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Matthew Borode

Universalisation of Elementary Education in India

Dr.Saima Siddiqi[*]

Abstract

Elementary education constitutes a very important part of entire structure of education system. Universalisation of elementary education has been one of the most important goals of educational development in India since independence. Article 45 of the Indian constitution directed states to Endeavour to provide within a period of 10 years from the commencement of the constitution (1950) free and compulsory education to all children up to the age of 14 years. This resolved to be fulfilled by 1960. In spite of concerted efforts by the centre as well as state governments in promoting elementary education, the target of Universalisation of elementary education has not been achieved till date.

The parliament has passed the constitution 86th amendment Act, 2002 to make elementary education a Fundamental Right for children in the age group of 6-14 years. Another development is Supreme Court judgment which interpreting the constitutional provision declared basic education as a fundamental right of every citizen requiring the state to make necessary provisions as a basic obligation. This was followed by a framework of partnership between the centre and the state governments on a massive scale through a number of centrally sponsored schemes such as District Primary Education Programme, Lok Jumbish Project, Mid Day Meal Scheme Sarva Shiksha Abhiyan, Education Guarantee Scheme,

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Alternative and Innovative Education, Shiksha Karmi Project, Janshala Programme etc. All these programmes aims at Universalisation and qualitative improvement of primary education in remote and socio-economically backward areas by increasing enrolment, attendance and retention and also improving nutritional status of children in primary classes.

There are some problems of elementary education such as out of school children, working children, or child labourers, parents ignorance family's poor financial conditions, attitude of parents towards girl's education, distance of the school from the place of residence, lack of provision of basic infrastructure and lack of women teachers in the school is another problem (1)To bring out of school children in the fold of elementary education child wise planning should be undertaken (2)Child labour should be minimized,(3)Fund for primary education should be increased (4) Part-time and alternate schools should be opened in large numbe Nevertheless, unless efforts to attract the children to schools and to retain them in schools by making both parents and children feel that schools are worthwhile, the success of elementary education may remain a distant dream in country's developmental programmes.

Keywords: Universalisation, Elementary Education, Primary Education, Education and Development

Introduction

Elementary education constitutes a very important part of entire structure of education system. It is the backbone of the educational pattern of a country. No pattern of education can ever be successful as long as it does not have a sound primary educational system. Elementary education is crucial for spreading mass literacy which is the basic requirement for the effective functioning of democratic institutions, economic development and modernization of

social structure. It also represents an indispensable first step towards the provision of equality of opportunity to all the citizens.

Universalisation of elementary education has been one of the most important goals of educational development in India since independence. Article 45 of the Indian constitution directed states to Endeavour to provide within a period of 10 years of the commencement of the constitution free and compulsory education to all children up to the age of 14 years. This resolve to be fulfilled by 1960.Inspite of concerted efforts and considerable investments by the centre as well as by the state governments in promoting elementary education, the target of Universalisation of elementary education has not been achieved till now. National Policy on Education-1986, Programme of Action 1986, stands out as a significant landmark towards the goal of Universalisation of Elementary Education. Programme of Action was adopted which clearly outlined the strategies and processes to be pursued for the achievement of Universalisation of Elementary Education. The target date according to the National Policy on Education 1986 was 1995. The modified National Policy on Education and Programme of Action (1992) has further revised the target date. It states "It shall be ensured that free and compulsory education of satisfactory quality is provided to all children up to 14 years of age; before entering into twenty first century. A national mission will be launched for the achievement of this goal."

The Ninth Five Year Plan envisages UEE to mean Universal access, universal retention and universal achievement. The constitution (Eighty third amendments) Bill 1997 was introduced in the Rajya Sabha on 28 July 1997 to make right to free and compulsory education for children from 6-14 years of age a Fundamental Right.

The parliament has passed the constitution 86th Amendment Act, 2002 to make elementary education a Fundamental

Right for children in the age group of 6-14 years. It is proposed to bring in a follow up legislation with detailed mechanism to implement this act. Another development is the Supreme Court judgment which interpreting the constitutional provisions declared basic education as a fundamental right of every citizen requiring the state to make necessary provisions as a basic obligation.

This was followed by a framework of partnership between the Central and State Governments on a massive scale through number of Centrally Sponsored Schemes. During 1990's the country saw emergence of a large multi-state programmes of primary education such as District Primary Education Programme .This was centrally sponsored scheme and was launched in 1994 as a major initiative to revitalize primary education system and to achieve objectives of UEE. The programme components include construction of classrooms and new schools, appointment of new teachers, strengthening of the State Council of Educational Research and Training (SCERTs), District Institute of Educational Training (DIETs), promoting education of disadvantaged groups, girls, SC/ST etc. Alongside this, Rajasthan initiated a large programme under the name of Lok Jumbish an innovative project with assistance from Swedish International Development Agency (SIDA) to achieve education for all through people's mobilization and their participation. The first phase of the project was implemented during June 1992 to June 1994.The second phase of the project was implemented between 1st July 1994 to June 1998 and subsequently extended up to 31 December 1999.

The National Programme of Nutritional Support to Primary Education (NP-NSPE) popularly known as the Mid-Day Meal Scheme was formally launched on 15th August 1995. The objective of the programme was to give a boost to universalisation of primary education by increasing enrolment, attendance and retention and also improving nutritional status of children in primary classes studying in government, local body and government aided schools.

The scheme of Sarva Shiksha Abhiyan (SSA) was launched in 2001.The programme covers entire country and addresses the needs of 192 million children in 11 lakh habitations. The SSA has a special focus on girls and Innovative Education (EGS and AIE) that are the important components of Sarva Shiksha Abhiyan to bring out of school children in the fold of Elementary Education.

The Shiksha Karmi Project (SKP) aims at Universalisation and qualitative improvement of primary education in remote and socio-economically backward villages in Rajasthan with primary attention given to the girls. The project identifies teacher's absenteeism as a major obstacle in achieving goal of UEE. Phase 1 and II of SKP was implemented with the assistance from Swedish International Development Cooperation Agency (SIDA) from 1987 to 1994 and 1994 to 1998 respectively. Phase III of the project was implemented from 1st July, 1999 to 30th June, 2003 with financial assistance from Department for International Development (DFID) of UK and Government of Rajasthan on 50:50 basis.

Another scheme known as Janshala Programme was a collaborative effort of the Government of India and five UN agencies UNEP, UNICEF, UNESCO, ILO, and UNFPA to provide programme support to ongoing efforts towards achieving UEE. It aims to make primary education more accessible and effective, especially for girls and children in deprived communities, SC, ST, minorities, working children and children with specific needs

A Quick Retrospect of Progress
Development of primary education in India presents a mixed bag of progress and failure, on the positive side, the country has witnessed multifold expansion of public primary education facilities. There are nearly 600,000 schools providing primary education (grade 1-5) and more than 200,000 non formal education centers and alternate schools catering to the same age group. As a result of the

efforts made by the central and state governments, 94% of country's rural population has primary schools within one km. At the upper primary stage 84% of the rural population has schools within a distance of three km. Recent figures from the census show that the national literacy rate has recorded a quick rise about 13 percentage points between 1991 and 2001. Enrolment ratio at primary stage has gone up from 42.60% in 1950-51 to 92.14% in 1998-99, number of primary and upper primary schools has gone up from 2.23 lakh in 1950-51 to 8.17 lakh in 1998-99 and number of teachers in primary and upper primary schools has gone up from 6.24 lakh in 1950-51 to 31.80 lakh in 1998-99. Participation of women in educational programmes has grown faster than that of males, female literacy increased two and halftimes faster than male literacy during 1970 to 1995. Total expenditure on education as % (GNP) has increased by six times from 0.7% in 1951 to 4% in 1993-94 Public expenditure on primary education as percent of total education budget increased from 34.22 in 1991 to 36.5 in 1996.

Central and state governments have over a period of time evolved strategies to check drop out rates and improve levels of achievements in the schools, Key elements which includes (1) creating parental awareness and community mobilization,(2) involvement of communities and PRIs (73rd and 74th) Constitutional Amendments,(3)District Primary Education Programme initiative, (4) economic incentives,(5) improvement in the infrastructural facilities in schools,(6) National Programme of Nutritional Support to Primary Education (Mid-Day Meal Scheme) Non Formal Education (NFE Scheme) and (8)teacher education schemes. But this seems to be too small for meeting the ever-expanding challenges of UEE.

Problems or Obstacles

There are some problems or obstacles on the progress of elementary education such as out of school children many of whom end up as working children or child labourers. According to 1991 census there were 11.28 million child

workers in the age group 5-14. About 91 percent of these children were concentrated in the rural areas. Around three fourth of the out of school children live in six states of the country, namely Andhra Pradesh, Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh and West Bengal. So, India is today world's largest producer of illiterates and child labourers. Parents' ignorance and family's financial conditions, social customs and attitude of parents towards girl's education also pose as a major threat to the activation of primary education in India. Based on the official statistics available for 1997-98 it is estimated that around 11 million girls in the age group 6-11 remain un-enrolled in the school. The corresponding figures for the 11-14 age group is around 16 million girls. India still accounts for 30 percent of the total adult illiterates in the world.

Distance of the school from the place of residence is also a cause for the ignorance of primary schooling. Further provision of basic infrastructure and lack of women teachers in the school is another problem. One of the greatest obstacles in the expansion of primary education is wastage and stagnation. Many children leave studies either after their failure in the examinations or in order to assist their guardian in earning their livelihood.

Suggestions
1. To bring out of school children in the fold of elementary education child wise planning should be undertaken for each out of school child. As envisages by Education Guarantee Scheme.

2. Effort should be made to adopt a demand based approach wherein schooling facilities are to be given only on expressed demand by the local community. The Education Guarantee Scheme of Madhya Pradesh is one such example.

3. Child labour should be or ought to be minimized if not totally abolished.

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4. The government should also make a law under which it would be compulsory for all parents to send their children to schools.

5. Various programmes like Adult Education Programme, Anganwadi programme, Night School Programme should be started, with strict vigilance and care.

6. Decentralization of elementary education to the local community would help in enforcement of laws and would also make the local people accountable.

7. Fund for primary education should be increased.

8. Education should be reached in remote areas and socio-economically backward villages for this purpose Shiksha Karmi Project should be started in more states as was started in Rajasthan.

9. Part time and Alternate Schools should be opened in large numbers to meet the target of UEE because they are flexible in timings and curriculum.

10. It is natural that food remain the top priority of any poor family it is therefore, necessary that formal classroom education is associated with some earning activities.

11. The awareness about the need of education among tribes should be enhanced for this purpose. Awareness programme should be organized continuously. The tribal parents should also be acquainted with benefits of education.

12. The teachers appointed for tribal areas must have the knowledge of local dialect wherever necessary in their teaching.

13. Establishment of day care centers for pre school children and infants, so that girl child can go to school.

Last but not the least; it is necessary that panchayats and the local people should be made aware of their duty of providing basic primary education to their children. For instance, Education Guarantee Scheme launched in Madhya Pradesh and Lok Jumbish Project is doing this with considerable success. Panchayats are appointing teachers, providing space for the schools and supervising their functioning while the text books and other infrastructure are taken care of by the district authorities.

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Faculty Attitudes towards Promotion at Jordanian Universities

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Abstract

A quantitative approach was used to explore the attitudes of 241 faculty members at public and private universities in Jordan toward promotion. The result of study revealed that by using Means and standard deviations and a two-tailed t-test, attitudes of faculty members toward promotion were in moderate level. Faculty members in Humanities discipline had positive attitudes toward promotion more than faculty members in scientific discipline. Associate professors had significantly upper attitudes toward promotion than the assistant professors or full professors. Faculty members, with 5 to 10 years of experience had significantly upper attitudes toward promotion than either the faculty members with less 5 years of experience and more 10 years of experience.

Keywords: Attitude, Scientific Discipline, Academic Promotion, Academic Performance, Academic Culture

Introduction:

Advancing in rank to associate and full professor in higher education institutions is a form of recognition bestowed on individuals to signify their professional contribution to a body of certified knowledge (Long, Allison, & McGinnis, 1993). It can be described as the final rite of passage to higher organizational status within the university culture (Tierney & Bensimon, 1996). Despite a large body of literature that describes the experiences of new faculty in the promotion process, little research has been done to substantiate what constitutes the essential structure of the promotion process to full professor from the perspective of the faculty member who have obtained and or been denied full professorship (Diamantes, Roby, & Hambright, 2002). Although the process is described by an organizational perspective, there is a

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perception among faculty that has requirements for promotion to full professorship is more stringent.

The American Association of University Professors (AAUP) specified the goals of academic promotion and tenure as the "freedom of teaching and research and of extramural activities and economic security to make the profession attractive to qualified candidates" (Savoie, Sawyerr, 1991). The promotion and tenure system, however, contrary to the goals of its creators, has resulted in academic and financial inflexibility, for both universities and faculty that is causing the profession to lose its attractiveness to younger, qualified candidates (Helfand, 1986; Renner, 1986a, 1986b). With 64% of the faculty at public institutions tenured and concentrated between the ages of 41 and 60 (Andersen, 1989), universities are faced with long-term financial commitments that have resulted in financial and academic inflexibility.

Defining the process from the faculty perspective helps other faculty members as well as the organization understands the individual experience of promotion process, and components that may help or hinder the process and ultimately puts an impact on the final decision.

The primary area of concern here is the promotion of assistant professors to associate professors and to full professor. This component of the promotion process is highly under research, indicating a clear gap in the area of research. If we can examine the experiences of both male and female professors, we can begin to understand the institutional and individual implications for this population in the academy.

In attempting to explore current issue, it is important to ascertain the conditions and viewpoints that inform the study. Social scientists of organization theory, especially, those writing from a gender perspective, point out several factors impeding the advancement of women in academic institutions. The obvious discriminatory practices include unequal pay and sex segregation of work (Acker, 1990). An examination of the organizational environment reveals barriers to women's full socialization into the academic culture (Menges & Exum, 1983). An obvious inequity appears in an examination of tenure and salary rates. In 1995, 39 percent of full time females were tenured as compared to 59 percent of men (Schneider, 1998). In addition, women earned less than their male counterparts in 1995 across all ranks (Schneider, 1998).

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Promotion and tenure criteria vary from university to another or from department to department within the same university. Considerations and criteria are developed by each department, and by each university. Perceptions of tenure and the criteria used to grant tenure are influenced by individuals' experience and background. Several factors of interest may include age, years of industry experience, years of teaching experience, and whether or not the respondent is tenured (Ciesielski, 2000).

In their study of American colleges and universities, Trower and Chait (2002) found out that 75 percent of the full professors at research universities are male, only 5 percent of the full professors in the United States are African American, Hispanic, or Native American. And that the disparity between the percentage of tenured men and the percentage of tenured women has not changed in thirty years. These statistics prove that certain types of bodies—raced, gendered, and otherwise not "normal"—are not getting tenure and promotion.

Operational Definition
Promotion is the act of being raised in position or rank that is granted to faculty members with regular appointments who have demonstrated outstanding accomplishments in an appropriate combination of instructional, research, outreach (including Extension), and other professional activities (Office of the Provost, Southeastern University, 2000).

Problem of the Study
The organizational culture of universities is complex and individuals' interpret the culture in different ways. The promotion process is described from an organization's perspective in its faculty handbooks. The books often take faculty step-by-step through the requirements, providing checklists of issues that one needs to address. There are a vast number of materials needed upon a review for promotion. The supporting materials typically demonstrate the level of involvement in and contributions to teaching, research, and service. Most institutions require a faculty member demonstrate productivity in all three areas (Whicker, Kronenfeld, & Strickland, 1993).

Research, teaching, and service are key components in the promotion process. Each institution has policies requiring which areas are emphasized and what documentation is suggested for a solid dossier. Sufficient evidence must be provided in order for the faculty member to provide their efforts. Research or scholarship is often the most explained component in the promotion policies issued by an institution (Whicker et al., 1993). The criteria are typically based on the following evidence: peer reviewed publications, books, scholarly presentations, positive reviews of publications, citations for publications, and grants for research (Whicker et al., 1993). Teaching evidence can include but is not limited to student evaluations, peer observations of classroom teaching, letters from former students, success of graduate students, and teaching awards (Whicker et al., 1993). Service is a component that is difficult to define but evidence can include professional associations, editorial boards or journals, review activities, committee participation, community talks, and faculty advisory roles (Whicker et al., 1993).

An objective study of these empirical indicators of the promotion process requires not only the organization's perspective, but also a description of the faculty's experiences from their perspective. To describe the promotion process as indicated only by the organization's description may not be congruent with the faculty perspective. Defining the process from the faculty perspective helps other faculty as well as the organization understand the individual experience of the promotion process, and components that may help or hinder the process and ultimately impact the final decision.

The purpose of this study is to explore the academic promotion process by looking at the faculty attitudes. The studies addressing the attitudes toward promotion in higher education institutions in Jordan are absent. Given this limited research, there is a need to further study attitudes toward promotion at institutions of higher education in Jordan. More specifically, this study will answer the following questions:

(1)   What are the attitudes of faculty members toward promotion?

(2)   Are there significant differences in faculty attitudes towards promotion attributed to, university type, gender academic discipline, academic rank, and years of experience of faculty members at the university?

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    (3)   What are the major challenges that face faculty members during the promotion process?

Significance of the Study

Promotion to associate and full professorship is the most important academic incentive and reward to faculty who have made exceptional contributions within academe. Inequitable policies and practices can result in poor use of human resources, individual frustration, low faculty morale, and low institutional productivity. The current study intends to fill the gap in the Jordanian studies that discuss the factors of facilitating or hindering a faculty member's promotion to associate and full professor. Also, are women are more likely to be stuck as career assistant or associate professors. The findings of this study will provide valuable information for universities, colleges, and departments to build up a fair and effective promotion practices and to improve their faculty development programs.

Methodology

The population of this study included all public and private universities in Jordan. A sample of four universities was selected for this study. This includes two public ones: The Hashemite University (357 faculty members) and University of Jordan (1050 faculty members), and two private ones: Zarqa Private University (179 faculty members) and Al-Ahlayia Amman University (215 faculty members).

A random sample of 400 faculty members was chosen. A total of 241 faculty members completed the survey with response rate of 76%. The sample included 139 faculty members at public universities, and 102 faculty members at private universities. In regards to gender, there were 168 male, and 73 female. As for discipline, there were 124 faculty members from scientific and 117 from humanities disciplines. Almost fifty percent of the participants have less than 5 years experience (See Table 1).

Table 1: Demographic characteristics of sample of study

	Demographic variables	**Public**	**Private**	**Total**
Academic rank	Assistant professor	101	60	161
	Associate professor	27	29	56

	Full professor	11	13	24
Gender	Male	90	78	168
	Female	49	24	73
Academic disicpline	Scientific	80	44	124
	Humainities	59	58	117
Experience at the university	Less 5 years	87	25	112
	5 to 10 years	40	67	107
	More 10 years	12	10	22
Total		139	102	241

The Faculty Attitudes Toward Promotion (FATP) instrument developed by Diamantes, Roby, & Hambright (2002) was adopted with modifications (see Appendix 1). This instrument consists of three sections; the first section includes the instructions, the second section was asking about participants demographic and background information and the third section includes the 12 items that measure faculty members' attitudes. Responses were recorded on a five degrees likert- scale: Strongly Agree = 5, Agree = 4, Undecided = 3, Disagree = 2, strongly Disagree = 1.

For the purpose of examining the validity of the instrument (face validity evidence) it was presented to six experts in educational research and evaluation and educational measurement. They were asked to check whether the statements in the instrument are clear and linked appropriately with the problem of study. Based on the experts' comments, some revisions were done to the instrument.

Regarding the reliability of the instrument two procedures were used: Test-retest procedure (to estimate stability coefficient) and internal consistency procedure (to estimate the consistency across the items). In order to estimate the reliability of the instrument, to analyze its items, and to examine the clearness of its statements and instructions, a pilot study had been conducted. 12 faculty members in one university were participated in the pilot study. Those faculty members did not participate in the final study. During the implication of the pilot study many faculty members asked about the term feedback. So it was important to make sure that faculty members who will participate in the final study will recognize the meaning of that concept during the process of collecting the data. The instructions were clear and all of the 12 items functioning in appropriate manner. Stability coefficients for the instrument were

0.89. In addition, the values of alpha (the internal consistency coefficient) were 0.90. The previous values can be considered reasonably satisfactory to achieve the objectives of the current study.

Data Analysis
The data was analyzed using the SPSS. Means and standard deviations were analyzed for each item. A two-tailed t-test was used to determine any differences on the mean scores of faculty attitudes in Jordanian public and private universities.

An analysis of the variance comparing faculty attitudes mean scores for each of the demographic variables was also conducted to test whether there are significant differences between attitude levels among faculty members as perceived by them for each of the demographic variables. The qualitative data was analyzed by grouping them into themes and categories.

Results and Discussion:
In order to understand the results of the current study, it was important to set a specific cut points to interpret faculty members' total scores related to their attitudes toward promotion process. Consequently, since faculty members' perspectives toward promotion process were measured through 12 items and since the score of each of which was ranged from 1-5, the scale of the total scores of faculty members' attitudes toward promotion process ranged from 12 to 60 and the score 24 is the middle score into this scale. The total scores were interpreted as following: less than 24.00-low, from 24.01 to 50.00-moderate, 50.01 or above-high. Regarding the mentioned cut points it should notice that the researchers used the response scale of each item which ranged from 1 to 5 to determine these cut points according to the following manner: less than 2.66- low, from 2.67 to 4.00-moderate and 4.01 or above- high. This is not clear to me?

Question 1: What is the attitude of faculty members toward promotion? Table 2 below shows the responses of faculty members to the items that measure their attitudes toward promotion.

Table 2: Means and Standard Deviation for Faculty Attitudes toward Promotion

Items	Mean	Sd
(1) promotion procedures are clearly defined in my	3.67	1.11

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university		
(2) promotion decisions depend upon the quantity or published research and/ or creative work	3.82	1.11
(3) promotion decisions depend heavily upon the quality of published research and or creative work	3.79	1.14
(4) promotion decisions depend heavily on outside evaluations	3.74	1.07
(5) promotion decisions depend heavily on student evaluations	3.34	1.31
(6) promotion decisions depend heavily upon the recommendations of the promotion committee in my university	4.05	.94
(7) in order to be promoted, it is important to work collaboratively and effectively with professional colleagues	3.64	1.08
(8) promotion depends on one's ability to secure grants	3.41	1.14
(9) the criteria used for promotion decisions are clear in my university	3.42	1.29
(10) students' evaluation is helpful in applying for promotion	3.20	1.21
(11) promotion depends on time spent on performing community service.	3.24	1.15
(12)community service is not important in the promotion process in my university	2.85	1.32
Total	**3.51**	**.655**

The total mean scores of faculty members' attitudes toward promotion was (M=3.51). Related to interpreted scores, attitudes of faculty members toward promotion were in moderate level. The promotion and tenure system, however, contrary to the goals of its creators, has resulted in academic and financial inflexibility, for both universities and faculty that is causing the profession to lose its attractiveness to younger, qualified candidates (Helfand, 1986; Renner, 1986a, 1986b).

Question 2:   Are there significant differences in faculty attitudes towards promotion attributed to university type, gender, academic discipline, academic rank, and years of experience of faculty members at the university?

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University Type

Table 3: Means, Standard Deviation and t-test for Faculty Attitudes toward Promotion according to University Type

Items		Mean	Sd	T	Df	Sig.
(1) promotion procedures are clearly defined in my university	Public	3.65	1.102	-.965	239	.336
	Private	3.78	1.068			
(2) promotion decisions depend upon the quantity or published research and/ or creative work	Public	3.73	1.087	-2.997	239	.003*
	Private	4.13	.886			
(3) promotion decisions depend heavily upon the quality of published research and or creative work	Public	3.53	1.131	-5.426	239	.000*
	Private	4.25	.838			
(4) promotion decisions depend heavily on outside evaluations	Public	3.71	.972	-2.005	239	.046*
	Private	3.97	1.009			
(5) promotion decisions depend heavily on student evaluations	Public	3.28	1.274	-1.318	239	.189
	Private	3.50	1.280			
(6) promotion decisions depend heavily upon the recommendations of the promotion committee in my university	Public	3.94	.918	-2.723	239	.007*
	Private	4.25	.875			
(7) in order to be promoted, it is important to work collaboratively and effectively with professional colleagues	Public	3.69	1.013	.523	239	.601
	Private	3.62	1.144			
(8) promotion depends on one's ability to secure grants	Public	3.30	1.061	-2.013	239	.045*
	Private	3.60	1.213			
(9) the criteria used for promotion decisions are clear in my university	Public	3.31	1.239	-2.413	239	.017*
	Private	3.70	1.217			
(10) students' evaluation is helpful in applying for	Public	2.80	1.130	-5.677	239	.000*
	Private	3.66	1.198			

promotion						
(11) promotion depends on time spent on performing community service.	Public	3.06	1.041	-3.451	239	.001*
	Private	3.56	1.207			
(12) community service is not important in the promotion process in my university	Public	2.67	1.248	-1.685	239	.093
	Private	2.95	1.330			
Total	Public	3.38	.61692	-4.565	239	.000*
	Private	3.74	.58090			

* The mean difference is significant at the .05 level.

A *t-test* analysis was used to compare if there were differences in attitudes of faculty members toward promotion regarding to university type (public, private). Out of 12 items of the instrument, 8 items had significant differences of the t-value related to private university. For example, item (2) "*Promotion decisions depend upon the quantity or published research and/ or creative work*" had significant differences with significant level .003 related to private university. That means faculty members at private universities had positive attitudes (M = 4.13) toward promotion more than faculty members at public universities (M=3.73).

There are several areas where there differences between universities prevail. These include: the significance of teaching skills and research activity, the number of refereed articles needed, requirement for a doctorate degree, subjectivity of the promotion and tenure process, and whether or not promotion and tenure is outmoded.

Gender

Table 4: Means, Standard Deviation and t-test for Faculty Attitudes
Toward Promotion regarding to their gender

Items		Mean	Sd	T	Df	Sig.
(1) promotion procedures are clearly defined in my university	Male	3.81	1.083	2.274	239	.024*
	Female	3.47	1.068			

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(2) promotion decisions depend upon the quantity or published research and/ or creative work	Male	3.99	1.015	2.030	239	.043*
	Female	3.70	1.023			
(3) promotion decisions depend heavily upon the quality of published research and or creative work	Male	3.98	.994	3.404	239	.001*
	Female	3.48	1.180			
(4) promotion decisions depend heavily on outside evaluations	Male	3.98	.954	3.761	239	.000*
	Female	3.47	1.001			
(5) promotion decisions depend heavily on student evaluations	Male	3.35	1.376	-.519	239	.604
	Female	3.44	1.027			
(6) promotion decisions depend heavily upon the recommendations of the promotion committee in my university	Male	4.14	.917	1.876	239	.062
	Female	3.90	.885			
(7) in order to be promoted, it is important to work collaboratively and effectively with professional colleagues	Male	3.64	1.090	-.372	239	.711
	Female	3.70	1.023			
(8) promotion depends on one's ability to secure grants	Male	3.43	1.140	.025	239	.980
	Female	3.42	1.129			
(9) the criteria used for promotion decisions are clear in my	Male	3.55	1.285	1.418	239	.158
	Female	3.30	1.127			

university						
(10) students' evaluation is helpful in applying for promotion	Male	3.27	1.227	2.156	239	.032*
	Female	2.90	1.215			
(11) Promotion depends on time spent on performing community service.	Male	3.24	1.140	-.530	239	.597
	Female	3.33	1.143			
(12) community service is not important in the promotion process in my university	Male	2.71	1.336	-1.357	239	.176
	Female	2.96	1.160			
Total	Male	3.59	.604	1.935	239	.054
	Female	3.42	.664			

* The mean difference is significant at the .05 level.

A *t-test* analysis was used to compare if there were differences in attitudes of faculty members toward promotion regarding to their gender. Out of 12 items of the instrument, 5 items had significant differences of the t-value related to male faculty members. For example, item (2) "Promotion decisions depend upon the quantity or published research and/ or creative work" had significant differences with significant level .043 related to private male faculty members. That means male faculty members had positive attitudes (M = 3.99) toward promotion more than female faculty members (M=3.70).

There may be several factors impeding the advancement of women in academic institutions. The obvious discriminatory practices include unequal pay and sex segregation of work (Acker, 1990). An examination of the organizational environment reveals barriers to women's full socialization into the academic culture (Menges & Exum, 1983). An obvious inequity appears in an examination of tenure and salary rates, women earned less than their male counterparts in 1995 across all ranks (Schneider, 1998). In 1995, 39 percent of full time females were tenured as compared to 59 percent of men (Schneider, 1998). But in Jordan they are paid as men. In Jordan there is a salary structured that applies to everyone, there are no negotiations.

Academic Discipline

Table 5: Means, Standard Deviation and t-test for Faculty Attitudes
Toward Promotion regarding to their Academic Discipline

Items		Mean	Sd	T	Df	Sig.
(1) promotion procedures are clearly defined in my university	Scientific	3.57	1.113	-1.963	239	.051
	Humanities	3.85	1.047			
(2) promotion decisions depend upon the quantity or published research and/ or creative work	Scientific	3.79	1.114	-1.725	239	.086
	Humanities	4.02	.910			
(3) promotion decisions depend heavily upon the quality of published research and or creative work	Scientific	3.71	1.153	-1.793	239	.074
	Humanities	3.96	.977			
(4) promotion decisions depend heavily on outside evaluations	Scientific	3.67	1.080	-2.472	239	.014*
	Humanities	3.98	.871			
(5) promotion decisions depend heavily on student evaluations	Scientific	3.27	1.176	-1.344	239	.180
	Humanities	3.49	1.375			
(6) promotion decisions depend heavily upon the recommendations of the promotion committee in my university	Scientific	3.92	.870	-2.682	239	.008*
	Humanities	4.23	.932			
(7) in order to be promoted, it is important to work collaboratively and effectively with professional	Scientific	3.59	1.012	-1.063	239	.289
	Humanities	3.74	1.125			

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colleagues						
(8) promotion depends on one's ability to secure grants	Scientific	3.38	1.180	-.680	239	.497
	Humanities	3.48	1.088			
(9) the criteria used for promotion decisions are clear in my university	Scientific	3.42	1.217	-.690	239	.491
	Humanities	3.53	1.270			
(10) students' evaluation is helpful in applying for promotion	Scientific	3.10	1.188	-.738	239	.461
	Humanities	3.22	1.281			
(11) promotion depends on time spent on performing community service.	Scientific	3.23	1.090	-.502	239	.616
	Humanities	3.31	1.192			
(12) community service is not important in the promotion process in my university	Scientific	2.86	1.225	.924	239	.356
	Humanities	2.71	1.352			
Total	Scientific	3.45	.694	-2.066	239	.040*
	Humanities	3.62	.534			

* The mean difference is significant at the .05 level.

A *t-test* analysis was used to compare if there were differences in attitudes of faculty members toward promotion regarding to their academic discipline. Out of 12 items of the instrument, 2 items had significant differences of the t-value related to male faculty members. For example, item (4) "Promotion decisions depend heavily on outside evaluations" had significant differences with significant level .014 related to Humanities discipline faculty members. That means Humanities discipline faculty members had positive attitudes (M = 3.98) toward promotion more than Scientific discipline faculty members (M=3.67).

Both faculty members at scientific and humanities agree that service counts little towards promotion and tenure. Most agree that presentations of papers at conferences are considered in promotion and tenure decisions. Also, peer evaluations are considered to have moderate to

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heavy weight and student evaluations only moderate to slight weight in making promotion and tenure decisions.

Academic Rank

A One-Way ANOVA was conducted to evaluate the Faculty Attitudes toward promotion by academic rank.

Table 6: One-Way ANOVA for Faculty Attitudes toward promotion by Academic rank

	Sum of squares	Df	Mean square	F	Sig.
Between groups	9.954	2	4.977	14.068	.000*
Within groups	84.200	238	.354		
Total	94.154	240			

* The mean difference is significant at the .05 level.

In Table 6, the results for the ANOVA indicated that Faculty Attitudes toward Promotion (F (2, 238) = 14.068, p=.000), significantly differ according to academic rank.

The means and standard deviations for the Faculty Attitudes toward Promotion regarding to their Academic Rank are presented in Table 6.

Table 7: Means and Standard Deviation for Faculty Attitudes toward Promotion regarding to their Academic Rank

Academic rank	N	Mean	Sd
Assistant professor	161	3.4777	.65383
Associate professor	56	3.8735	.50252
Full professor	24	3.1806	.28833
Total	241	3.5401	.62634

Table 8: TukeyHSD Multiple Comparisons for the Faculty Members Attitudes regarding to their Academic Rank

Academic Rank	Assistant Professor	Associate Professor	Full Professor
Assistant Professor	-	.000*	.023*
Associate Professor	.000*	-	.000*
Full Professor	.023*	.000*	-

* The mean difference is significant at the .05 level.

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Table 8 presents Tukey HSD results. Tukey HSD post hoc test were conducted as follow-up test. The results of this analysis indicate that the associate professors had significantly upper attitudes toward promotion than either the assistant professors or full professors. It is very helpful, if not crucial, that nonpromoted faculty has someone to guide them and take them under their wing. Publishing is difficult enough and the situation is compounded when there's no support or guidance.

Experience of faculty members
A One-Way ANOVA was conducted to evaluate the Faculty Attitudes toward promotion based on their experience at the university.
Table 6: One-Way ANOVA for Faculty Attitudes toward promotion by experience at this university

	Sum of squares	Df	Mean square	F	Sig.
Between groups	11.472	2	5.736	16.511	.000*
Within groups	82.682	238	.347		
Total	94.154	240			

 * The mean difference is significant at the .05 level.

In Table 6, the results for the ANOVA indicated that Faculty Attitudes toward Promotion (F (2, 238) = 14.068, p=.000), significantly differ according to experience at the university.

The means and standard deviations for the Faculty Attitudes toward Promotion regarding to their experience at the university are presented in table 6.

Table 7: Means and Standard Deviation for Faculty Attitudes toward Promotion regarding to their experience at the university

Experience at this university	N	Mean	Sd
Less 5 years	112	3.344	.640
5 to 10 years	107	3.784	.560
More 10 years	22	3.348	.424
Total	241	2.540	.626

Table 8: TukeyHSD Multiple Comparisons for the Faculty Members Attitudes regarding to their experience at the university

Experience at this university	Less 5 years	5 to 10 years	More 10 years

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Less 5 years	-	.000*	1.00
5 to 10 years	.000*	-	.005*
More 10 years	.023*	.005*	-

* The mean difference is significant at the .05 level.

Table 8 presents Tukey HSD results. Tukey HSD post hoc test were conducted as follow-up test. The results of this analysis indicate that the faculty members with 5 to 10 years of experience had significantly upper attitudes toward promotion than either the faculty members with less 5 years of experience and more 10 years of experience.

Question 3: What are the major challenges that face faculty members during the promotion process?

When asked about the major challenges that face faculty members during the promotion process, Faculty listed several challenges including the following:

Lack of knowledge of and preparation for the informal rules of promotion and tenure emerged as the second most dominant theme. This was most evident in the responses related to the institutional ambiguity associated with what is required for promotion and tenure.

One of the major issues that faculty faces in navigating the promotion process is not being clear as what is needed to get promotion. How many published research papers are needed? How important are chapters in edited books, if grants and contracts? In my experience it's the "hidden agenda" and the issue of "fair" play that bothers me the most.

These excerpts highlight an overall impression that promotion and tenure are much more political than merit based, more practical than theoretical. In particular, respondents expressed and alluded to promotion and tenure as being more aligned with an amalgamation of the art- or creative-based, craft- or skill-based, and science- or knowledge-based understanding and application of departmental, college, and university-level politics. Hence, only by understanding and applying the unwritten and unstated rules of the promotion and tenure "game" can one be successful.

Implications

This study leads to several implications for academic administration. First, there seems a need for improved promotion policies. These policies should reflect the purpose and goals of the university and serve as standards for faculty performance decentralized policies and practices, and central control decisions.

Second, there is an indication for the need of improved promotion practices. A step in this direction may be the use of more objective methods of evaluation at all levels of the university. Methods such as maintaining current bibliographies, reading faculty publications, accumulating book reviews, ranking the relative importance of various journals in each field of study, noting the quantity of distribution of books and articles, showing evidence of manuscripts in process, and utilizing objective teaching reports from students and colleagues would seem very beneficial for central or decentralize administrators in making promotion decisions. Once these objectives methods of evaluation are decided upon by administration and or faculty members, they should be fully communicated to all concerned.

Finally, evolving from and a basis for improved policies and practices is the need for betted central controls. Central control of the promotion process is necessary to maintain standards and thus assure maximum faculty contributions to the goals of the university. If there are no central controls, the decentralize administrators have a free hand concerning why faculty members are promoted or not promoted. The possible consequence may be the in breeding of a substandard faculty.

Directions for future research and action, there are shortcomings associated with this study. These findings speak to the need for additional research and subsequent action to address these issues. In particular, more longitudinal quantitative and qualitative exploration is needed to better understand the depth and breadth of this phenomenon (e.g., research that explores the sense of community that exists on college and university campuses). Continued comparative exploration is also needed. Are the issues facing male faculty similar to those facing female faculty. Do the experiences of faculty at public universities differ from those at private universities? These research undertakings, however, should not encumber continued affirmative action taken by colleges and universities.

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Exploring Current Practices of Supervisors in Government Primary Schools in Karachi, Pakistan

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Abstract

This paper explores the current practices of supervisors in Government Primary Schools in Karachi, Pakistan. Research participants included two supervisors, two head teachers and four primary school teachers. Data was collected through semi-structured interviews, informal discussions, documents analysis. Findings suggest that since, the supervisors are not provided with the TORs by Education department their practices are influenced by the way they are appointed and the ways they learn about their roles and responsibilities in the schools. Since supervisory practices are mostly hanging between supervision and monitoring, these neither fulfill the criteria of Supervision nor of Monitoring and Evaluation. Their routine work in schools is carried out through surprise visits. During those visits, they write visit notes in the visit logs maintained at schools. The language of these visit notes indicate that main concerns of the supervisors are dealing with the issues of teacher absenteeism and completion of courses. They seldom appear to be concerned with quality of teaching pedagogies in schools. Study concludes with recommendations for re-conceptualization of supervision as a moral practice. Other key recommendations focus professional development of supervisors, preparation of comprehensive TORs for supervisors and clustering primary schools with high schools, where supervisors can play the role of being liaison persons.

Keywords: Primary Education, Educational Supervision, Professional Development, Teacher Education

Introduction

Supervision, as found in literature, mostly written in the western world includes variety of responsibilities and functions from developing

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curriculum and organizing instruction, to evaluate instruction (Glickman, 1981). This paper attempts to understand the role of two supervisors in the two government primary schools in Karachi, Pakistan. Here, supervisors are mostly external inspectors known in the education department and schools as 'Supervisors' or Supervisors Primary Education (SPEs).

In the government primary schools in Karachi, the supervisor is a person who supervises from eight to twelve schools. Supervisors are senior teachers of high schools, who are given the responsibility of supervising primary schools. Their responsibilities include monitoring and evaluation of primary schools and collection of information from primary schools. Their monitoring and evaluation activities take place through surprise visits. In practice, they have two main responsibilities, (a) monitoring primary schools through occasional visits and (b) collecting information from schools.

In the contemporary age, as a result of changes that have taken place in the field of education and the concepts of transmission of knowledge to students being changed into facilitating students to constructing their own knowledge; the whole paradigm of teaching learning has considerably changed (Hsiao, 2006). Along with these changes the traditional practice of supervision (which is generally based on the practice of collecting data and rarely offering suggestions for improvement based on the data) has also become irrelevant. Bourke (2001) suggests that where teachers have made the transition to new ways of learning, "it makes little sense to have them supervised by people who cling to the old ways and still employ invalid criteria"(p.71).

Supervisors' role becomes more important against the reality, that in Pakistan and particularly in Karachi and interior Sindh, teachers are not appointed for primary schools because of their qualification for the job or their own interest. On the contrary, Smith et al., Ahmed and Ali (cited in Ali, 2000) have mentioned that appointments of teachers is a political process. Ali (2000) notes, "it is easy for politicians to oblige their voters by *arranging* teaching jobs for them" (p.178). In this situation, teachers would certainly be lacking in teaching skills and knowledge. Therefore, they would need more professional help from supervisors.

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Moreover, literature on supervision in South Asia in general (Grauwe, 2000; Lamichhane et al, 1997) and particularly in Pakistan (Ali, 2000; Kazi, 1997; Khan, 2004), suggest that supervision has not been able to provide required support to the teachers. Furthermore, the supervisory practices in Pakistan, on the one hand, has not been studied in detail, while on the other, these practices are so multifarious that they encompass administrative, academic and coordination roles. This makes supervision of primary schools in Karachi and whole Pakistan an ambiguous one. It highlights the need of exploring supervisory practices. Exploring current practices of supervisors may also provide opportunity to look into the teachers' needs and their perceptions; regarding supervision. This may provide an informed basis for re-conceptualization of roles and responsibilities of supervisors. This re-conceptualization may envisage the idea of making supervisors active partners in teaching learning at primary schools, and then slowly scaffolding supervision to make it moral practice and supervisors as moral agents in future.

The data for this study was collected through semi-structured interviews, informal discussions and document analysis. The research participants included two supervisors, two head teachers of primary schools A and B and four teachers of same schools. Three interviews, followed by informal discussions, were conducted with each of two supervisors and two interviews with head teachers and teachers. The documents included two years visit notes of supervisors which they write in the visit logs maintained at schools.

Findings
Findings reveal that although there is an official criterion for the appointment of supervisors yet there are some other factors which influence the appointments of supervisors. As our main concern was to explore the current practices of supervisors according to what we believe and from what our experiences in government sector have been that the practices of supervisors are usually influenced by their qualifications. Therefore, it was important for me to know two things; a) what is the official criterion for appointment as a supervisor, and b) to what extent the criterion is followed.

Official Criteria
The only official document, which we accessed with concerted efforts about the qualifications of supervisor was an 'Information Booklet for

Primary Teachers, Head Teachers, Learning Coordinators, and Supervisors', published by the Bureau of Curriculum and Extension Wing Sindh, Jamshoro in 1999. This document enlists four qualifications for a supervisor; these are having a Master degree in education, expertise in communication skills, administrative abilities and flexible thinking, minimum five years experience of teaching primary classes.

Appointment of supervisor- existing practice

Saleem describes a story of becoming supervisor. According to Saleem, He has a friend who once asks his intention to become supervisor. With Saleem's inclination, his friend made him supervisor without his tilt and aptitude towards research. So Saleem became research supervisor just like a Muslim child becomes Muslim because he is born to Muslim family. So it is the wish of my friend to become a Supervisor and I became supervisor.

Thus Saleem became a supervisor because of his relationships with a person, who somehow could manage this kind of appointment in the education department. He shared that in many cases supervisors are also sent back to their previous jobs as high schools teachers, and this happens when the education department officers develop a personal grudge with any particular supervisor. A grudge might result from personal like dislike or difference of political affiliations.

Shan in informal discussion told how she became supervisor,
In 1988, as soon as I was promoted to the post of a high school teacher from my previous job of being primary school teacher, my Sub-Divisional Education Officer did not allow me to go and work in a high school, but he asked me to work as supervisor. Then I started working as supervisor.

Apparently, Shan was fulfilling two out of the four already discussed qualifications, required for being appointed as Supervisor. However, the procedure of her appointment was not clear for me. In Shan's case, the influence of the SDEO seemed to manipulate the appointment of a supervisor.

Terms of Reference (TORs)

We entered into the field with an assumption that supervisors have their TOR as a guideline to fulfill their responsibilities. However, during

interviews and informal discussions with supervisors we were informed that at the time when a High School Teacher (HST) is appointed as a supervisor s/he is not given any terms of reference. As Shan explained,

When we (HSTs/Supervisors) were promoted as supervisors, at that time, we were given no instructions, but we were given a letter, which said: You are promoted as Supervisor Primary Education (SPE) and your post is in this area, just these lines.

Saleem also affirmed that they were given just a two-line letter upon their appointment as a supervisor. In this study, I came to know the ways through which they learn about their supervisory responsibilities, which are as follows.

Learning Through On-job Trainings
One source for supervisors to learn about their job responsibilities is the reading material that they are provided during different training programs. Shan informed that she learnt her responsibilities from a booklet that she was given during a training program. On request, she provided researchers a copy of that booklet. That booklet was not more than a few stapled pages, and in that there was only half a page, which contained seven brief points under the heading of 'duties and powers of a supervisor primary education'. These include, assisting SDEO, inspecting schools, paying surprise visits of schools, examining school records, assessing requirements of schools, paying special attention to rural schools and recommending teachers' transfers.

We accessed the remaining part of that so called booklet from a faculty at a university. This part of the document mentioned five other roles of supervisors along with the seven mentioned earlier on. These five roles are:
- Keeping close watch upon low performing schools
- See the condition of private schools and recommend their recognition by education department
- Recommending the SDEO to strike of the unserviceable items in his or her office
- To submit monthly and periodical returns of schools
- To perform other duties as may be assigned by Sub-division or District education Officers

Furthermore, this document mentions seven academic responsibilities of a supervisor, which are:

- Evaluation of the quality of the educational provision by checking the quality of teaching methodologies, assessment and record-keeping policies, consistency in children's achievements across and between the schools, evaluating school development, meetings with learning coordinators, teachers and head teachers organizing in-service education for learning coordinators
- Advising head teachers on the school management
- To ensure planning by teachers for effective delivery of curriculum
- To maintain accurate record of data regarding schools
- To inform sub-divisional education officer regarding shortages of those articles in schools which may affect the satisfactory delivery of curriculum
- Monitoring of the achievement of schools and provide feedback on it to Sub-divisional education officer
- To appraise learning coordinators

These multifarious administrative and academic responsibilities indicate that a supervisor is a very important official in the hierarchy of education and his or her work is tremendously important and teachers head teachers and ADOE work in consultation with supervisor. His/Her responsibilities include professional development of teachers, evaluation of their work, monitoring and evaluation of the achievements of schools.

The responsibilities of supervisors that this document suggests are different from those responsibilities which the Information Booklet for Primary Teachers, Head Teachers, Learning Coordinators, and Supervisors, published by Bureau of Curriculum and Extension Wing Sindh, Jamshoro (1999) mentions, thus the authenticity of sources of learning job responsibilities is also questionable. The question arises to what extent supervisors like Shan are informed regarding their responsibilities, and what may be its implications for profession and practice of supervision?

Learning Through B.Ed. Courses Texts
In his interview, Saleem revealed, "During our B.Ed. courses, we read in the texts of the courses about the responsibilities of supervisors, so on the basis of that information, we know what are our roles and

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responsibilities" Whatever a supervisor learns in the texts of professional courses may be relevant, as it is procedural; but the manner in which one interprets those texts becomes very individualized, and translating those interpretations into practice, particularly when one is not provided with TOR, depends upon ones' own understanding.

Learning through Apprenticeship
Formally, there is no such concept of apprenticeship for supervisors. However, it was a self-initiative from the supervisors that they intended to learn how to perform their roles and responsibilities. Saleem said, "I asked from senior supervisors, and then for some days, I went with a senior supervisor and started to practice what he used to do"

From such stories, we found that there is no uniform way for the supervisors to learn their roles and responsibilities, thus, their practices are being informed from different sources; consequently, the supervisory practices lack uniformity. Every supervisor works either according to his or her understanding of the job or according to the way he or she has learnt about her roles and responsibilities from any other source. As Shan said, "my way of work is my own; the others work as they find it suitable". Saleem said, "I try to work as I learnt in B.Ed. and during my course of supervision in England". Although our purpose of study was not to find or construct generalizations, taking into consideration the nature of a profession it was quite interesting to know how a profession may lack uniformity of practice. This trend may have serious repercussions for teaching/learning.

Supervision or Monitoring
If seen with precision, supervision stands as a support service, while the purpose of monitoring has dual objective, as simultaneously it stands for development and accountability as well. Moreover, in the case of primary schools in Karachi, supervision stands for both; support and monitoring. However, in practice, it appears that it does none of the above, as other findings indicate that it neither provides professional support to teachers nor serves the purpose of accountability and development. Both Shan and Saleem believe monitoring is the main purpose of supervision. According to her, supervision is an essential component of primary schools, because without it, schools cannot be monitored. She shared the concern:

How will our department know that our schools are working properly and our teachers are coming to school on time and they are leaving the school at proper time? All the information the government needs is sent by us supervisors, the government has no other way for monitoring the schools.

Along with believing that supervision stands for monitoring, she further considers that monitoring stands for collecting information and ensuring punctuality of teachers and school timings rather than monitoring for academic purposes or quality assurance. Thus, she also may hold a stereotype meaning of monitoring.

Saleem said, "The responsibilities of a supervisor first of all come from monitoring, which means to make teachers punctual".

Surprise Visits: A Classical Approach
Justifying the surprise visits Shan explained:
Informing them in advance results in them getting prepared for only that one day and shows us that this is the way we are working. However, surprise visit makes the entire story clear on the spot, that how the school is working, and how the teachers are teaching.

Warwick and Reimers's (1995) study, which they conducted in primary schools of Pakistan, support the claim made earlier:
External supervisors act as administrators rather than as managers or leaders. … During their visits to schools they focus on classic questions of administration: Does the school have its own building? Are forms sent in on time? Are there enough teachers? Do the teachers and pupils attend school when they should? Does the school have adequate facilities and does its equipment have all of its parts? During their appearances at school they may observe classes and talk with teachers, but they do not have the time and inclination to be managers or leaders. (p.92)

Even after twelve years Warwick and Reimer's (1995) study, supervision still does not offer a viable leadership solution to the primary schools. Supervisors' main concern was to check the absenteeism of teachers, as Saleem's statement supports this view, "Supervisor checks the teachers' attendance register to see whether the teacher has come to the school or not. If a teacher is late, the supervisor notes it down and warns the teachers."

Focus of Surprise Visits

Teacher absenteeism seems the biggest focus of surprise visits as mentioned by supervisors as a concern. 28 visit notes were studies, two statements were found very common in the visit notes of supervisors; 'teachers were found present', and 'all teachers including head teacher were present'.

A visit note is most of the times a descriptive note, which informs how many teachers were present, on leave, or absent at the time of the visit of a supervisor. Some notes also indicate how much part of the syllabus has been completed at the time of the visit. Some other notes also disclose a given number of teachers, who have recently been transferred to or from a school. Although these transfers are not sanctioned by supervisors and are not under their jurisdiction, perhaps these records are maintained to check the teachers' apathy in attending the school and the constant absenteeism which is rampant in schools (Sindh Education Foundation, 2007).

Typical classroom observations

Classroom Observation was found as a main academic practice of supervisors, which also takes place during surprise visits, the way this observation takes place is a 'typical style', it is like having a bird's eye view of a classroom. To know about the process of this kind of observation, we asked Saleem if he or other supervisors use any tools, for example, a checklist or any other thing to focus on the observation, he said, "No-no, I mean there must be tools, but formally we check the way of teaching" Saleem justifies his practice of not using observation tools by relating it with lack of teacher's competencies to focus their teaching, he said; "No I don't use observation tools because our teachers are not aware of focusing on their classroom teaching".

For Shan, observation of the classroom teaching was, "I sit in the class and then I call the teacher in the staffroom or in office, in case of good performance, I appreciate the work or if there are mistakes or the teacher missed something, I tell her the correct way".

Teachers informed that classroom observations are very rare and if they take place, it is just for a minute or two or sometimes five minutes. Regarding providing feedback Nisha (pseudonym a teacher in school A) shared her experience with me "when the supervisor observed my class,

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he wrote a note in the visit book, which she shared with me: [the note reads] "I observed the school. Discipline is good, classes are good, children and teachers were busy in teaching and learning". These kinds of generalized statements are common in visit notes. For Nisha, whatever the supervisor noted in the visit book about her teaching failed to inform her anything about her teaching. In the same way in all the visit notes that were collected, anywhere any statement from supervisors that could be taken as constructive feedback for teachers on classroom observation was not found.

Information collection
Another practice of supervisors is collecting information from schools through Sindh Education Management and Information System (SEMIS) forms. This information consists of the number of Physical facilities available in school, Staff and their qualifications, enrolment of children, School Management Committee and school finances. These forms do not touch the 'how' question regarding the usage of those facilities. It seems that may be the purpose of this information collection is just to update the SEMIS quantitative database, which may be useful for the government officials when they sit in the meetings with donors, where they can share the figures and give the impression of themselves being highly concerned regarding meeting the objectives of Education For All (EFA) to the officials. However, the authenticity of this data which is sent through SEMIS form is questionable, because no system of validation of this data exists. Saleem shared, "even there are such schools, where teachers are posted and SEMIS forms are sent with data. The school record shows the student enrolment, but in reality not even a single child is attending such schools". Shan initially denied existence of such schools, but on further probing, she accepted that certain schools of such kind exist, she stated, "that there are not more than one or two such schools, where there isn't even a single child attending school".

Discussion
After careful reading of the data and findings, we can precisely relate the ambiguity in the field of supervision and its role in schools, with the state of supervision of government primary schools in Karachi. Hence, same question that Glanz (1999) asked "can we expect a field to attain historical maturity when difficulties prevail in both defining the field's parameters and role in schools?" (p. 100) is again relevant to the state of supervision in this context.

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Furthermore, as findings suggest that supervisors are not given their terms of reference, therefore, it is their discretion how they practice supervision. Since their sources of professional knowledge are different, as we have discussed in the findings, that there is no uniform way of learning about their roles and responsibilities, and everyone does it as s/he likes.

Considering this situation of primary education in Pakistan, one should simply understand the dire need for change. However, the question arises who will initiate change? Are our supervisors in position and equipped with the required skills to initiate change? It is not that change is only required to be initiated, but Fullan (2001) attributes three phases to the process of change: first- initiation, second- implementation, and third- institutionalization.

Taking this situation of primary education into consideration, it appears that there is a dire need of taking quite drastic improvement initiative at the very grassroots level, which should include such kind of supervision which is an essential support service for the improvement of instruction in primary schools and is concerned about the student achievement, and which also is accountable. In addition, such improvement initiative should also envisage establishing a viable monitoring mechanism, which should work on the basis of some standards and professional ethics.

To conclude, the officials working in the public system of education at all levels from supervisors to policy-makers are required to understand that supervision stands for the "improvement of classroom practice, for the benefit of students, regardless of what else may be entitled" (Bolin & Panaritis, 1992, p.31). To achieve these objectives the supervisors must understand that "supervision is a process of engaging teachers in instructional dialogue for the purpose of improving teaching and increasing student achievement" (Sullivan & Glanz, 2005, p. 27). This becomes more pertinent when "teachers in many government primary schools in Pakistan are still struggling alone in their classrooms to cover content with large groups of learners with few textbooks or resources to help them" (Rizvi & Elliot, 2005, p. 36). This demands the re-conceptualization of supervision as a moral undertaking, as suggested by Sergiovanni and Starratt (2007):

If supervision is to be moral action, it must respect the moral integrity of the supervisor and the supervised. That is to say the exchange between the supervisor and the teacher must be trusting, open, and flexible to allow both persons to speak from their own sense of integrity and to encourage each person to respect the other's integrity. (p.68)

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Comparison of Management Systems of Army Public Schools and Colleges (APSACS) and Federal Government Educational Institutions (FGEIS) In Cantonments and Garrisons(C/G)

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Abstract

The purpose of the study is to analyze and compare the management systems of the educational institutions administered by the armed Forces i.e. Army Public Schools and Colleges (APSACs) and Federal Government Educational Institutions, Cantonment and Garrison (FGEIs)(C/G) with a view to suggesting ways and means for improving the effectiveness of these institutions. Comments of 350 respondents selected through the stratified sampling were obtained by administering questionnaire followed by conducting interviews separately of the management authorities of FGEIs and APSACs, Heads of Institutions and a few parents. The sample comprised 20 heads of institutions, 130 teachers and 200 parents. The data collected were tabulated, analyzed by calculating their percentages and verified statistically using Chi- Square test. The results of study indicate similarities and differences in the two systems with regard to their organization, functioning, and school environments. Both systems differ with respect to their organization, recruitment procedures and fiscal arrangements. FGEIs' system is better than that of APSACs with respect to job security, teachers' experience, and uniformity of syllabi, teachers' fringe benefits and centralization of policies. The system, however, suffers from certain weaknesses like over-crowded classes, in-compatible set of training facilities vis-à-vis the rapid technological developments. On the other hand, APSACs are privileged institution being self-financed and semi- autonomous bodies. Their policies

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are made corresponding to the local requirements. Students-teachers ratio is better than that of FGEIs which facilitates better learning environments. Teachers, however, do not enjoy job security, which generally mars the overall performance of institution(s).

Introduction

Cantonment Board educational institutions all over Pakistan were taken over by the Federal Ministry of Education in 1975. The administrative and financial control of these institutions was transferred to Army Education Directorate in 1977. Subsequently, a separate Directorate of Federal Government Educational institution was established in November 1981, under the administrative control of Ministry of Education. The administrative control of this Directorate was then shifted to Ministry of Defense in March 1992.

The need for establishing APSACs arose mainly due to the overcrowding of classes in FGEIs. The immense increase in clientele necessitated the establishment of more FGEIs in cantonments. However, due to adverse economic state in the country, allocation of development funds to these institutions was curtailed by the government resulting in an acute shortage of school buildings and other allied facilities. To cope up with this situation, the need to establish another system of education was felt. The first institution was established in March 1981 which was named as Army Education Corps High School at Humayun Road, Rawalpindi. The school was formally inaugurated on 29th April 1981 and started functioning under the administrative control of Army Education Directorate. Later these institutions were named as Army Public Schools and Colleges and were affiliated with Federal Board of Intermediate and Secondary Education, Islamabad.

Statement of the Problem

The study "comparison of Management Systems of APSACs and FGEIs (C/G) is aimed at carrying out in depth study of the management systems of educational institutions under the administrative control of Army, and suggesting measures for their

effective and efficient functioning in achieving their objective of providing quality education.

Significance

The study would help the planners, administrators and the managers to alleviate any weaknesses/ shortcomings and hence would contribute effectively towards the common cause of provision of quality education.

Objectives of the Study

- To explain the historical perspective of the two educational systems.
- To identify the essential differences between the two systems, if any.
- To compare the effectiveness of the two systems and identify the causes of differences, if any.
- To suggest measures to overcome bottlenecks, if any to make both the systems more effective.

Population

The estimated population comprised 10,000 subjects which included heads of institutions, teachers, students' parents of 62 APSACs and 85 FGEIs at SSC and HSSC level.

Sample

The sample was selected by stratified sampling from the institutions located in Rawalpindi Region, which included areas Rawalpindi, Jhelum, Murree and Muzaffarabad. The sample comprised the following:-

- 20 Heads of Institutions
- 130 teachers
- 200 parents.

Methodology

The data were collected through questionnaire, interviews and document analysis.

Findings

In the light of the data analysis and their interpretation the findings drawn are given in the succeeding paras:-

Management System- Essential Differences Between FGEIs and APSCs*:*

⇒ **Administration and Management:-**FGEIs (C/G) are administered and controlled by the armed forces with 99.5 percent civilian staff paid out of "civil estimates". APSACs are also administered by the Armed forces, with their staff employed by the local administrative/ management authorities. The staff is paid out of the school resources. The FGEIs (C/G) are controlled and administered by the FGEI Directorate which is an attached department of the Ministry of Defense. APSACs are administered/ controlled by local formation commanders. However, guideline policies and instructions are issued by the GHQ.

⇒ **Employment and Recruitment: -** Authority for employment of teaching and non-teaching staff in APSACs rests with the Chairman, Regional /Garrison Boards. FGEIs Directorate recruits its staff (from BPS-1 to BPS-15) through the Ministry of Defense and the Establishment Division. The employees of BPS-16 and above are recruited by the Federal Public Service Commission.

⇒ **Financial Management**:-The FGEIs are State managed institutions and funded by the Federal Government, whereas APSACs are privately managed institutions and are self-financed.

⇒ **Parents' Satisfaction to the Systems**:-The majority of parents whose children are studying in FGEIs are civil government servants whereas in case of APSACs, the majority of parents are from Armed Forces of Pakistan. The parents are generally satisfied with the both systems of education.

⇒ **Parents' Choice of Schools**:-Parents have a general liking for admission of their children to FGEIs due to better qualified teachers and low rate of tuition fees. However, Parents who are economically well off have their interest for APSACs due to their good repute, small class size and better student teacher ratio.

⇒ **Frequency of Parent Teacher Meetings**:- In APSACs, parent teacher meetings are held quite frequently to discuss students' progress / problems as against FGEIs where such activities are limited or almost non-existent .Parents have generally viewed

this activity as an important contributor in students' high academic achievements.

⇒ **Student-teachers' Relationship:-**Such relationships are generally found good. However, in APSACs these relations are further strengthened due to restricting the class strength to a reasonable level.

⇒ **Head-Teacher Relationship:-**No significant difference is found in this aspect in both the systems. Relations are generally good with one odd incident which is generally sorted out mutually in office meetings.

⇒ **Administrative Difficulties faced by Heads of Institutions:** - The heads face identical administrative problems in both the systems, generally in the form of hierarchical pressures and pressures from parents. These pressures hamper the independent functioning of the heads of institution. The heads of institutions confirmed about such impediments in their smooth functioning during interviews.

⇒ **Difficulties faced during Admission:-**During admissions, the heads of APSACs face some difficulties due to long channel of command, whereas the problems of heads of FGEls' are multiplied due to limited number of seats available, long channel of command and extraneous pressures for admissions.

⇒ **In-Service Training of Teachers:-**In APSACs, in-service training is conducted through holding of workshops and seminars, whereas in FGELs, the training is imparted through different administrative courses. A few seminars/workshops are also conducted. Both the systems differ significantly in conduct of the in-service training of the faculty.

⇒ **Fiscal Management**
  o **Fee structure: -** Both systems are significantly different from each other in the following respects:
    ✓ Higher fee structure of APSACs than FGEIs.
    ✓ APSACs are self financed being privately managed by Armed Forces under the jurisdiction of local Head Quarters.
    ✓ Federal Institution are financed centrally by the federal Ministry of Education through Ministry of Defense, thus the fee structures are comparatively low.

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✓ No uniform fee structure exists in APSACs in country as against the FGEIs.

⇒ **Financial Management Problems:** Heads of institutions of both the systems reported a number of fiscal problems which adversely affect the smooth functioning and efficiency:

➢ **APSACs**
   o Heads of institutions have got little room for maneuverability due to strict control over finances.
   o Shortage of funds for inducting experienced and well trained teachers.
   o No extra monetary benefits incentives for teachers for their performance.

➢ **FGEIs**: In case of FGEIs , the following factors hamper the smooth functioning:
   o Insufficient funds allocation by the Federal Government.
   o Ban imposed by Federal Government on development of new projects due to financial constraints.
   o Acute shortage of teaching and non-teaching staff due to scarcity of resources and ban on appointments.
   o Lack of community involvement in school affairs.

⇒ **Effectiveness of Both Systems**

➢ **Academic Performance of Students.** There was no significant difference in academic performance of students of both the systems at SSC and HSSC level except in Pre-engineering group at HSSC level where the performance of FGEI students was found better than that of APSACs students. In APSACs system the performance of Pre-medical students was better than that of FGEIs students of the similar group. The heads of institutions and management authorities of both the systems were interviewed to know their views and their level of satisfaction about students' performances. They showed their satisfaction over students' performances. Management and the heads of institutions suggested some measures to improve the effectiveness of their institutions as under: -

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- o Establishment of teachers' training institutions.
- o Enhancement of Teachers salaries and provision of fringe benefits.
- o Better rapport between teachers and parents.
- o Over crowding of classes in case of FGEIs be avoided.
- o Introduction of counseling cells in the institutions to resolve the psychological problems of students and assist them by motivating for their academic excellence.

⇒ **Bottlenecks Affecting Effectiveness**
  ➢ **FGEIs System:-** Director FGEIs pointed out the following impediments which adversely mar the effectiveness:
    - o Insufficient budget allocations by the government.
    - o Ban on new development projects by government
    - o Apathy of parents on academic progress of their wards.
    - o Lengthy procedures regarding induction / promotion of staff, and disposal of disciplinary cases against them.
    - o Non availability of local teaching staff and reluctance of teachers to serve in far-flung/ hard areas.
    - o Over crowded classes and different pressures for admissions.
  ➢ **APSACs System: -** The Director Doctrine and Evaluation (D&E) brought out the following problems affecting efficiency:
    - o Pressure for admission vis-à-vis capacity
    - o Non-availability of experienced teachers.
    - o Shortage of funds to employ trained and experienced teachers
    - o Lack of benefits and compensation for teachers.
    - o Job insecurity

⇒ **Measures to Overcome Bottlenecks**
  ➢ **FGEIs System**: - Director FGEIs suggested the following measures to enhance effectiveness:
    - o Increase in budget allocations
    - o Exemption of FGEIs from any future ban on recruitment.

- o Establishment of new schools and colleges and up gradation/ expansion of existing institutions to release the pressure of admissions in FGEIs.
- o Extraneous pressures and influences to be resisted by following a policy of merit for admissions.
- o Frequency of parent teacher meetings be increased to ensure community participation / involvement.
- o In-service training to be ensured for teachers for their professional growth.
- o Promotion of teachers to be linked with some publications by the teachers.
- ➢ **APSACs System**:- Following measures were suggested by the management authorities to overcome the problems affecting smooth functioning of educational institutions:
  - o Admissions to various classes need to be made on merit after administering a written test.
  - o Some provisions need to be made to get additional financial resources to enable the school administration to induct well qualified and experienced teachers.
  - o Further expansion of existing schools to reduce the admission pressure.
  - o Better financial package/job security for teachers to be offered.
  - o Highly professional, dedicated and experienced educationist to be appointed as Principals.

Recommendations
A.   FGEIs System:
1. Budget allocation is enhanced for development works, by the Federal Ministry of Finance for expansion of existing infrastructure.

2. Facilities for teachers who serve in far flung/hard areas may be created. Some incentives may be provided to such teachers in the form of monetary benefits like advance increment(s) or accelerated promotion. This would need an amendment in existing rules and regulations. Alternatively, monetary assistance, additional hard area allowance may be provided to teachers out of school fund or GHQ Development Fund which is introduced centrally and placed with local formation

commanders. In addition to these incentives, the period of their stay at such stations may be clearly specified in the posting orders for their timely rotation.

3. Additional classrooms may be constructed to avoid over-crowding. The funds to be procured from IQRA or "Social Action Programmes" (SAP) from the Provincial Government since most of these institutions are functioning in different provincial jurisdiction and providing educational facilities to the civilians in that locality.

4. Evening shifts were introduced in Primary schools at Primary level in FGELs to lessen the pressure for admissions. However, this step has put further pressure on the limited number of middle and secondary schools. The Primary schools in evening shift may be gradually upgraded to High/ Secondary Schools.

5. Director FGELs may be empowered to deal with the disciplinary cases up to grade 16 employees for speedy disposal of administrative cases. This would need an amendment in Establishment Code (Esta' Code) at the ministerial level.

6. In order to deal with the existing deficiencies of teachings staff in FGELs, these institutions may be exempted from any ban on recruitment imposed by the government.

7. Director FGELs may be empowered to make appointments up to grade 15 level, as and when required, to avoid complex, lengthy and time-consuming recruitment process. However, appointments made by the Director be communicated to Ministry of Defense and establishment Division, accordingly.

8. In-service training of teachers may be ensured for constant improvement of their professional competence. This can be achieved through arranging workshops, seminars and/or detailing teachers on various professions courses. Arrangement of coordinated training courses for teachers with the collaboration of University Grants Commission may add to the teachers' professional development.

B. APSACs System:

9. To overcome shortage of funds, community participation may be ensured. Teachers may be motivated to work as social workers and motivate parents for their contribution to the system for the betterment of their children.

10. Admissions may be made strictly on merit.

11. Pension benefits and other fringe benefits may be provided to teachers for their job security. A central fund for the purpose may be established by the management authorities where the employees should also contribute on monthly basis. Rules of business pertaining to pension and other fringe benefits may be formulated at GHQ for issuance of policy guidelines.

12. In-service training may be provided to teachers for their professional development. The management authorities may consider establishing a training institute for teachers on the lines of Fauji Foundation. A separate study may be undertaken by the management for the purpose.

13. In FGELs, a development fund is established @ Rs. 20/- per student per month from college students and Rs. 15/- at the school level. The funds are maintained centrally at the formation level. These funds are utilized for payment of salaries to temporary staff and minor repair works, etc. A similar fund is suggested to be established in APSACs to obviate the problem of shortage of funds and provision of trained/experienced teaching staff.

14. Induction of teachers may be made purely on merit considering their qualification, experience and the devotion to profession.

15. The salary package may be made more attractive to get better-qualified teachers. The expenditure may be borne from within the local resources of school. However, the Head quarters may provide financial assistance for the purpose.

16. Income generated from a particular school may be spent on the betterment of the same school in the form of provision of facilities for conducive to learning environment.

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Recommendations for the Managers

For the school performance and effectiveness, the managers are required to always cater for the tangible as well as intangible variables affecting the school outcome. Parameters like Instructional leadership by the principals/heads, strong emphasis on academics, efficient, qualified and experienced teaching staff with high expectations, external and internal environment of school form the basis of an effective school. All these factors need to be kept in mind by the school management for effective administration /functioning of schools. In addition, the management authorities and the heads of institutions may also take into account the importance of allied facilities namely well equipped laboratories, well stocked libraries and efficient and experienced teachings and non teaching staff: all contributing significantly towards school achievements and better learning environment. They are required to discriminate between effective schools and non-effective schools keeping the aforementioned parameters in mind which would help them to improve the school management for better performance.

Conclusion

APSACs and FGEIs (C/G) are two different school systems managed by Armed Forces with a view to providing quality education. Both systems significantly differ in their management system, fiscal management, recruitment and administrative set up. However, despite these major differences both systems have effectively contributed in provision of quality education. To ensure a better performance there is a need for provision of fringe benefits to the faculty members of APSACs system. A need is also felt to establish a Directorate of APSACs to ensure uniformity of policies regarding examination system, curriculum, uniform, fee structure and policies regarding administration of staff in line with the FGEIs system.

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The Effect of Cooperative Learning on Reading, Writing Achievement and Academic Self-Esteem

Shafqat Ali Khan[*]

Abstract

The study examines the effect of cooperative learning in improving reading and writing achievement and academic self esteem of students of large classes. Self-esteem is how people feel about themselves and how much they like themselves, especially academically after using cooperative learning method. One hundred and twenty eight students at Government Comprehensive High School of English subject participated in the study and a pre-test, post-test control group experimental design was used. At the end of experiment, participants took Johnson & Johnson self-esteem scale containing sixteen items to know the self-esteem of the students. T-Test was used to know the difference between means. The results indicated a statistically significant difference between variables achievement in reading and writing and academic self-esteem. The researcher discusses pedagogical implications of cooperative learning and suggests recommendations.

Keywords: Cooperative Learning, Self-esteem, Academic Achievement, Traditional Learning, Linguistic Skills

Introduction

Education is a teaching and learning process. Learning depends upon instruction. Many teachers use traditional methods of instruction in Pakistan. It is very difficult to teach English and to motivate the students to learn with traditional (whole class) method. The students of English class have to cover the syllabus in a limited period of time. There is no opportunity for a teacher in traditional learning methods to give individual attention to all students. The result is that achievement and confidence level remains low in the students (Khan.2001, 104).

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Cooperative learning claims to help the students in such a situation. Cooperation is a compulsory component of cooperative learning. Cooperation means working together to accomplish shared goals. In cooperative situations, individuals seek results that are beneficial for all members of a group. Students work together to maximize their own and each others learning and self-esteem. It may be contrasted with competitive learning in which students work against each other to achieve an academic goal and individualistic learning in which students work on their own to accomplish training goals unrelated to those of other students (Johnson et al., 1999.p.5). Competitive and individualistic traditional learning methods are popular among Pakistani teachers. To use cooperative learning effectively, teacher must realize that all groups are not cooperative groups. Some teachers use traditional learning groups. In this instructional method, a group whose members are assigned to work together but they have no interest in doing so. The structure promotes competition at close quarters, On the other hand learning group; members of a cooperative group meet all reasonable expectations which are given to them. In cooperative group, students work together on specific tasks or projects in such a way that all students in the group benefit from the interactive experience since learners are different in their intellectual capacity, their motivation and their linguistic skills. Students are strongly motivated by a need for praise or positive feedback. Students want to be praised. However, they need to have self verification and verification from others. Cooperative learning may provide the positive feed back on the other side competitive and individualistic (traditional learning) methods provide competition among students.

Self-esteem means how people feel about themselves and how much they like themselves, especially socially and academically. Everyone's self esteem is influenced by many factors parents, teachers, coworkers, friends, fellows' climates, and environment is constantly influencing self esteem (Blascovich at al., 1991).

Cooperative learning claims to meet one's academic expectations and desires that are a major key to students' self esteem. Having a high self-esteem has many positive effects and benefits. Students who feel positive about themselves are more persistent at difficult tasks, are happier. English is used as a second language in Pakistan. Numbers of second language acquisition models have been propounded in the last two

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decades. There also exists a variety of teaching approaches based on different views for not only second language learning but also enhancing self esteem of the learners. In this article researcher will attempt to relate two completely different view points: traditional (whole class) method, and the cooperative learning approach to second language teaching and their impact on self esteem of the students.

Rationale of the Study
English is taught as compulsory subject valued for its educational and cultural significance. Yet, there is more emphasis on teaching English as perceived to be more important for communication in the domains of science, trade, and technology. However, instructions in English in the context of the present study remains competitive in nature and does not provide opportunities for active learning and self realization among learners because learners are expected to perform better than their classmates in order to attain higher grades and achieve approval and success. There is a need to examine cooperative learning as an instructional approach in a traditional school context such as this one is based on the assumption that it would promote active learning, enhance self-esteem and meaningful interaction among learners. Specifically, the study addresses the following questions:

i. Is the cooperative learning method more effective than traditional learning method in promoting the reading and writing achievement of learners in English.

ii. Is the cooperative learning method more effective than traditional learning method in promoting the self-esteem of learners?

The main objectives of the study were:
a) To assess the effects of cooperative learning and traditional learning methods on reading comprehension and writing ability of the students in the subject of English.
b) To asses the effects of cooperative learning and traditional learning methods on the self esteem of the students.

Hypothesis of the Study
The following hypotheses were tested in this study:
(i) There is no significant difference between the mean post-test scores of the reading and writing achievement of sample students

who are taught by cooperative learning method and sample students who receive traditional learning method.

(ii)   There is no significant effect of cooperative learning on the self esteem of the sample students.

Definitions

Researchers have defined cooperative learning in the different ways:
Johnson et al. (1999) state, "Cooperative learning is the instructional use of small groups so that student's work together to maximize their own and each other's learning. It may be contrasted with competitive and individualistic learning". (p. 5)

Roger et al. (1992) described that cooperative learning is group learning activity organized in such a way that learning is based on the socially structured exchange of information between learners in groups in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others (p. 8).

Literature Review

Sadker and Sadker (1997) have focused on the benefits of cooperative learning. They show that both cognitive and affective growth results from cooperative learning with following additional benefits:

•   Students taught within this structure make higher achievement gains.

•   Students who participate in cooperative learning have higher levels of self-esteem and greater motivation to learn.

•   A particularly important finding is that there is greater acceptance of students from different racial and ethnic backgrounds when a cooperative learning structure is implemented in the classroom. (p. 64)

According to McGroarly, (1993, pp. 19-46) Cooperative learning creates natural and interactive contexts in which students have authentic reasons for listening to one another, asking questions, clarifying issues, and re-stating points of view. Cooperative groups increase opportunities for students to produce and comprehend language and to obtain modeling and feedback from their peers. Much of the value of cooperative learning lies in the way that teamwork encourages students to engage in such high-level thinking skills and analyzing, explaining, synthesizing, and elaborating. Interactive tasks also naturally stimulate and develop the

students' cognitive, linguistic and social abilities. Cooperative activities integrate the acquisition of these skills and create powerful learning opportunities. Such interactive experiences are particularly valuable for students who are learning English as a second language, who face simultaneously the challenges of language acquisition, academic learning and social adaptation.

Armstrong, (1999), conducted a study comparing the performance of homogenously grouped, gifted students to heterogeneous ability groups that included gifted average and low performing learners. Both groups experienced a comparable increase in achievement after working together, with gifted group performing only slightly higher.

Kosar (2003) investigated the effects of cooperative learning on the achievement of 7th class students in the subject of Social Studies. The sample comprised 40 students of 7th class equally placed in experimental group and control group on the basis of scores obtained in the social studies annual examination. In this experiment of two weeks, "cooperative learning resulted in higher achievement as compared to routine method of teaching social studies" (p. 81).

Parveen (2003) conducted an experimental study on the effects of cooperative learning on the achievement of 8th grade student in the subject of Social Studies. The study sample consisted of 35 students who were distributed among experimental group (N-18) and control group (N-17), matched on the basis of their annual examination social studies scores. After a treatment of fifteen days duration, on the basis of pretest and posttest scores, "cooperative learning was not found to be a better instructional strategy than routine method of instruction" (p. 105).

According to Siddiqui (2003), the available research on second language acquisition reveals that to develop and learn a language, learners must interact in the language. Increasing the frequency and variety of the verbal interaction in which learners participate is an important goal of any instruction based on the principles of second language acquisition. The teacher-fronted approach often ends up preventing students from having genuine interactions with the teacher and fellow students because the teacher initiates and controls the interaction. Collaborative learning encourages mutual interaction and, by increasing the number of opportunities available for verbal expression, provides opportunities for a

wider range of communicative functions than those found in teacher fronted classrooms.

Cooperative learning may increase the understanding of the material in the students of even over crowded class.

Nowka and Louis, (1999), used a cooperative method and divided a large class of 70 students into groups of five and seven students. They concluded that it helped students, understanding of the material. Minor questions were asked and answered in the group. Group discussion gave students and opportunity to be part of discussion.

According to Iqbal (2004) cooperative learning is more effective as a teaching learning technique for mathematics as compared to traditional teaching method. Students in cooperative groups outscored the students working in traditional learning situation, but in cooperative groups, they have no obvious supremacy over students taught by traditional method in retaining the learnt mathematical material. Low achievers in cooperative groups have significant superiority over high achiever.

Jennifer Crocker has carried out major research on the topic of contingencies of self-worth. She says that her research "explores what it is that people believe they need to be or do to have value and worth as a person, and the consequences of those beliefs". She claims that people pursue self-esteem by trying to prove that they have worth and value, and this pursuit affects "the satisfaction of the fundamental human needs for learning, relationships, autonomy, self-regulation, and mental and physical health" (Crocker, 2007).

Similarly Crocker et al. define successful self regulation as "the willingness to exert effort toward one's most important goals, while taking setbacks and failures as opportunities to learn, identify weaknesses and address them, and develop new strategies toward achieving those goals" (Crocker, Brook, & Niiya, 2006).

Researchers such as Crocker believe that people confuse the boosts to self-esteem resulting from successes with true human needs, such as learning, mutually supportive relationships, autonomy, and safety (Crocker & Nuer, 2004).

Gaith (2003) reported that learning together model yielded higher overall achievement as well as enhanced learners' academic self-esteem more than regular whole-class instruction of English reading significant superiority over high achievers (p. 75).

In the light of above mentioned studies, it was concluded that cooperative learning is more effective as a teaching – learning technique. The present study aimed at evaluating the effectiveness of cooperative learning method in the subject of English in over-crowded class.

Research Methodology
The purpose of this study was to evaluate the influence of cooperative learning on the self esteem of the students. Following procedure was adopted.

Design of the study
In this study pre-test post-test equivalent group design was used (adopted from Watenable, Hare and Lomax, 1984). In this design, pre-test was administered before the application of the experimental and control treatments and post-test at the end of the treatment period. A technique of cooperative learning (STAD) (adopted from Slavin, 1995, P. 131) was selected as the form of intervention in this study. After the experiment a questionnaire comprised 16 items (adopted Johnson & Johnson, 1996) was selected to know the self-esteem of the students.

Sample
Sample of the study consisted of 128 students of 8th classes of Government Comprehensive High School Rawalpindi. Their ages ranged from 13 to 14 years. The participants were selected from that school which represents population of typical government schools in Pakistan i.e. large classes and students of different socio-economic status. The experimental group included 64 participants who studied together in sixteen teams of four members each according to the dynamics of cooperative learning. Meanwhile, 64 participants in the control group studied the same material with traditional learning method. All students were randomly selected from all three sections of 8th lass of the school. These students were separated into two groups of experimental and control group on the basis of result of the test score. The score of the test was used to equate the groups i.e. each student of experimental group was equated with the corresponding student in the control group dents

were allotted randomly to control and experimental group. In this group of 64 students, sixteen were high achievers sixteen were low achievers, and thirty two students were average. Same criteria of selection of students were adopted to form control group. Thus two equivalent groups were formed in such a way that average score and average age of the students of two groups were almost equal. Immediately after the treatment was over; teacher made post test was administered to both the experimental and control groups.

Teaching Conditions
Equal conditions for both groups were established. All factors like time of the day and treatment length in time were equated. The same teacher taught students of both groups. Both groups were taught the same material. The study tested for fifty six days with daily period of 40 minutes. Experimental group was taught by using cooperative learning and control group was taught by using traditional learning. Training was provided to one teacher who was selected from government comprehensive high school Rawalpindi. He was elementary school teacher with 10days training in cooperative learning i.e. five days for theory and five days for practical teaching. Researcher in three areas of class preparation, presentation, group formation and quiz gave detail instructions.

Data Collection
During the experiment, two different treatment patterns were applied to the lesson plans of both of the groups addressed the same instructional objectives; based on the same reading passages and exercises. The methods of data collection for this study were teacher made tests and questionnaires.

Research Instruments
In order to equate the control and experimental groups, a teacher made pre-test was administered before the allocation of students to experimental and control groups. Immediately after the treatment was over, a teacher-made post test was administered to subjects of both the experimental and the control groups.

The purpose of this test was to measure the achievement of the students constituting the sample. The researcher constructed pre test and post test after a thorough review of the techniques of test construction. To make

reading comprehension test, researcher followed the work of author Farr (1972, pp. 4-9) and to evaluate the writing ability followed the work of author Haq (1983, pp. 47-118).

The numbers of items included in each test were double the number to be included in the final form of tests. These tests were first judged by experts of Faculty of Social Sciences, Education Department, International Islamic University Islamabad and Department of English, AIOU, Islamabad. About 23% items were dropped because experts doubted their validity. Then each test was administered to ten students of same level for which it was going to be used. At this stage 27% items were rejected. Thus the final form of the test was prepared.

Class teachers and experts were involved in the construction of tests. Both the pre test and post test were same but their arrangements of items were changed in post test. Each test had two parts, was composed of 100 multiple-choice test items, 50 items of reading comprehension and 50 items of writing ability. Reading comprehension test (Part I) had the following items.

Reading comprehension consisted of 50 items i.e.
  a) 20 items for literal comprehension of ideas directly stated in the passage.
  b) 30 items for evaluative comprehension that required inference, competencies of context clues and skimming and scanning.

These 50 items were developed from five lessons of the textbook for class VIII. Out of these five lessons, three lessons (lesson No. 14, 17, 18) had been taken from the content studied by the students in the classroom whereas; two lessons (i.e. lesson No. 19, 21) had been selected from the content not studied by the students in the classroom.

Writing ability test (Part II) had the following items i.e. writing ability test also consisted of 50 items:
a) 25 items for usage of five parts of speech, i.e. Pronoun, Adverb, Adjective, Proposition, Conjunction.
b) 25 items for tenses i.e. Present Indefinite, Present Continuous, Present Perfect, Present Perfect Continuous, Past Indefinite, Past Continuous, Past Perfect, Past Perfect Continuous.

The split half method (odd-even) was used to test the reliability of posttest scores obtained by 30 students who did not form the sample of the study. Spearman – Brown prophecy formula was used to estimate the reliability for the whole test from the obtained correlation between the two half tests.

In order to know the self-esteem of the students of control and experimental group, a questionnaire (appendix –1) was administered after experiment. Academic self-esteem was defined in the context of the present study as the self perception of one as being a capable, competent, and successful student (Johnson and Johnson, 1996, P.67) and measured by a five – item Likert subscale adopted from Johnson and Johnson (1996). The internal consistencies of this subscale was a=.76 based on data from the present study- T-test was used to compare impact of two methods on the self-esteem of the students.

Results
The hypotheses underlying the present study were that C.L method would yield reading achievement as well as enhance learners' academic self-esteem more than traditional (whole class) learning method. Table 1 presents the results of the test and Table 2 showed the result of the questionnaire. The treatment conditions (experimental versus control) were used as the independent variable, while reading achievement and academic self esteem were used as dependent variables. The pretest scores of participants were used in order to control for any potential preexisting differences in the performance of the control and experimental groups.

Table1: Significance of difference between mean scores of experimental group and control group on posttest.

Group	N	M	SD	t-value	
				Calculated value	Table value at .05
Experimental	63	73.08	9.48		
Control	61	62.90	10.90	5.53	1.96

Table:1 indicates that the means score of experimental group was 73.08 and that of the control group was 62.90 on posttest. The difference

between the two means was significant at 0.05 levels in favour of experimental group. The significance value indicates that the experimental group showed better performance on posttest than that of control group.

This result of the study is supported by the findings of the studies reported by Johnson and Johnson (1995), Whicker *et al.,* (1997), Oickle (1980) and Calderon *et al.,* (1998)

Table-2: significant difference between mean scores experimental and control group on self esteem

| Group	N	M	SD	t- Value	
				Calculated Value	Table Value at 0.5 level
Experimental group	63	66.83	2. 97	7.39	1.96
Control group	61	62.10	4.73		

The data in table 2 indicate that mean score of experimental group on academic self esteem was 66.83 and that of the control group was 62.10 the difference between the two means was significant at 0.05 levels in favour of experiment group. The significant level indicates that the experimental group shows more impact on academics self-esteem than control group. This result of the study confirmed the findings of the studies reported by (Norem-Hebeisenand, Johnson, 1981).

H_o: 1 Table 1 showed that the experimental group performed significantly better than control group on posttest. The difference between the posttest mean scores of the two groups was significant at 0.05 level. Thus the null hypothesis that, "there is no significant difference between the reading and writing achievement of the students taught by cooperative learning and the students taught by traditional method", was rejected at 0.05 level in favour of the experimental group.

H_o: 2 Table 2 showed that the difference of means was significant at 0.05 levels. Thus the null hypothesis, "there is no significant effect of cooperative learning on self esteem of the sample students" was rejected.

Discussion

The present study sought to evaluate the effect of cooperative learning in promoting learners reading, writing achievement and enhancing academic self-esteem of sample students. It did indicate that cooperative learning is more effective than comparable traditional (whole class) method in improving the reading, writing achievement and in enhancing the self esteem of sample students of elementary classes. This corroborates findings of previous studies regarding the positive effects of cooperative learning in improving reading and writing achievement in English language (Greenwood, Delquadri and Hall, 1989; Stevens, Madden, Slavin,and Famish, 1987). The theoretical relevance of cooperative learning in enhancing self esteem is based on the assumption that students in cooperative learning may feel important because they perform roles that are essential to the completion of group task. Furthermore, they posses information and resources indispensable for their teams. Likewise, interaction among team members may promote their psychosocial adjustment as the individual efforts of every student are encouraged and supported in order to achieve group success. Yet, it seems that significant gains in academic self esteem are unlikely to be achieved in the course of short experiments and cooperative interactions. This is especially so given previous research evidence regarding the efficacy of cooperative learning various models in enhancing students self esteem. The effect of cooperative learning can also be seen from the histogram shown below.

Mean Scores of Reading Achievement

73

Mean scores of academic self esteem
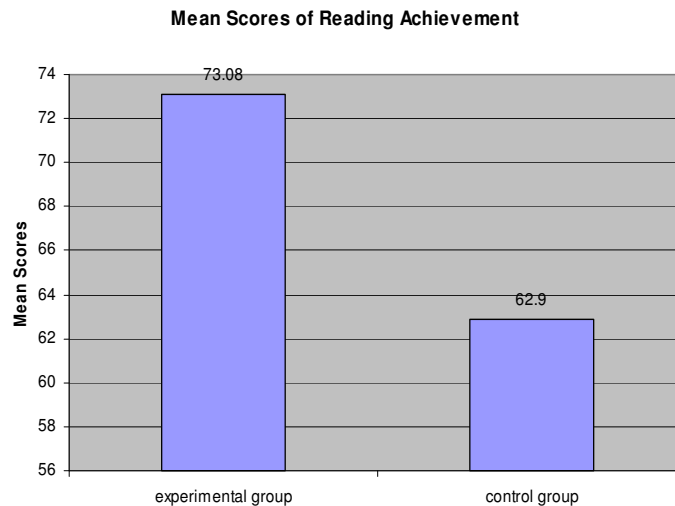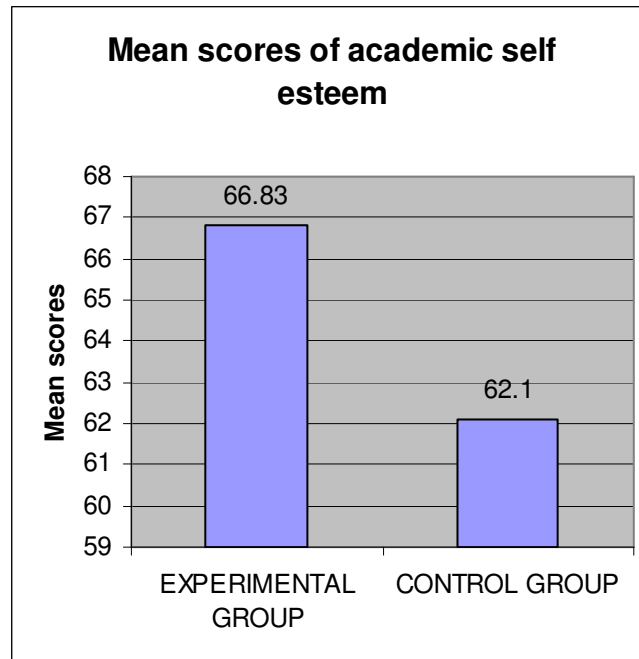
Conclusions
In the light of statistical analysis and the findings of the study, the following conclusions were drawn:

i. On the whole, cooperative learning is more effective as a teaching learning technique for overcrowded class of English at elementary level.

ii. Students in cooperative groups have significant superiority in learning reading comprehension over students learning reading comprehension and writing ability by traditional method.

iii. The finding calls for using the dynamics of cooperative learning (C.L) in the classroom because it engages learners in meaningful interactions in a supportive classroom environment that is conducive to enhance self-esteem.

Recommendations
In the light of findings and conclusion of the study, following recommendations were made:

1. This study proves cooperative learning method as more effective mode of instruction for English as compared traditional learning

method. Therefore, teachers of English should use cooperative learning to improve the academic achievements and to enhance the self-esteem of students.

2. Teachers, planners, curriculum developers should be provided training in cooperative learning. Training may be provided to use basic elements of CL i.e. positive interdependence, equal participation, individual accountability, simultaneous interaction, small group skills and group processing.

3. There are some potential dangers in cooperative learning method. Sometimes all the potential troublemakers gather together in one group. The teacher may use mixed ability groups to avoid this danger.

4. There is also a need for further research that examine the relative efficiency of the various Cooperative learning models in achieving the cognitive as well as affective outcomes of English subject across different cultures.

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Constructivist Perspective on Technical and Vocational Education

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Abstract

The changing context of global competition, cultural diversity, new technologies and management processes requires today's technical and vocational education institutions to produce workers equipped with critical thinking, problem solving and communicative skills, and advanced level of job skills. This requires a new look at prevailing theoretical and conceptual framework of learning, technologies and instructional model of transmitting students in a discrete and well-established set of skills and knowledge. Constructivism, a learning theory based on recent cognitive science research, suggests a way to restructure learning environment that will make vocational and technical education programmes, most viable and effective. In view of the shortcomings of the underlying theories of vocational and technical education (e.g., behaviourism), this paper explores whether and how constructivist theory of teaching and learning can be used in vocational and technical education. Finally, it has been argued that constructivism will be a better solution than behaviourism to serve as the learning theory foundation for vocational and technical education curriculum and pedagogy.

Keywords: Behaviourism, Constructivism, Cognitive perspective, Cognitive constructivism, Social constructivism, Peer collaboration, Cognitive apprenticeship

Introduction

In the past, three learning theory metaphors have dominated education, as a whole: learning as the acquisition of stimulus-response pairs (behaviourism), learning as the processing of information (information processing), and learning as the construction of knowledge

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(constructivism) (Mayer, 1992). These changes in explanatory metaphors have resulted from, and have allowed for, new insights concerning the nature of learning and knowledge in general education as well as technical and vocational education. Although scholars have called for a new look at theoretical and conceptual frameworks in vocational and technical education (e.g., Doty & Weissman, 1984; Lynch, 1997), with the rapid development in occupational, educational, and computer technologies, the old instructional model of transmitting to students a discrete and well-established set of skills and knowledge must be called into question. Within this uncertain environment of change, the student's ability to construct viable knowledge and to adapt is paramount.

Dominance of Behaviourist Position

The unifying theory underlying vocational and technical education as envisioned by David Snedden and effectuated by Charles Prosser, was so called 'social efficiency doctrine' (Camp, 1983). This theory was based on the assumption that only an efficient society could create a positive environment in which the individual could prosper and find satisfaction. Vocational and technical education, as envisioned by Snedden and Prosser, made up one of the bulwarks of social efficiency, in that the preparation of a well-trained, compliant workforce was a sin qua non of an efficient society (Wirth, 1972). Six fundamental theories formed the basis for social efficiency especially in the context of vocational, career and technical education during early 20th century (Camp, 1983). These were: socioeconomic stratification, probable destiny, psychometrics, social control, pedagogy, and behaviourism. However, as an emerging learning theory of the early 20th century, behaviourism provided the final foundation for social efficiency. Behaviourists (e.g., Thorndike, 1932) contended that learning consists of the formation of links between specific stimuli and responses through the application of rewards (Wirth, 1972). This emphasis on stimulus response pairing reflected behaviourism's positivistic philosophical base. That is, an analysis of the human condition that relies on only verifiable observations of behaviour and not on untenable mentalistic constructs. Further, behaviourists believed that most human behaviour could be understood as basic reflexive learning mechanisms or "laws" that operate on one's experience with the environment.

It was believed that psychometrics and sociology would allow schools to guide students into their ideal educational tracks based on their probable

destinies (Wirth, 1972). Behavioural science provided the mechanism and pedagogical science provided the processes by which the schools would teach students the right work and moral habits.

Those habits would lead to a voluntary compliance with social norms in compliance with social control theory. That compliance, in turn, meant that members of all social classes would benefit from a healthier society and economy and, eventually, a more humane workplace. By providing a scientifically based mechanism for teaching and learning, the science of behaviourism is, thus, seen as a lynchpin of the educational system's contribution to social efficiency. The social efficiency theory was most prevalent in the 4 first half of 20th century when the education (both vocational and technical) was being designed and put into place in America under the name of vocational education. However, relevance of this theory seems to have little to do with the realities of early 21st century vocational and technical education, as Dobbins (1999) argued, behaviourism remains the learning theory under girding current vocational and technical education thinking. The links between behavioural learning theory and the competency based approach to programmatic decision-making and curriculum structuring is still pervasive in career and technical education (Finch & Crunkilton, 1999). For many years, a competency-based approach to vocational and technical education has been the dominant curriculum model for the profession and remains so today (Finch & Crunkilton, 1999). That dominance is still reflected in instructional systems in which skills are "checked off" when accomplished, and assumed to be permanently held by the student thereafter. Thus, behaviourism is fundamental to the way we do business in vocational and technical education; yet, as the state of knowledge in education and psychology advances, it is incumbent on scholars to re-examine all aspects of our profession's theoretical foundations.

According to Dobbins (1999), the use of performance objectives to provide structure for lesson plans, criterion-referenced measures to measure task completion (Newcomb, McCracken, & Warmbrod, 1993), and reliance on incumbent worker task lists for the primary source of curriculum (Finch & Crunkilton, 1999), derives directly from behavioural learning theory. Following that logic, it seems clear that a curriculum designed to provide specific, pre-determined skills demonstrated to industry standards do not represent knowledge

constructed internally by the student, but rather knowledge and skills externally imposed on the student. Thus, the behaviourist (Prosser) position has predominated over the pragmatic/ constructivist (Dewey) position in vocational and technical education for most of this century (Lynch, 1997). Johnson and Thomas (1994) note that vocational and technical education researchers have shown little interest in cognitive science-based research, although instructional strategies supported by such research include those that have been used by technology education for years. Thus, the behaviourism was one of the primary theoretical foundations of the social efficiency doctrine. Indeed, today, behaviourism remains the primary basis in learning theory for both the curriculum and pedagogy of vocational and technical education as practiced in classroom and laboratory (Dobbins, 1999).

Although scholars have called for a new look at theoretical and conceptual frameworks in vocational and technical education (e.g., Doty & Weissman, 1984; Lynch, 1997), with the rapid development in occupational, educational, and computer technologies, the old instructional model of transmitting to students a discrete and well-established set of skills and knowledge must be called into question. Within this uncertain environment of change, the student's ability to construct viable knowledge and to adapt is paramount.

Information Processing and Cognitive Perspectives
As researchers began to see that complex learning was difficult, if not impossible, to explain using behaviourist approach and as the computer began to enter the academic consciousness; information-processing theory emerged to explain how mental structures affect behaviour. With increased interest in human information processing in complex cognitive activity, the cognitive perspective assumed prominence. Bruner (1990) argues that the cognitive revolution was meant to do more than simply be an improvement in behaviourism; it was also meant to promote a psychology that focused on "meaning making." To explain meaning making, cognitive psychologists introduced cognitive structures (such as schemata and heuristics) as the representations of knowledge in memory. These cognitive structures are assumed to underlie such phenomena as problem solving and transfer ability.

Over recent decades, educators have moved to embrace information processing and constructivism. A number of theorists in vocational and

technical education have advocated similar change in the underlying theoretical framework of this profession (e.g., Hill, 1994; Gregson, 1997). Grubb (1997) long an advocate of curriculum integration as a mechanism for better serving students by providing context for all learning, lamented the slow progress in vocational and technical education toward real reform. Gregson (1997) made an impassioned plea for vocational and technical educators to move toward critical pedagogy, which is anchored in constructivist philosophy. He argued that such a reorientation might serve as a means of pursuing Dewey's (1916) much earlier vision that education through occupations could be a liberalizing influence on education as opposed to a tool of the status quo. Moore (1999) even attempted to formulate a comprehensive theory of work-based learning. Then, after several years of productive research into the components of memory and cognition, it became apparent that context and culture influenced the representation of these components; and constructivism emerged to explain personal meaning and the nature of reality and representations (Doolittle & Camp, 1999). Today, virtually all cognitive science theories entail some form of constructivism to the extent that cognitive structures are typically viewed as individually constructed in the process of interpreting experiences in particular contexts.

Recent Orientation: Constructivism
A number of factors, many of which were actually informed by cognitive perspectives on teaching and learning (Breur, 1994), have motivated interest in constructivism. Recent advances in cognitive science as well as in the science of teaching and learning indicate that constructivism provides a clear and valid theoretical framework for vocational, career and technical education. It provides a framework that coherently organizes and synthesizes knowledge (e.g., psychological, technical, vocational), and serves to describe, explain, and predict thought and behaviour within career, vocational and technical education. Recent educational reform efforts have all embraced constructivist principles within their theoretical frameworks. In addition, recent research concerning vocational and technical education has discussed the usefulness of constructivist principles without specifically positioning those principles within the framework of a constructivist perspective (see Cash, Behrmann, Stadt, & Daniels, 1998; Herrick, 1996; Roegge, Wentling, & Bragg, 1998). As cognitive research clarified the demands of expert reasoning and problem solving, interest emerged in distributing

the cognitive work (Bruer, 1994). Researchers hypothesized that by drawing upon a larger collective memory and multiple ways in which knowledge could be structured among individuals working together, groups could attain more success than individuals working alone.

Constructivist Theory of Learning
The concept that learners construct their own knowledge from experience is termed constructivism (Fosnot, 1996). Constructivism is not a unitary theoretical position; rather, it is frequently described as a continuum. Typically, this continuum is divided into three broad categories: Cognitive constructivism (e.g., Anderson, 1993), social constructivism (e.g., Cobb, 1994; Vygotsky, 1978), and radical constructivism (e.g., Piaget, 1973; von Glasersfeld, 1995). Cognitive constructivists emphasize accurate mental constructions of reality. Radical constructivists emphasize the construction of a coherent experiential reality. Social constructivists emphasize the construction of an agreed-upon, socially constructed reality.

Constructivism as a theory of learning has roots in both philosophy and psychology. The essential core of constructivism is that learners actively construct their own knowledge and meaning from their experiences (Fosnot, 1996; Steffe & Gale, 1995). This core has roots that extend back through many years and many philosophers, including Dewey (1938), Hegel (1807/1949), Kant (1781/1946), and Vico (1725/1968). Philosophically, this essence relies on an epistemology that stresses subjectivism and relativism, the concept that while reality may exist separate from experience, it can only be known through experience, resulting in a personally unique reality. The essential epistemological tenets of constructivism are: (1) Knowledge is not passively accumulated, but rather, is the result of active cognizing by the individual. (2) Cognition is an adaptive process that functions to make an individual's behaviour more viable given a particular environment. (3) Cognition organizes and makes sense of one's experience, and is not a process to render an accurate representation of reality. (4) Knowing has roots both in biological/neurological construction, and in social, cultural, and language-based interactions (Dewey, 1916/1980; Garrison, 1997; Larochelle, Bednarz, & Garrison, 1998; Gergen, 1995). Research on postmodern constructivist perspective on teaching and learning (cf. Prawat, 1996) rejects the view that the locus of knowledge is in the individual. Rather, learning and understanding are regarded as inherently

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social; and cultural activities and tools (ranging from symbol system to artifacts of language) are regarded as integral to conceptual development. The theory of constructivism rests on the notion that there is an innate human drive to make sense of the world. Instead of absorbing or passively receiving objective knowledge that is "out there," learners actively construct knowledge by integrating new information and experiences into what they have previously come to understand, revising and reinterpreting old knowledge in order to reconcile it with the new (Billett, 1996). The cognitive structures that learners build include procedural knowledge (how: techniques, skills, and abilities) and repositional knowledge (that: facts, concepts, propositions). Often neglected are dispositions, that is, attitudes, values, and interests that help learners decide: Is it worth doing? Knowing how and that is not sufficient without the disposition to "do." Other key features of knowledge construction are functional context, social context, and usefulness.

The process works most effectively when it is embedded in a context in which new knowledge and skills will be used. Research on thinking and learning reinforces the idea that people learn through interaction with others (Johnson & Thomas, 1994). Although learning is a matter of personal and unique interpretation, it takes place within the social context. In addition, learning must be useful to the learner; intrinsic motivation emerges from the desire to understand, to construct meaning (Billett, 1996). Thus constructivism acknowledges the learner's active role in the personal creation of knowledge, the importance of experience (both individual and social) in this knowledge creation process, and the realization that the created knowledge will vary in its degree of validity as an accurate representation of reality.

Constructivism in Technical/Vocational Education

According to Parnell (1996), the philosophical position of academic education has been "learning to know is most important; application can come later"; of vocational education: "learning to do is most important; knowledge will somehow seep into the process" (p. 9). The irony for vocational and technical education is that studies of cognitive development in vocations are leading reforms of general education, but the full import of the theoretical advances is not being applied in vocational and technical education itself (Stevenson, 1994).

Constructivist Theory of Piaget

Piagetian theory (Piaget & Inhelder, 1969) stands in sharp contrast to behaviourism and information processing accounts of cognition. Piagetian theory assumes that social interaction leads to higher levels of reasoning and learning. This assumption is best explained in terms of the *socio-cognitive conflict* derived principally from the work of Piaget and his disciples, and the notion of *disequilibration* (See Piaget, 1985 for details). Piaget further suggested that the social exchanges between children were more likely to lead to cognitive development than exchanges between children and adults. Neo- Piagetian theory leads not only to an emphasis on environments, which support discovery and construction but also to a stress on the importance of collaboration in learning. Although, according to theory, tutors may have little role to play in promoting development, problem-solving interactions between peers may be highly significant. Thus, instruction plays very minor role in Piagetian thinking, where the emphasis lies on the active, self constructive nature of learning.

Vygotsky and the "Social Constructivism"

The role of social processes as a mechanism for learning is usually identified with Vygotsky (Vygotsky,, 1978, p. 30 cited in Wertsch & Bivens, 1992). Mental functioning of the individual is not simply derived from social interaction; rather, the specific structures and processes revealed by individuals can be traced to their interactions with others. Wertsch (1991) has proposed three major themes in Vygotsky's writings that elucidate the nature of this interdependence between individual and social processes in learning and development. The first theme is that individual development, including higher mental functioning, has its origins in social sources. This theme is best represented in Vygotsky's "genetic law of development" (Valsinar, 1987, p. 67). As learners participate in a broad range of joint activities and internalize the effects of working together, they acquire new strategies and knowledge of the world and culture. In contrast with the prevailing views of his time, in which learning was regarded as an external process and development an internal process, Vygotsky was concerned with the unity and interdependence of learning and development. For example, he was critical of Piaget's theory in which "maturation is viewed as a precondition of learning but never the result of it" (Vygotsky, 1978, p. 80). In contrast, Vygotsky proposed that (p. 90):

Learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and with his peers. Where Piagetian theory emphasizes the role of self-discovery and peer collaboration, Vygotskian theory (Wertsch, 1985) stresses the role of interaction between novices and experts. The commonplace observation that novices can often perform tasks with help when they cannot handle them alone is of central importance in the theory. The "gap" between assisted and unassisted performance, the "zone of proximal development" or "region to sensitivity to instruction" (Wood, Wood, & Middleton, 1978) is where important learning takes place. What happens in such interactions is not simply the acquisition of new task knowledge and skills, but the development of general competence in "self-regulation" as the process of instruction itself becomes "internalized." Thus, the learner acquires expertise in learning how to learn by virtue of the ways in which others assist them in learning. They become, so to speak, their own teachers as they internalize the process of being instructed by another. By a similar argument, trying to teach someone how to perform a task that one already understands can facilitate development in the teacher. By finding out what does and does not work in regulating other people's learning, a tutor discovers how to regulate their own learning more effectively. Put more dramatically, the teacher may discover the strengths and weaknesses of human cognition by reflecting on their successes and failures in attempts to help others. The theory thus leads to a strong emphasis on peer tutoring in development where more knowledgeable members of a learning community both teach and learn by helping the less knowledgeable.

A number of new approaches to instruction have grown up around these ideas such as scaffolding (providing physical aids and supporting materials), apprenticeship, and guided instruction.

Teaching and Learning in Technical/Vocational Education
It is argued that the role of technical and vocational education should be supporting constructivist learning. Research confirms that the "focus of teaching and learning should be on the individual's active construction of knowledge" (Stevenson, 1994, p. 29). The essential role of vocational education is "to facilitate construction of knowledge through experiential, contextual, and social methods in real-world environments" (Lynch, 1997, 27). Because the focus is on the learner, technical and

vocational education should be conceptualized as a learning process rather than a teaching process (Stevenson, 1994).

Role of the Teacher
In view of the constructivist perspective, the role of vocational and technical education teachers is not to set tasks, but to organize experiences that allow learners to develop their own knowledge and understanding. Using the method of *cognitive apprenticeship*, the teacher is a coach who provides guidance that gradually decreases, as learners become more proficient and who models, mediates, diagnoses, and scaffolds.

Vocational and technical education teachers should facilitate learning by encouraging active inquiry, guiding learners to question their tacit assumptions, and coaching them in the knowledge construction process. This contrasts with the behaviourist approach that has dominated education, in which the teacher disseminates selected knowledge, measures learners' passive reception of facts, and focuses on behaviour control and task completion. A constructivist vocational and technical education teacher should be more interested in uncovering meanings than in covering prescribed material. According to the constructivist theory, learning is most effective when situated in a context in which new knowledge and skills will be used and individuals construct meaning for themselves but within the context of interaction with others. Experts facilitate learning by modeling problem-solving strategies, guiding learners in approximating the strategies while learners articulate their thought processes. Experts coach learners with appropriate scaffolds or aids, gradually decreasing assistance as learners internalize the process and construct their own knowledge and understanding (Kerka, 1997). Thus, role of a learner in vocational and technical education is of guide, adviser, coach, motivator, facilitator, and role model within a contextual setting (Galbraith & Cohen, 1995) Functioning as experts, technical and vocational teachers and instructors provide authentic, experiential learning opportunities as well as an intense interpersonal relationship through which social learning takes place.

The role of vocational and technical teachers should be that of birds guiding their young ones the nests; they support without rescuing, provide scaffolding (e.g., in a problem situation, asking "What do you think you should do next?"), and have the courage to let learners fail

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(Bell, 1997). Experience is transferred into expertise through trial and error, observing an experienced person, and guided learning. The guided learning is the characteristics of most effective teaching in vocational and technical education. With trust as the foundation of the relationship, teachers give learners a safe place to try out ideas, skills, and roles with minimal risk. Such experiments are more authentic when linked with real-world activities such as temporary work assignments or short-term projects. The knowledge acquired is thus constantly reinterpreted and developed through practice (Clemnson & Bradford, 1996). Although, learning is a matter of individual interpretation of experiences, it takes place within social context (Kerka, 1997). Therefore, interpersonal relationship of teachers and learners is recognized as essential (Galbraith & Cohen, 1995). Thus, the idea of learning as a transaction i.e., an interactive and evolving process between teachers and their learners is considered as a fundamental component of vocational and technical education.

The Learning Environment
The constructivist approach to teaching and learning requires that teachers "provide a learning environment where students search for meaning, appreciate uncertainty, and inquire responsible" (Brooks & Brooks, 1993, p. v). Technical and vocational teachers must begin to make difference, how students learn by encouraging student-to-student interaction, initiating lessons that foster cooperative learning, and providing opportunities for students to be exposed to interdisciplinary curriculum. The thematic approach to learning and implement practices that encourage students to think and rethink, demonstrate, and exhibit should be abandoned (Brooks & Brooks, 1993).

Under constructivism, teachers follow practices that lead students to engage in higher order thinking and provide opportunities for students to process information through various avenues of expression--written, oral, building, drawing, etc. Also, the learning environment should reproduce the key aspects of communities of practice: authentic activities sequenced in complexity, multiple experiences and examples of knowledge application, access to experts, and a social context in which learners collaborate on knowledge construction.

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Contextual Learning

Contextual learning, rooted in the constructivist approach, assumes that individuals learn by constructing meaning through interacting with and interpreting their environments (Brown, 1998). The concept of situated learning, that "knowledge is created and made meaningful by the context in which it is acquired" (Farmer, Buckmaster, & LeGrand, 1992, p. 46), is embedded in constructivism. The meaning of what individuals learn is coupled with their life experiences and contexts; it is constructed by the learners, not by the teachers; and learning is anchored in the context of real-life situations and problems (Brown, 1998; Dirkx, Amey, & Haston, 1999). Weinbaum and Rogers (1995) describe contextual learning as a process by which knowledge is socially shared, thinking is shaped by engagement with tools, learning is engaged with objects and events, and learning is situation specific. The emphasis is on application of knowledge and skills in the context of real-life experiences, problems, and events (Brown, 1998). Learning occurs as students attempt to make sense of the situations with which they are presented and develop strategies for confronting barriers typically encountered in the workplace to arrive at a course of action that they can test for viability. Teamwork, negotiation, leadership, and conflict resolution are encouraged. Relating instructional content to the specific contexts of learners' lives and interests' increases motivation to learn (Dirkx & Prenger, 1997). By integrating academic content with situations or issues that are meaningful to students, instructors can help students acquire skills more rapidly than through approaches that focus only on subjects. The contextual learning incorporates recent research in cognitive science and recognizes that learning is a complex process that involves much more than behaviourist approaches emphasizing drill and practice.

According to Clifford and Wilson (2000), the contextual learning, based on constructivist learning theory as well as theories of cognition and learning (i) emphasizes problem solving, (ii) recognizes that teaching and learning need to occur in multiple contexts, (iii) assists students in learning how to monitor their learning so that they can become self-regulated learners and, (iv) anchors teaching in the diverse life context of students, (v) encourages students to learn from each other, and (vi) employs authentic assessment. Current perspectives on what it means for learning to be contextualized include *situated* cognition, *social* cognition, and *distributed* cognition.

(i)   The Situated Cognition

This approach emphasizes that a learner actively constructs an internal representation of knowledge by interacting with the material to be learned. In situated learning students actively construct their own knowledge through interactive projects with classmates, modeling of expert behaviour, and building their new knowledge by modifying their current knowledge. This is the basis for both situated cognition (Streibel, 1991) and problem-based learning (Savery & Duffy, 1995). Teachers act as coaches, scaffolding student learning and modeling expert behaviour, providing appropriate feedback, and challenging students' conceptions and misconceptions.

This is similar to the Cognitive Flexibility and the Hypermedia Design Mode. Both the physical and social contexts in which an activity takes place are an integral part of the learning that occurs within these contexts. A relationship exists between the knowledge in the mind of an individual and the situations in which it is used. Theories of situated cognition assume that knowledge is inseparable from the contexts and activities within which it develops. Situated learning results from undertaking authentic activities; guided by expert practitioners situated in a culture of practice (Billett, 1994a). A constructivist model for helping novices to acquire expertise is cognitive apprenticeship in which experts' model the strategies and activities needed to solve problems, and learners approximate doing the activity while articulating their thought processes. Experts coach learners with appropriate scaffolds (physical aids and supporting materials), gradually decreasing assistance as through continued practice, to enable learners internalize the process by constructing their own knowledge base and understanding (Farmer, Buckmaster, & LeGrand, 1992). Thus what one learns is an integral part of the physical and social context within which learning takes place. The fact that learning does not generalize is not to be attributed to some weakness or failure on the part of the learner. Rather, what may seem to be the same task in two different social contexts is not the same. The learning situation is part of the fabric of the task.

(ii)   Social Cognition

 Learning is more than just the individual construction of knowledge. Interactions with others in learners' social environments are major factors influencing what is learned and how the learning takes place.

Over time, individuals participate in a number of different social communities (known as discourse communities) that provides the cognitive tools (i.e., ideas, theories, and concepts) for them to make sense of their experiences.

(iii) Distributed cognition.

Related to both the situated and social nature of cognition is the idea that it is also distributed. Individuals often engage in collaborative learning activities and draw on resources beyond themselves in their learning. Researchers, therefore, have suggested that cognition is also an activity "that is distributed or 'stretched' over the individual, other persons, and symbolic and physical environment" (Borko & Putnam, 1998, p. 41).

Workplace Learning

Research on how people learn in the workplace demonstrates that what is taking place is constructivist, situated learning, often through cognitive apprenticeship. Studies of practitioners in several professions (Farmer, Buckmaster, & LeGrand, 1992) reveal that what helped them most in learning to deal with ill-defined, complex, or risky situations is having someone 'model' how to understand and deal with the situation and guide their attempts to do so. Billett (1993, 1994b) conducted several studies of coal miners and workers in other industries, concluding that, in the informal learning setting of the workplace, effective learning resulted from learners' engagement in authentic activities, guided by experts and interacting with other learners. Although, construction of understanding was unique to each individual, it was shaped by the workplace culture of practice. These workers valued direct instruction only for information they were unlikely to learn without it being made explicit (so-called opaque knowledge). However, the quality of that instruction was important: they wanted to help them understand why things had to be done and they wanted to be at their level, not "talking down to them" (Billett, 1994b). Thus, activity is a key factor in knowledge construction (Billett, 1994b), and participation in everyday work activities "forces" learners to access higher-order procedural and prepositional knowledge. Repeated experience adds to their index of knowledge, and active engagement in routine problem solving reinforces learning.

In the constructivist view, reinforcement is the internal satisfaction that results from making sense of new stimuli (adapting them to existing knowledge structures), in contrast to the behavioural approach of

reinforcement from external sources. According to Billett (1996), as a learning environment the workplace has a number of strengths (Billett, 1996) which include: (i) authentic, goal-directed activities, (ii) access to guidance--both close assistance from experts and "distant" observing and listening to other workers and the physical environment, (iii) everyday engagement in problem solving, which leads to indexing, and (iv) intrinsic reinforcement. However, there are also limitations to workplace setting (Billett, 1996), which are characterized in terms of the construction of inappropriate knowledge (e.g., racist or sexist attitudes, unsafe work practices), lack of sufficient or more challenging authentic activities, and reluctance of experts to participate or restrictions on their assistance.

Conclusion

In conclusion, it can be said that educators and trainers in technical education must endeavor to root or anchor their instruction in more authentic tasks (Sherwood, 1992). Instruction should not proceed by teaching abstract operations or disembodied skills in a context, which differs from those to which they are intended to find application. Rather it must work within the situations, which form an integral part of the actions to be learned. The novice learner is embedded in the social practices and activities, which constitutes the competencies to be acquired. They are inducted into these practices and become expert by virtue of the part they come to play in them, as happens in such learning at home, on the streets, and in cultures which do not school their children. Such calls for relevance in education are not new, of course (Bruner, 1971). What is new, perhaps, is the claim for an essential discontinuity between what one may learn as a mathematician, say, and what one does in other social contexts which seem to the naïve theorist/educator to implicate the same competencies. In this volatile contemporary world, the goal of constructivist teaching in vocational and technical education should be to develop self-directed yet interdependent learners who can access and use a wide range of cognitive structures in order to transfer learning to contexts they have yet to encounter.

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Cost- efficiency and Effectiveness of Illiteracy Eradication through REFLECT approach in the Developing Countries

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Abstract

This paper set out to examine the cost efficiency and effectiveness of illiteracy eradication through REFLECT approach in the developing countries. This is to equip nation's concern about the advantages of REFLECT over the other traditional approaches to illiteracy eradication. The secondary approach to data retrieval was used, and found out that, if the developing countries will adopt the use of REFLECT approach in the eradication of illiteracy in their nations, it will reduce the unit cost, of operation without tampering the effectiveness of the programmes. It will produce good number of artisans and successful farmers at least cost optimization. Not only that, it would also empower the illiterate women in the rural areas, to be usefully engaged and, also contribute to the well-being of their children.

Key words: Cost-effectiveness, cost-efficiency, illiteracy, Reflect approach, mass literacy campaign, selective campaigns, women empowerment.

Introduction;

Efficiency is concerned with the cost of achieving outputs. An approach or system is considered efficient relative to another approaches or systems, if its output costs less (per unit) than that of the other approach. It becomes more efficient to the extent that it maintains outputs with a less than proportionate increase in inputs. Effectiveness on the other hand is concerned with outputs; an approach or systems is effective to the extent that it produces outputs that are relevant to the needs and demand of its clients. It is cost-effective if its outputs are relevant to the needs and demands of the client. It is cost efficient if its outputs cost less than the outcomes of other approaches (traditional) that serve the same purposes.

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An approach for eradicating illiteracy can be effective but not necessarily efficient. For example, one can teach an illiterate reading skill very effectively, but if the cost per student of doing this is four or five times the cost incurred by anyone else, it can then be said that it is not efficiently done.

An approach of eradicating illiteracy may also appear to be more efficient than another one (i.e. its unit costs are lower) but the extent to which it is really efficient must depend on its effectiveness of an organization, thus diminishing its cost-effectiveness.

REFLECT approach to the eradication of illiteracy in the developing countries have come out with great success with least costs where it was adopted than the high costs and relatively small success of mass literacy campaign.

Concept and reasons for illiteracy eradication
There are various ways of viewing what illiteracy actually connotes. Literacy can be understood as a basic communication skill, which enables an individual to extend the range of his contact well beyond his immediate environment. Thus an individual, who possessed this ability, is regarded as a literate person, and one who does not possess the ability is considered as an illiterate. Illiterate may be defined in general terms as an inability to read and write a simple message in any language. This definition seems to set a standard in which its strength lies in the fact that literacy can be expressed in any language. However, not all the spoken languages in the developing countries like Nigeria have written form.

Thus 'a person is termed literate who, in a language that he speaks can read and understand anything he would have understood if it had been spoken to him and who can write, so that it can be read anything that he can say' Gudschinsky (1973). In the word of Paulo Friere (1970), a Brazilian educator, with a strong tenet of conscientisization sees literacy as a means to human liberation. His definition runs thus.

Learning to read and write ought to be an opportunity for men to know what speaking the word really means; a human act implying reflection and action. As such it is not at the same time associated with the right of expression of creating and re-creating, of deciding and choosing and ultimately participating in society's historical process.

The idea put forth by Paulo Friere was also shared by Julius Nyerere of Tanzania (1976) when he asserted that "The first objective of adult education must be to shake ourselves out of resignation to the kind of life Tanzanian have to live for centuries past. We must become aware of the things that we, as members of the human race, can do for ourselves and our country. Thus from the depths of literatures, it shows that most adult literacy sponsors hold similar view to those of Nyerere and Freire. They conceive literacy, not as an end in itself but a means to an end; that is it is a powerful tool for political, religious, economic and women empowerment. The necessity to make everybody to become literate and shun illiteracy stigma cannot be over emphasized.

Strategies for illiteracy eradication
Three main strategies have been followed before the intensification of REFLECT to eradicate illiteracy in the developing countries. These are mass literacy campaigns, strategies that integrate primary education with Adult literacy programmes and selective campaigns with particular focus. This third strategies is where REFLECT approaches had been found to be both cost efficient and effective above others.

Mass literacy campaigns are reviewed by Torres (1990) and Sasaoka (1990) AL-Nasser (1990). The most successful campaigns appear to have been those conducted in socialist countries. Little systematic data exists and it is rarely possible to decide whether literacy rapidly acquired is eventually retained.

For the second strategy, the regional programme for the eradication of illiteracy in Africa launched in 1984 urged member states to eliminate illiteracy through a vigorously sustained campaign to universalize primary education and promote literacy for young people and adults. (UNESCO 1994) other examples include the Arab literacy strategy Al-Hasser (1990) and the literacy awareness programme in Paupa, New Guinea (PNG 1991). In India, Bordia and Kaul (1992) described the Indian National Literacy Mission which involved inputs to primary and adult education in an integrated framework. Most of the evaluation studies carried out, suggested that the success levels were associated with programme duration, the relevance of course content and the visibility of results to the participants.

For the third strategies; examples of selective literacy campaigns abound which include the literacy for income generation programme for women in Togo, Employment Oriented Learning in Indonesia, the skill Training Programme in Jamaica, the small farmers Development project in Nepal, and the better life for rural women programme in Nigeria. All these take a narrower specification of both target group and desirable outcomes than is common in the previous two strategies.

Concept of REFLECT
REFLECT is the acronym for "Regenerated Freirean Literacy, through Empowering Community Techniques." It is based on the theory of conscientization, pioneered by the Brazilian educator, Paulo Freire. The emphasis is placed on dialogue and action, awareness-raising, cooperation and empowerment. Adult learners explore development challenges and find ways to overcome them. Such issues become basis for learners to be taught literacy and numeric skills.

Communities are also engaged in using these skills to generate income to improve their livelihoods. This empowering process gives an opportunity to freely discuss any issue including sensitive cultural traditions. The main task of the facilitators is to keep the interactive dialogue on track.

REFLECT was developed by action Aid U.K as a new approach to Adult Literacy between 1993 and 1995 through field practice in Uganda, Bangladesh and El Salvador. Since then, it has spread rapidly. REFLECT is now being used in developing countries, to tackle the problems of agriculture, HIV/AIDS, conflict resolution and peace building.

REFLECT approach does not need a textbook, no primer, no printed materials, except a manual for literacy facilitator. Each literacy circle develops its own learning materials through the construction of maps, calendars and diagram that represents the local reality. It systemizes the existing knowledge of participants and promotes the detailed analysis of local issues.

Groups develop their own learning materials by constructing graphics (maps, calendars, matrices diagrams) or using forms of drama, story telling and songs, which can capture social, economic, cultural and political issues from their own environment. A range of other participants approaches can be interwoven with the strong participatory

structure of REFLECT to include the use of role, drama, songs, dance, story-telling, visualization, radio, games or proverbs.

However, there is a "renewed" definition of REFLECT; as a structural and participatory learning process, which facilitates people's critical analysis of their environment, placing empowerment at the heart of sustainable and equitable development. Through the creation of democratic spaces, the construction and interpretation of locally generated texts, people build their own multi-generated analysis of local and global reality, challenging dominant development paradigms and redefining power relationships in both public and private spheres. Based on ongoing processes of reflection and action, people empower themselves to work for a more just and equitable society."

This broader definition comes at a time when some international development agencies are reconsidering their earlier abandonment of adult literacy programmes on grounds of inefficiency and ineffectiveness. The 'renewed' definition presents an evaluation challenge that goes beyond testing the achievement of basic literacy and numeracy. It also crosses several disciplinary boundaries that package different types of outcomes, such as literacy and numeracy, empowerment, development, democratization, poverty alleviation etc.

Cost effectiveness and efficiency of REFLECT approach to illiterate eradication.
 The approach had made it easy for the learners in various communities to develop materials that suit their literacy skills and participated actively in the skill producing projects. Resent research has shown (Rogers and Uddin 2004/2005) that many adults learn literacy skills without going to school. Almost all of these learn through the texts involved in their occupation or some other immediately relevant activity and they also learn difficult words from the start, simply because they are words which they know and can relate to in their experience (car components, building contractors' materials and design tasks, names of customers and items for sale),

In India for example, a group of women; many of whom were non-literate, wished to learn how to maintain hand pumps, developed their literacy through the hand pump manual without using a literacy primer. REFLECT shows that the literacy learners choose words relevant to

themselves, some of which may textually be 'difficult' but that they cope with these easily. In Japan, a group chose to use cinema notices as their learning texts-which demonstrates what has been revealed elsewhere, that it is easier to start learning from the known than unknown words. This is more suitable for literacy skills.

In Bangladesh, one project helps women sewing groups to learn relevant literacy skills through pattern books. In Sri-Lanka, farmers have been learning literacy through booklets and pest management. These had been made possible through REFLECT approach.

Various steps involved in REFLECT has been able to make use of minimum input generated by the learner to produce maximum output to the satisfaction of the learners' desire. The main advantage is to help trainees to develop their literacy skills that will make learning as immediate as relevant to their own set purpose –a better welder, fashion designer, and vehicle mechanic or construction worker. Again, there is no delay between the learning and the application of the learning received such that the trainee will be using such literacy practices in the course of their own skill practice, to the extent that the trainer becomes a role model for the trainee.

It can be concluded that communities and nations in the developing countries could get their level of illiteracy drastically reduced through REFLECT, which at the time will minimize the level of poverty if not eliminated. The literacy facilitator will find it easier at meeting the needs of the client when they are the major executors of the various projects embarked upon.

The amount of budgetary allocation of the campaign against illiteracy and hunger will be drastically reduced, if this approach is well implemented.

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Male/Female-Factor Infertility:
What Contributes to Emotional Connotations for Couples?

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Abstract

The diagnosis of male-factor infertility or female-factor infertility brings emotional connotations for infertile couples. The present research was carried out to examine psychological consequences of male/female-factor infertility prevailing in Pakistani society. A randomly selected sample of 200 infertile couples ranging in age from 20 to 70 years was taken from different cities including Multan, Khanewal, Sahiwal, Vehari, Melsi, Bahawalpur, Lahore, and Rawalpindi-Islamabad. The six instruments including Beck Depression Inventory (Beck et al., 1961), Beck Anxiety Inventory (Beck & Steer, 1993), Aggression Questionnaire (Buss & Perry, 1992), and Indexes of Self-Esteem, Marital Satisfaction and Sexual Satisfaction (Hudson, 1981) were used. The findings of this study were suggestive of this fact that the couples, who have male-factor infertility, are more anxious and have a decline in their level of self-esteem and sexual satisfaction as compared to couples having female-factor infertility. The results further indicated that the couples with male-factor infertility are equally depressed, aggressive and less satisfied with their marriages as the couples with female-factor infertility are.

Keywords: Infertility, Emotional Connotations, Childlessness, Psychosocial Distress, Aspermia

Introduction

A society places a great emphasis on fertility. Childbearing is an important goal for a marriage (Lee & Kuo, 2000). Not being able to have children may cause marriage impairment (Wright et al., 1991). The diagnosis of male or female factor infertility would be a terrible shock for any man and woman who would feel ashamed to face his or her parents and ancestors. This may lead to a deep sense of guilt and self-blame (Guerra et al., 1998). However, the possibility of occurrence of

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psychological changes in infertile couples is great but the most noticeable negative effects of infertility are as follows. Infertile couple may experience high level of depression and anxiety, low self-esteem and high aggression (Crick et al., 1997). They report less satisfaction with their marriages and with their sexual lives. Childlessness may be the result of an existing sexual dysfunction (Burns, 1995).

The word "Infertility" has a deep emotional connotation for many people. Even though a couple may rationally accept this, it is extremely important for each partner to be as open as possible about any negative feelings they might associate with the infertility Such feelings on the part of either partner may have devastating consequences on a relationship if they surface only after being diagnosed with infertility. Openness with each other is imperative in order to make a decision that is clear of any hidden apprehensions. Neither partner should be too embarrassed to request counseling if the emotional aspects involved in making the decision are too difficult to solve between themselves (Daniluk, 1996).

Okonufua et al. (1997) identified that men can suffer from infertility, but male infertility is not mentioned spontaneously. Women usually seek treatment for infertility from religious leaders and traditional healers, since they view it as a supernatural problem. If unsuccessful, women later consult medical practitioners, but there are concerns about the lack of confidentiality in hospitals. In one community, infertile individuals are considered to have failed in some fundamental way. Women, who take the blame for the problem, are cast out by their husbands for infertility and ostracized by the community. Okonufua et al. (1997) call for community education on the true causes and treatment of infertility to dissipate the blame that women carry, and to encourage prompt medical treatment.

Gender differences may contribute to infertility related marital conflict (Daniluk, 1996). Greil (1991) pointed out that every society has a "motherhood mandate" but does not have a similar "fatherhood mandate". This differential societal expectation may trigger more feelings of distress in women than in men. In her review of research, Daniluk (1996) cites studies indicating that compared to men, women experience more psychosocial distress, lower self esteem, and more depression. Greil (1991) noted that women view infertility as a devastating experience whereas men view it as a "bad break". Women

locate the cause of their infertility in their selves either in terms of some biological deficit or as a result of some past misdeed (Daniluk, 1996). Many women view infertility as pervading their entire existence whereas it is a much more circumscribed experience for men (Greil, 1991). This difference in views and experiences can lead to differing motivations to seek medical treatment for the fertility problem. This difference in motivation may also contribute to some of the conflicts (Greil, 1991; Ulbrich et al., 1990; & Wright et al., 1991).

Generally speaking, women are much more willing to disclose to others information about upsetting personal matters (Cozby, 1973; Davidson & Duberman, 1984; Peplau & Gordon, 1985). Consequently, women may be more likely than men to talk about their infertility concerns with their friends and colleagues. One can mistakenly assume that because men talk and focus less on infertility, they are less upset about it. Daniluk (1996) cautions clinicians to avoid assuming that the outward male response to infertility means that men are less invested than women in having a child. The different ways that men and women respond to infertility may, in fact, be a reflection of gender related differences in coping with any upsetting situation.

Indeed, research has found that women are emotional specialists, seeking to talk and vent about what's bothering them and men are instrumental specialists bent on "fixing" a problem (Allen & Haccoun, 1976; Rubin, 1983). Thus, although a man may be upset about infertility, he may not choose to talk about it. His wife may mistakenly attribute his unwillingness to talk about it as a sign of disinterest rather than as a style of coping. Her misattribution may fuel conflict (Rubin, 1983).

Each of these explanations consists of three elements: permanence, pervasiveness, and personalization (Seligman, 1990). If one member of a couple views infertility as a permanent condition and the other sees it as transitory, they may experience tension. If one person focuses on personal responsibility for the failures and the other looks to external forces, they may have difficulty in commiserating. Finally, where one sees infertility as a circumscribed aspect of life and the other sees it as pervading every facet of existence they may feel that they don't share a common problem. One of those partners can be viewed as an optimist and the other as a pessimist. The optimist will wish to hang in, find creative solutions, keep trying new approaches, and look for ways to

finance treatment even in the face of dwindling finances. The pessimist will become depressed and will want to give up (Seligman, 1990).

Women who think too much, how to get freedom from over thinking and reclaim their lives always remain in depressive mood (Winokar, 1997).The result of over-thinking is that women (and worrying men) work themselves into a complex, confused emotional state where conclusions and solutions become difficult, if not impossible. Women may be more prone to over-think because they are sensitive to others and are often expected to solve personal conflicts without offending anyone (Winokar, 1997). Anxiety may have a dramatic impact on one's reproductive life. Most physicians and mental health professionals who work in this field have encountered men who have experienced temporary impotence when diagnosed with azoospermia (the inability to produce sperm), or women who have temporarily lost all interest in sexual intimacy after a diagnosis of female factor infertility (Eugster & Vingerhoets 1999). Feelings about our fertility are intertwined in our feelings about sexuality. Many women with infertility share that they do not feel like "real women" and are not members of the club who have experienced pregnancy and childbirth (Moret et al., 1998). These women tell that they feel like outsiders at social functions when talk inevitably turns to children related topics. Men can often feel that having normal sperm function is related to virility, when in fact impotence (male sexual dysfunction) and male infertility are not the same. Hearing phrases such as "he has no ability to produce a baby" reinforces feelings of inadequacy and anxiety, and complicates these feelings for men (Mikulincer et al., 1998)

Infertility robs us of our control and choices, leaving us vulnerable to depression and feelings of hopelessness. For the infertile partner in a couple, feelings of guilt and responsibility can arise. It is not uncommon to hear an infertile partner's offer to divorce their partner so that they can have a child with someone else (Crick et al., 1997). It is found that unexplained infertility is associated with the risk of subsequent aggressive acts among couples with or without history of aggressive behavior. It is found that there is a significant positive relationship between the infertility and aggressive behavior (Babcock et al., 1993).

Greil (1997) noted when studying the psychological consequences of infertility, "an individual's response is likely to be dialectically related to

the response of that individual's partner". Greil's supposition was supported by the work of Andrews et al. (1991) who found that for infertile couples, each spouse's perception of their quality of life influenced the quality of life of the other. In his review of the literature published since 1980 on infertility and psychological distress, Greil (1997) paid particular attention to gender and its effect on the experience of infertility. He noted that the literature suggests that stress may be a causal factor in infertility and that the descriptive literature points to infertility as a devastating experience, particularly for women. He highlights the fact that while most studies point to infertility as being more distressing for women than for men, this is not affected by which partner has the difficulty.

Keeping in mind the importance of quality of life of spouses diagnosed with male/female-factor infertility, the present research aims to investigate the emotional responses to male-factor or female-factor infertility. It was hypothesized that male-factor infertility would be more distressing for couples as compared to female-factor infertility for couples.

Method
Participants
The sample consisted of 200 infertile couples ranging in age from 20 – 70 years with a mean age of 35.62 years for men and 31.48 years for women. To select the participants, purposive and convenience random sampling techniques were used. All the participants were approached in different cities of Punjab including Multan, Sahiwal, Khanewal, Bahawalpur, Vehari, Melsi, Lahore, Sialkot, and Rawalpindi-Islamabad.

Instruments
To measure the psychological aspects of infertility, the following instruments were used because of some practical consideration.

Beck Depression Inventory (BDI) & Beck Anxiety Inventory (BAI)
The BDI (Beck, Ward, Mendelson, Mock & Erbaugh, 1961) and the BAI (Beck & Steer, 1993) are the self-administered 21 item self-report scales presented in multiple-choice format, which purports to measure the presence and supposed manifestations of depression and anxiety respectively. Each item is rated on a 4-point scale ratting from 0 to 3. Both inventories take approximately 10 minutes to complete

individually. Both are scored by sum up the ratings for the 21 items. The highest score on each of the 21 items would be 3, the highest possible total for the whole test would be 63 and the lowest possible score for the whole test would be zero. Only add one score per item (the highest rated if more than one is circled).

Aggression Questionnaire (AQ)
Aggression Questionnaire (Buss & Perry, 1992) contains 29 items. Each item is rated on a 5-point scale ratting from 1 to 5. Where 1 identifies the occurrence of characteristics with least intensity and options of 2, 3, 4, and 5, identify the occurrence of the characteristics with mild intensity, average intensity, moderate intensity and great intensity respectively. This scoring will be applicable to all items except for items 15 and 21 for which reverse scoring will be done i.e., if the subject marks the option 1, for these items a score of 5 will be assigned. Likewise the reverse scoring will also be done if subject marks the options 2, 4 & 5. (5 becomes 1, 4 becomes 2, 2 becomes 4, 1 becomes 5) and a score of 3 remains uncharged. The highest score on the measure indicates the higher level of aggression.

The Index of Self – Esteem (ISE), Index of Marital Satisfaction (IMS) & Index of Sexual Satisfaction (ISS)
These three Indexes of Self-Esteem, Marital Satisfaction and Sexual Satisfaction are the scales of Clinical Measurement Package or CMP developed by Hudson in 1981. The ISE was designed to measure the degree, severity, or magnitude of a problem the client has with self-esteem, IMS was designed to measure the degree, severity, or magnitude of a problem, a spouse or partner has in the marital relationship and ISS was designed to measure the degree, severity, or magnitude of a problem in the sexual component of a dyadic relationship..

Every scale is structured as the 25-item wherein each item is scored according to the following five categories: 1 = rarely or none of the time; 2 = a little of the time; 3 = some of the time 4 = a good part of the time; and 5 = most or all of the time. Some of the items are positively worded statements or descriptors, and others are negatively worded to partially control of response set biases. All of the items were randomly ordered within scale. The higher scores represent more severe problems, and lower scores indicate the relative absence of such problems. The first step in scoring is to reverse-score each of the positively worded items so

that an item score of 5 becomes 1, 4 becomes 2, 2 becomes 4, 1 becomes 5, and a score of 3 remains uncharged. The reverse score items in ISE are 3,4,5,6,7,14, 15, 18, 21, 22, 23 and 25. The reverse score items in IMS are 1, 3, 5, 8, 9, 11, 13, 16, 17, 19, 20, 21 and 23. The reverse score items in ISS are 1, 2, 3, 9, 10, 12, 16, 17, 19, 21, 22 and 23. Every scale has a clinical cutting score of 30. It is generally found that persons who obtain a score above 30 have a clinically significant problem in the area being measured. While those who score below 30 are generally free of such problems.

Procedure
The participants of this study were selected and approached as described in sampling. To select the participants, the non-probability sampling approaches purposive and convenience sampling techniques, were used. The subjects were told about the objectives of the study and then given the instructions. They were assured that all the information sought from them would be kept strictly confidential and would be used for research purposes only. The scales were presented to the couple one after another in the form of a booklet. All the information provided by participants was statistically analyzed using SPSS (Statistical Package for Social Sciences).

Results & Discussion
In order to see the comparison, analysis was performed for two groups of infertile couples with male/female-factor infertility in couples; it means the couples with male-factor infertility and the couples with female-factor infertility. Results pertaining to these expected differences are presented in Table 1.

Table: Means, Standard Deviations and t-values for the Scores of Couples with Male/Female-Factor infertility on Urdu-Versions of BDI, BAI, AQ, ISE, IMS and ISS

Scales	Male-Factor Infertility (*N*=56)		Female-Factor Infertility (*N*=47)			
	M	*SD*	*M*	*SD*	*t*	*p*
BDI	19.23	11.41	19.86	11.42	-0.27	0.39
BAI	21.46	10.15	19.95	9.87	0.76	0.02*
AQ	40.49	14.49	40.97	14.44	-0.16	0.43

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ISE	71.55	16.45	69.40	14.07	0.70	0.04*
IMS	31.56	18.66	32.84	18.91	-0.34	0.36
ISS	32.47	16.28	29.69	16.07	0.8	0.03*

d$f.$ = 101, * $p < 0.05$, p = n.s.

Figure 12

Differences in Mean Scores of Couples with Male/Female-Factor Infertility on BDI, BAI, AQ, ISE, IMS and ISS
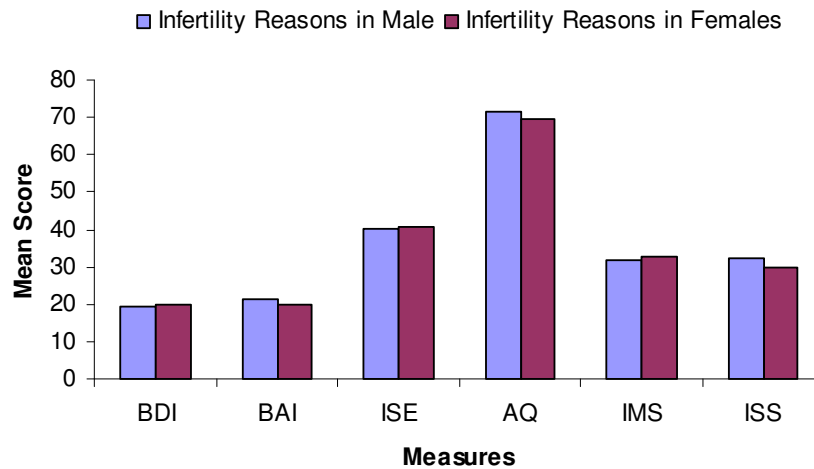
The results in Table 1 and Figure 1 indicate the significant differences on the measures of BAI, ISE and ISS. It means that the male-factor infertility is more distressful for couples as compared to female-factor infertility for couples. The findings of this analysis are suggestive of this fact that the couples, who have the infertility problem from male side, are more anxious and have a decline in their level of self-esteem and sexual satisfaction as compared to those couples whose infertility problem is from females-side.

The results in Table 1 also indicate no significant differences in the measures of Beck Depression Inventory, Aggression Questionnaire and Index of Marital Satisfaction, which implies that the couples with male-factor infertility are equally depressed, aggressive and less satisfied with their marriages as the couples with female-factor infertility are.

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As for as the hypothesis is concerned about male/female-factor infertility, it was assumed that couples diagnosed with male-factor infertility would experience more psychological changes when compared with the sample of those couples who are diagnosed with female-factor infertility. The results of present study indicated that both groups of sample have significant differences in experiencing anxiety, self-esteem and sexual satisfaction. It suggested that the male-factor infertility is more distressing for couples as compared to the female-factor infertility for couples.

Infertility is a major and growing problem. Over three million visits each year to North American physicians are for infertility. The demand for treatment is increasing and the cost, both financial and emotional, can severely strain relationships. In past years, difficulties with fertility were usually attributed to the female partner. However, it is now commonly known that the male factor plays a significant role. In fact, recent medical practice and research indicates that male infertility is the sole cause in 30 - 40 % of all infertility cases. In another 10 - 15 %, a combination of male and female factors contributes equally. Infertility investigations should therefore always include a thorough assessment of both partners. The emotional and psychological impact of male infertility is often underestimated. Counseling and support by an infertility team, for both partners, is recommended to help limit the potentially devastating emotional impact.

Limitations & Suggestions
While the overall findings of the present research were encouraging, it is important to acknowledge its limitations as well. The sample used in the present research is not large enough to represent the whole population of infertile couples in Pakistan. The unavailability of the exact statistics about infertile couples in Pakistan was a major restriction in selecting a representative sample of this kind of population. Unwillingness of the participants to participate in the present research because of the sensitivity of the issue of infertility that has a tremendous impact on the well being of a couple, is another limitation for taking representative sample. It is reasoned earlier that infertility is often a lonely and confusing battle for couples, so the scarcity of resources restricted to select the sample based on convenience sampling instead of a nationally representative one.

In the light of limitations and across the wide implications of present research, following are the some suggestions for future researchers regarding the betterment of research work. Nevertheless, the present study has significantly contributing in assessing the psychological aspects of male/female factor infertility such as depression, anxiety, aggression, self-esteem, marital and sexual satisfaction with peculiar reference to Pakistani cultural context. It is suggested that more researches should be carried out with a larger sample from different provinces of Pakistan with reference to infertility and its psychological effects. A larger sample belonging to different areas of Pakistan may give a better insight into infertility and its related psychological problems. A broad based awareness of infertility and its resultant effects on couples should be given a higher priority for maximum benefit to the infertile couples.

A need for informational programs on infertility regarding its psychological aspects and its management is felt strongly. Most important is the implementation of counseling centers for the guidance of infertile couples. Counseling centers should be established where psychological problems related to infertility could be reported and psychological help should be available.

Implications of the Study
Apart from the findings of the present research, the study has number of implications in areas related to infertility. The present study, tried to take into consideration the crucial issue of infertility, the most neglected area in psychological research in Pakistan with respect to infertility. Nevertheless, the present research may be considered a pioneering in the area of infertility. The present research has opened new venues for research in the area of infertility and its psychological aspects while taking into account certain other factors.

The present research may further help to understand the phenomena of infertility from other perspectives and may suggest some different kinds of contributing factors such as adoption of a child, divorce in couple due to infertility and husband's second marriage because of remaining childless. The results of the present study may provide a unique issue for further research in this area and a lot of research is to be carried out to strengthen the findings of present study. The issue of psychological aspects of infertility has to be further strengthened by employing larger

and representative sample from various regions of Pakistani population. The present study is first of its kind and the findings of the pilot and main study would help the public and counseling psychologists to understand about underlying factors of infertility. It may help in missing awareness of couples and their family members in this regard. Public may not be aware of the harm they can cause the infertile couples. They are simply unaware of the psychological and emotional needs of them and are also unaware of that infertile couples always demand social support which they can only provide them.

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Relationship between Interest of Subject and the Level of Achievement of Secondary School Students

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Abstract

It is generally agreed upon by most of the schools of thoughts that motivation and interest of a learner brings an effective learning. In case of choice of hard and soft subjects the situation maybe and it may not be same. This study touches this aspect too. Students' interest in any subject may be crucial for scoring. In order to check the above statement a study was designed to check the interest of students of secondary level in a subject and their score in the corresponding subject. The aptitude of students for the subject of mathematics was checked with the help of achievement test. The test was served the students during routine classroom environment so that the environment required for a test/examination may through stress on the minds of the students. The study shows that throughout the series of tests the students who were keen interested in mathematics provided better results.

Keywords: Effective Learning, Classroom Environment, Learning Outcomes, Academic Achievements

Literature

Mathematics is the study of quantity, form arrangement and magnitude; especially the methods and processes for disclosing by rigorous concepts and self consistent symbols the properties and relations of quantities and magnitudes, whether in the abstract, pure mathematics, or in their practical connections, applied mathematics.(Funk & Wagnalls,1968).

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Mathematics is considered as a major and difficult subject at secondary level. Almost in all walks of life, there is use of mathematics. Students often struggle to see applications of mathematics. Therefore, they are usually seen saying; I hate mathematics, I do not like mathematics, oh mathematics….these are the some statements of students of secondary level. "Generally students are afraid of studying mathematics. There are various reasons for this. Pupils tend to learn mathematics through a meaningful approach to mathematics rather than by a mechanical process" (Kumar, 1993).It mostly depends upon the teaching approach of the teacher. For many, mathematics is a dead subject that has not change over the years. The mathematics then see appears to have been chipped onto stone tablets and handed down from a mountain. It is the responsibility of all teachers of "mathematics is shifting prom primary emphasis on paper and pencil calculations to full use of calculator and computer.(mathematical sciences education Board,1989). When students see no relationship between mathematics and real life they get frustrated. Hence, they realize that there is no benefit in learning such thing which has no proximity with life problems.

Ryans (1963) and Taylor (1969) considered the marks awarded by the examiners or supervisors in theory examinations and reported that they are not objective and hence are not reliable .In this connection, it is necessary to quote from tailor's book "Mark sheet analysis "when an examiner assigns a mark to an answer script, he is attempting to measure the candidate's performance. If we assume, that there is a 'true mark "for each script, it could only be assigned by an ideal examiner who certainly does not exist." Srivastave (1976) conducted a study of learning outcomes, in terms of objectives in mathematics and found that some of the personality factors as predictors of academics achievements of high school students. According to Krishnamurthy (2000), academic achievements depend on a number of variables. Important among them are: the student's attitude towards the subject of study, their interest in it and their academic achievement motivation Development of all these will maximize their achievement in a worth while manner.Khalid (1997) focused his research on factors affecting mathematics achievement. The investigator found that confidence, socio-economic status, gender beliefs, peers, location of school, school environment, ethnicity beliefs and previous achievement in mathematics were significant contributors of mathematics achievement in Malaysian school. There is no definite criterion to be necessary to become a good student at mathematics.

The study

The main objective of the study was to check the correlation between the choice of subject by the students and their achievement in the corresponding subject. Students of Model College Islamabad were selected for the study. They were asked about their choice of subjects out of their X class. There were 25 students, among them only 8 showed first preference for mathematics. Since mathematics was focal subject for the researchers (first researcher mathematics teacher who controlled the administration of test himself), therefore three tests of mathematics based on selected chapters being taught them in regular classes were designed. Each test was administered with the gap of 10 days. Papers of all students were assessed. Since the test papers were coded therefore scripts of those students who already gave top most preference to mathematics were tallied, mean was calculated test wise and at the end mean value was drawn as a whole.

Questionnaire was developed to find the level of interest of the students. After collecting this information from the students, it was arranged. The students were informed that a series of three test will be arranged for them .The objective of series was that may be a student got high marks in a test fortunately or by luck, but the series will show the consistency of students in mathematics. For these tests chapters from syllabus of mathematics of class X were selected and the students were informed about the dates and chapters and then the test was administered on the schedule (which was already communicated to the students). The marks were judged and comparison was made among their interest and their marks. For allocation of marks a standard was designed for each step of the question (indicating marks for each and every step) so that all the papers could be marked according to that standard designed and the chances of flexible marking or any other mistake could be avoided.

Results and discussions

The results of the study are presented and discussed here.

Table No.1 Level of interest

Preference/Order	Number of Students/Frequency	*%*
1	8	32
2	5	20
3	6	24

4	3	12
5	2	8
6	1	4

(N:25)

The above table shows that 32 % students' ranked mathematics at first priority i.e. majority of the cluster liked mathematics. Only one student gave last priority to mathematics.

Table No.2 Reasons of Liking Mathematics

Reasons	No. of students
It is an easy subject	8
Mathematics just like a Game	5
Mathematics helps in other subjects	5

The above table indicates that 32 % students liked mathematics reason being an easy subject to them, 20 % student considered mathematics like a game which keeps them involved whereas same number of the students considered it as a helping subject in other fields/subjects.

Table No.3: Reasons of disliking Mathematics

Reasons	No. of students
Mathematics is boring subject	3
Mathematics is not understandable	3
Learn mathematics just as a subject having no importance	1

The above table mentions that 12 % students disliked mathematics considering it a boring subject, while 12 % students think it is not understandable to them. Only one students out of the sample opined that mathematics has no importance.

Table No.4:   Achievement test No. 1 of those students who showed their liking in mathematics

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Rank order	No. of Students	Total marks (20 marks per test X Number of students)	Marks obtained	Mean
1	8	160	121	15.12
2	5	100	57	11.40
3	6	120	57	9.50

The above table reflects that the students who gave top priority to mathematics students got average 15.12 marks. And the order of the preference matches with the level of achievement.

Table No.5: Achievement test No. 1 of those students who showed their disliking in mathematics

Rank order	No. Of Students	Total marks (20 marks per test X Number of students)	Marks obtained	Mean
4	3	60	24	8.00
5	2	40	10	5.00
6	1	20	6	6.00

The above table indicates that the students who have no interest in mathematics showed poor progress in mathematics. For example three students gave 4th priority to mathematics; their average result is 8 and priority wise 'means' go down with absolute proximity.

Table No.6: Achievement test No. 2 of those students who showed their liking in mathematics

Rank order	No. Of Students	Total marks (20 marks per test X Number of students)	Marks obtained	Mean
1	8	160	125	15.60
2	5	100	70	14.00
3	6	120	62	10.33

The above table shows that those students who liked mathematics demonstrated good results once again if compare to the other students. In

the table number 1 above; students got 15.12 marks. Similarly the numbers of rest of the categories of students increased partially if compared with their rest in first test given in table one. Moreover, rank of the choice fully tallies with the achievement.

Table No.7:   Achievement test No. 2 of those students who showed their disliking in mathematics

Rank order	No. of Students	Total marks (20 marks per test X Number of students)	Marks obtained	Mean
4	3	60	27	9.00
5	2	40	15	7.5
6	1	20	9	9

The above table indicates that the students who gave 4th priority to mathematics obtain average 9 marks, similarly with the rank order the results go down. The student who put mathematics at the lower most order obtains only 9 marks.

Table No.8:   Achievement test No. 3 of those students who showed their liking in mathematics

Rank order	No. of Students	Total marks (20 marks per test X Number of students)	Marks obtained	Mean
1	8	160	145	18.12
2	5	100	84	16.80
3	6	120	74	12.33

The above table reveals that the students who liked mathematics secured good marks in all tests. Same is the situation for other two ranks orders.It means those students who have inclination towards mathematics perform very well.

Table No.9:   Achievement test No. 3 of those students who showed their disliking in mathematics

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Rank order	No. of Students	Total marks (20 marks per test X Number of students)	Marks obtained	Mean
4	3	60	33	11.00
5	2	40	23	11.50
6	1	20	10	10.00

The students who put mathematics at 4th preference order obtained an average 11 marks. The students who gave fifth priority to mathematics also score 11.50 averagely. The student who gave last priority to mathematics scores 10 marks. It is very interesting to observe the results of achievement test in relation to rank order as it denotes very close link.

Table No.10:   Combined Results of Three Tests of those students who liked mathematics

Rank order	No. of Students	Total marks for three test(Total number of students X 3 tests X 20 marks per test)	Marks obtained in three tests	Mean
1	8	480	391	16.29
2	5	300	211	14.07
3	6	360	193	10.72

The above table shows that those who liked mathematics most secured highest number and likewise other ranks orders. It is inferred that the students who have mathematics aptitude provide always good results.

Table No.11:   Combined Results of Three Tests of those students who disliked mathematics

Rank order	No. of Students	Total marks for three test(Total number of students X 3 tests X 20 marks per test)	Marks obtained in three tests	Mean

4	3	180	84	
				9.33
5	2	120	48	
				8.00
6	1	60	25	.33

It is clear from the above table that the extent of interest is closely related with the score in the relevant subject. The students who have no interest in mathematics show poor progress throughout.

Discussion
The study shows the aptitude of the students towards mathematics. Those students who were keenly interested in mathematics showed good during the series of tests. The best results were provided by those students who gave much priority to mathematics. Although mathematics is a difficult subject but the students who were fond of mathematics attempted all the questions in a proper and well managed way. When asked about the reason of their good results the students replied that they have clear concepts of the questions, same question was asked from those who showed poor progress, they replied that they do not know the use of formula. This study also elaborates that students may show good results in the subjects they liked most.

One of the major factors for disliking a subject is the method of teaching. Mathematics is not a subject to teach by lecture method. Students become more and more perfect at mathematics as they do more practice. After clear concepts drill is the only thing which makes a man perfect in mathematics.

Findings
1. The Students who gave much importance to the mathematics provide better results in mathematics.

2. This study showed that for better scores in any subject especially for mathematics, interest and motivation for the specific subject is necessary.
3. The research showed that those students who have even lesser interest in the mathematics passed the examination.

4.   Interest and achievement are very inter-related.

5.   The students who had negative impression about mathematics gave poor performance.

6.   Those students who had positive impression about mathematics gave good performance.

7.   Tests with intervals could not affect the performance of both groups who liked mathematics and also those who did not like mathematics.

8.   Students could be mindful of the value of mathematics provided their attention is drawn to this aspect properly.

Recommendations
1. Students should be aware of the importance of mathematics. It becomes the responsibility of the institution and teachers working over there.

2. The teachers should create conducive environment while teaching mathematics so as to generate interest of the students and their effective learning.

3. Mathematics should be taught with everyday examples so that students must know the value of the subject.

4. Particular attitude for mathematics should be developed in the students by the teacher.

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