effects of these variables become known. So on the suggestion of Robert House (personal communications, June 21, 2002) **stress** was added to the theory as a moderator variable and also as a confounding variable. Stress is being studied in this research at two levels, stress of the subordinates that can affect the relationship of leadership and subordinates' outcomes, and stress of the leader that can affect the leader's rationality in decision-making. Path-goal theory was the conceptual framework used in this study and served as the basis for the generation of and testing of research questions and their corresponding hypotheses.

The study was aimed at exploring the relationship among leadership behavior of degree college principals in the Punjab, Pakistan, and job satisfaction, acceptance of leader and job expectancies of teachers taking into account the moderating effect of stress of subordinates, after controlling the effect of principals' stress and role ambiguity. The major purpose of this research was to find out the moderating effects of stress on leadership style and subordinate outcomes as an additional variable. As evident from the literature review, there has been very little research conducted in higher education that utilizes path-goal theory to study the relationships between the independent variables, stress and the dependent variables. This study was unique in the sense that on House's suggestion stress had been used as a variable. This study was also unique because for the first time in the history of path-goal testing, it was decided by the proponent of the theory to control the effect of intervening variables that are the cause of irrationality in decision making by the leaders. These variables are stress and role ambiguity.

Research Question

1. What is the relationship between leadership behavior and subordinates' outcomes as moderated by stress of the subordinates, holding constant the effect of principals' role ambiguity and stress?

Hypotheses

H_{o1} There is no relationship between leadership behavior and subordinates' job expectancies, when they are highly stressed,

holding constant the effect of principals' role ambiguity and stress.

$\mathbf{H_{o_2}}$ There is no relationship between leader behaviour and subordinates' job satisfaction, when subordinates were highly stressed, holding constant the effect of principals' role ambiguity and stress.

$\mathbf{H_{o3}}$ There is no relationship between leadership behavior and subordinates' acceptance of leader, when the role clarity is high and stress is low, holding constant the effect of principals' role ambiguity.

Methodology

The purpose of this exploratory study was to investigate the validity of path-goal theory through the study of the relationships among perceived leader behaviors of Degree Colleges' Principals, and their subordinates' job satisfaction, and job expectancies. The relationships between leader behaviors and moderating variable stress, and the dependent variables Job Satisfaction, Job Expectancies I and II (effort leads to performance and performance leads to reward) were examined.

House (Personal Communications, June 21, 2002) asserts that "Tests of the theory have been very mixed. My belief is because the theory assumes too much rationality on the part of the leader and leaders working under stress cannot be highly rational." So House suggested that researcher should control stress and ask the leader to indicate the degree to which they are able to be rational in their decision-making. The data from principals was collected on "Stress and Anxiety Scale" and "Role Ambiguity Scale". Since these are the variables that interfere with rational decision-making.

The population of the study consisted of the principals and teaching staff of all male and female degree colleges from the province of Punjab, Pakistan. The total number of degree colleges in Punjab was 285 (Male 144, Female 141) and number of working staff was 13821 (Male 8195, Female 5626), according to the statistics of Directorate of Public Instruction (Colleges) Punjab, in the year 2002, from where complete lists of Degree Colleges of Punjab were collected. ***Sample size*** of the study comprised of 170 Government Degree colleges and 1020 teachers (lecturers, Assistant professors, Associate professors, professors)

teaching in these colleges. This sample size was selected keeping in view the criteria of Wiersma (1995). Wiersma (1995) says "If a population of 25000 teachers is surveyed a sample of 500 or 600 should be adequate" (p 296). The population of this study was more than 13000. So it was decided to take at least 1000 cases to make the study more representative.

All computations were made by utilizing SPSS-10 Software Package. Multivariate Analysis of Covariance (MANCOVA) and Univariate Analysis of Covariance (ANCOVA) were used to analyze the data (Afifi and Clark, 1996). Before conducting an ANCOVA, the homogeneity-of-slopes assumption was first tested. Wiersma, (1995) explains that if the interaction between factor and covariate is significant, the results from an ANCOVA are not meaningful, and ANCOVA should not be conducted.

This assumption was observed in this study and the tests of homogeneity-of-slopes were conducted on all possible combinations of variables. The covariate that came up with non-significant interaction was included in data analysis. All hypotheses were tested at .05 level of significance. An independent-sample *t* test was conducted to evaluate the mean difference of male and female respondents. The test was non-significant, so it was decided to run data analysis without consideration of gender. The four Leadership behaviours were categorized into high, medium and low groups. However the results of only high and low groups were cited and discussed for most of the time in data analysis.

Findings of the Study

On The Bases Of Data Analysis Of The Study, Following Findings Were Drawn:

1. The new variable stress, which was included as an additional variable, had negative significant correlation with acceptance of leader and job satisfaction. It means that this variable had the potential to be included as a moderating variable in path-goal theory.
2. High directive and supportive leadership had positive effect on subordinates' job expectancies, when subordinates were highly stressed. This result goes in line with the path-goal theory, which states that when subordinates don't know much of their work they got motivation from directive leader who clarifies the role and provides guidance to the subordinates and supportive leader who

shows considerate behaviour and reduces the uncertainties of work environment.

3. High directive leadership had inverse relationship with acceptance of leader, when the role clarity was high. This result confirmed path-goal prediction that when subordinates roles were clear they accept low directive leader because in this situation direction is unnecessary.

Results Not Supporting Path-Goal Theory

High directive leadership had inverse relationship with acceptance of leader, when subordinates were highly stressed. This result did not confirm path-goal prediction that when subordinates were highly stressed they accept directive leader because role-clarifying behaviour reduces subordinates stress.

Implications of Findings for Path-Goal Theory

This was an additional variable added in this study so the hypotheses were generated for the first time. It was hypothesized that highly stressed people will be more satisfied with supportive leader as this behavior can help in reducing the level of stress. Directive leadership behavior can also contribute as it clarifies roles and responsibilities and help people done their work smoothly. It was also predicted that highly stressed people had low level of job satisfaction. Path-goal theory asserts that when subordinates tasks or work environment are dangerous, monotonous, stressful or frustrating, supportive leader behavior will lead to increase subordinate effort and satisfaction by enhancing leader subordinate relationships on a self confidence, lowering stress and anxiety and compensating for unpleasant aspects of the work (house 1996).

The findings of this study made clear that stress had inverse relationship with job satisfaction and acceptance of leader. Another significant result was that highly stressed people had greater acceptance scores when their leaders were directive. High directive and supportive leadership had positive effect on subordinates' job expectancies, when subordinates were highly stressed. This result is consistent with path-goal theory, that when subordinates were highly stressed they were more motivated when they work with directive leader who clarifies the role and provides guidance to the subordinates and supportive leader who shows considerate behavior and reduces the uncertainties of work environment.

But high directive leadership had inverse relationship with acceptance of leader, when subordinates were highly stressed. This result did not confirm path-goal prediction that when subordinates were highly stressed they accept directive leader because role-clarifying behavior reduces subordinates stress.

Implications of Findings for Educational Administrators

Stress is a phenomenon that is present in today's work place everywhere. A major percentage of recourses is being wasted only due to stressed employees. Stress needs to be understood within the particular occupational context in which it occurs. Sutherland and cooper (1990) have made the point that occupational stress is not a new phenomenon, it has always been around. They have given a list of eight most stressful occupations including doctors, nurses, social workers, middle managers, the police force and teachers.

Teaching is a stressful occupation, and this stress has increased as the relationship between society and education has become more complex. Teachers face increased parental and community expectations and pressures for the outcomes and standards of education and their demand for more accountability in the work of teachers. These demands affect teaching roles, without teachers always knowing how to adapt and cope with them. A large number of teachers carry out their work and job assignments in the distressing and depressing state of mind. In such circumstances it is imperative to deal with the stressors more effectively and deal with the stressful people more gently, sympathetically and in more supportive way.

Work load is considered as the major stressor (Timperley and Robinson, 2000) for teachers with dual responsibilities for females, of doing jobs and looking after the home, and economic pressures for males, for meeting both the ends meet. So far as work load is concerned it could not be a contributory factor of stress for college faculty as they bear very less work load as compared to school teachers and university staff. This research was confined only to know the level of stress and it did not focus on what factors were really causing stress and were major stressors but whatsoever the reasons may be, there were a reasonable number of people who were facing this dilemma. These people certainly need some

different treatment and help to cope with the uncertainties of the job and miseries of the situation.

Quality of higher education these days has become a matter of great concern to all. Improvement in college administration is a pre-requisite to any plan of improvement. The need of the present study emerged from the lack of scientific exploration of college leadership. It was expected that the present study would be able to generate scientific thinking about college leadership. The study would not only provide the leadership behavior knowledge to college principals but also increase satisfaction, motivation and the acceptance of college principals among members of the staff.

Leadership is more necessary than ever before. Problems which arise in colleges require proper leadership to solve them. One of the most important factors necessary for the success of any organization is the satisfaction and morale of its members. The leader has to win the confidence, the respect and the acceptance of the led. The field of college leadership likes that of college teaching needs much greater research than has so far been produced. Leadership cannot be conceived in a vacuum. It is in part a product of the situation and experiences. The situation in which the job is to be done and the people, who are to accomplish it, have a definite influence on it. This shows that a study of the situational factors is very important in educational administration. The leader can make the job more tolerable by creating a friendly, open work environment, and employees are motivated to work harder and therefore achieve their goals and feel more satisfied while doing it. When employees under stress believe that their managers support their efforts, they have more confidence that their hard work will actually lead to successful completion of the task.

The finding of this study also made it clear that the stress of the subordinates and of the administrators plays its detrimental role in the leader-member relations. Researchers should test path-goal theory with stress as a moderator and instead of relying heavily on survey and questionnaire techniques a more comprehensive method should be adopted. For a deep understanding of this phenomenon, a combination of quantitative and qualitative methods will suffice.

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