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Earnings May Help in Studying Reliability of (Self) Assessment

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Zunaira Fatima Syeda[**]
Jean-Jacques Paul[***]

Abstract

Competence is a determinant of earnings (Roy, 1951; Semeijn et al., 2006, etc.) and the earnings are explained by (the use and the level of) one's acquired competence (Loo & Semeijn, 2004). Whereas, the subtlety of competence assessment is, appropriately, a critical research question; and the self-assessment of competence becomes even more subtle. The researchers have been using various methods for the (self) assessment (Shah, 2009) and rating scale seems a workable method for the competence measurement. This paper explores into the reliability of (self) assessment of level of competence. Data set of the Reflex project has been analysed; and we are thankful to the team of Reflex project. This dataset was collected through convenient sampling technique. OLS Regression analyses were done in Stata. We find the reliability of (self) assessment (acquired and required level of the competence). Results of this study are reinforced by the work of many researchers, for example, Heijke et al. (2002), and Busato et al. (2000). The study concludes with the confirmation of reliability of competence (self) assessment.

Keywords: (Self) Assessment, Competence, Higher Education, Earnings, Occupation, Gender, Labour Market

Introduction

Reliability of (self) assessment of individuals' competence(s) has been a matter of serious concern to the researchers in Education, Economics, Management and the related fields. Various ways have been proposed in this regard; and the debate is on continuously. Far reaching objective of such a continued arduous activity is to prepare individuals through education and retraining so that they may get adjusted in real work situation. Underlying question of this debate is how to better match people with their work. Researchers believe that competence assessment may help in deciding how to match people with their jobs and tasks (Spencer & Spencer, 1993).

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Earnings have been defined primarily on the basis of, initially, the number of successful years in schooling, and at later stage, the time spent in employment. The time in schooling and/or employment is in fact responsible for adding to the *competence* (human capital) possessed by the individual through their lifelong learning experiences. In rather simple words, it is the *competence* (the cumulative effect of school and work) possessed by an individual which is in fact responsible for their earnings. Therefore, now it is not strange to consider competence(s) as a determinant of earnings (Roy, 1951; Hartog, 2001; Semeijn et al., 2006; Nijhof, 1998). According to Loo and Semeijn (2004) it is the *use* and the *level* of competences possessed that determines individuals' earnings.

Nijhof (1998) considers *labour market oriented* knowledge and skills are decisive for individuals' success in their job. There are many researchers (Heijke et al., 2002; Busato et al., 2000; Garcia-Aracil et al., 2004; Teichler & Kehm, 1995) who have been working on competence and the earnings; they are interested to ascertain more appropriate competences for professional success of 21st century graduates.

Concerns over match between individuals' qualification (higher education) and employment have attracted many researchers (Garcia-Aracil et al., 2004; Heijke et al., 2002; Busato et al., 2000; Teichler & Kehm, 1995) for better output both at micro and macro level. Trade-off between specific and generic competences kept researchers divided indiscriminately. Many researchers like Mane (1998), Campbell and Laughlin (1991), and Kang and Bishop (1989) believed in superiority of specific competences over the generic; whereas, some others, Teichler (1999) and Bowen (1977), revealed contradictory empirical evidences. Garci-Aracil and van der Velden (2008) revealed strong relationship between acquired competences and the required competences (characteristics of the job). Relationship between *earnings* and *competences* was found by Allen and van der Velden (2001), however, it was a week relationship.

An extensive work on (self) assessment was carried out by Falchikov and Baud (1989) who scrutinized studies of 48 related works; and afterwards, it was worked out to 67 by Ward et al. (2002). Researchers have been assessing competences through the proxies like academic degrees, earnings etc. On the other hand, there are direct assessment ways and means. These methods include peer- and (self) assessment. Peer-assessment is also known as expert rating. Palpably, there are concerns in both assessment methods. Ward et al. (2002) recommended assessment by many assessors to correct eventual inconsistency in expert/peer assessment.

The research question in this paper is *"to what extent the individuals' (self) assessment of their competence is reliable"*. Our objective defines that the earnings are the function of (the *acquired* and the *required* level of) competence. The term *self-assessment* refers to the participants' assessment of their *acquired* level of competence; whereas, the term *assessment* refers to their assessment of the *required* level of those

competences at their work place. The rule of parsimony urges us to write *(self) assessment* to take in both terms meaningfully. We maintain that on having *consistent* and *coherent* findings, this objective would have been achieved. Popper's theory of *falsifiability* allows us to theorise that (self) assessment of individuals is reliable. However, in this paper we neither intend to prove this relationship nor tend to propose competence as an excellent determinant for the earnings. Making use of long studied *competence-earnings* phenomenon in a different way we want to the reliability of competence (self) assessment.

Methodology

The dataset we are exploiting in present study is the outcome of the REFLEX[*] research project. We are thankful for their granting us permission to use in our research. The acronym REFLEX (it is a research project which provides the dataset we are exploiting in present study) refers to a large-scale European survey among higher education graduates. It is invest in as a Specific Targeted Research Project (STREP) of the European Union's Sixth Framework Programme. It is coordinated by *The Research Centre for Education and the Labour Market* (ROA) which is a research institute of the *Maastricht University School of Business and Economics* (the Netherlands).

The REFLEX project focuses on the demands that the modern knowledge society places on higher education graduates, and the degree to which higher education equips graduates with the competencies to meet these demands. Therefore, we consider this dataset appropriate for our study. This data set contains information from about 40,000 individuals some three to four years after their graduation. It is comprehensible that higher competence level points towards higher earnings. But it is appropriate to those cases where higher education is relevant.

To establish the relationship of individuals' *earnings* and their *competences*, we investigated individuals' (self) assessed acquired level of competences (in their higher education), and their (self) assessed required level of competences (in their work); and subsequently, the net (difference in acquired and required) level of competences for any probable element of interest. Then we use this *competence-earning* relationship as a *priori* in determining the reliability of the (self) assessment. The *coherence* and *consistency* parameters are crucial to decide upon the reliability of (self) assessment.

We suppose that *earnings* of an individual *i* (Y_i) is a function of *country* (X1), *occupation* (X2), *competence* (X3), and *gender* (X4). *Country* and *gender* are included in the model as control variables. The *error term* (ε_i) includes all the left out factors and/or for inaccurate measurements. The identifiers *j, k, l* and *m* are the markers for

[*] http://roa.sbe.maastrichtuniversity.nl/?portfolio=reflex-international-survey-higher-education-graduates

country, occupation, competence and gender respectively. Mathematical form of the model is given below.

$$\ln Y_i = \beta_0 + \sum_1^j \beta_j X1_{ij} + \sum_1^k \beta_k X2_{ik} + \sum_1^l \beta_l X3_{il} + \sum_1^m \beta_m X4_{im} + \varepsilon_i$$

This OLS regression model is used to analyse the Reflex dataset in Stata. It is one of the most common models in this field of research. Our focus is not on proposing a new model. To our understanding, OLS regression model is the most suitable way in present context; and we find it the most suitable and direct way in our study. Results are described here in the following section. The basic statistics of the variables of interest are given in the appendix. Readers are invited to consult the appendix for complementary information on these variables.

Results

We intend to study that the

- ⋆ earnings are the function of acquired level of competence
- ⋆ earnings are a function of required level of competence
- ⋆ earnings are a function of net level of competence

Table 1

Level of Competence

	n_A	$\overline{x}_A$	σ_A	n_R	$\overline{x}_R$	σ_R	n_N	$\overline{x}_N$	σ_N
1. Willingness to question your own and others' ideas	27801	5.387	1.166	27426	4.942	1.479	27414	-0.443	1.486
2. Mastery of your own field or discipline	27819	5.300	1.069	27445	5.313	1.468	27436	0.013	1.411
3. Analytical thinking	27806	5.339	1.203	27424	5.104	1.460	27412	-0.231	1.330
4. Ability to write reports, memos or documents	27799	5.399	1.267	27429	5.170	1.592	27414	-0.227	1.491
5. Ability to work productively with others	27803	5.601	1.099	27429	5.418	1.439	27417	-0.183	1.344
6. Ability to use time efficiently	27804	5.376	1.196	27429	5.580	1.329	27415	0.203	1.477
7. Ability to use computers and the internet	27804	5.854	1.182	27434	5.445	1.458	27421	-0.410	1.347
8. Ability to rapidly acquire new knowledge	27809	5.650	1.067	27439	5.360	1.369	27425	-0.288	1.379
9. Ability to perform well under pressure	27809	5.420	1.246	27434	5.552	1.409	27424	0.132	1.406
10. Ability to make your meaning clear to others	27797	5.334	1.151	27426	5.388	1.374	27412	0.053	1.428
11. Ability to coordinate activities	27804	5.460	1.177	27425	5.354	1.438	27414	-0.107	1.367
12. Ability to come up with new ideas and solutions	27795	5.317	1.151	27421	5.160	1.473	27406	-0.156	1.472

"A" and "R" are the subscripts respectively referring to the *Acquired* and the *Required* (competences level)

Competence-earning relationship is empirically evidenced for competences acquired level, required level and net level in Table 2. Acquired level of 5 competences (in bold) have been marked statistically insignificant; other 7 are noted statistically significant out of which three are with negative sign. Coefficient estimates with negative signs are unusual. We suspected it for likely *multicollinearity* and attempted unsuccessfully the centring techniques for its correction. In all through the analyses we have observed certain competences with negatively significant difference.

We tried to correct likely *multicollinearity* through centring technique which improved nothing at all. Then we go for checking whether there is multicollinearity or not. We compute variance inflation factor (VIF) as well as tolerance (Tol) which is reciprocal to VIF. Value of VIF >10 (or <0.1 value of tolerance) may be regarded as a signal for the presence of multicollinearity among the variables in the model under study (Jeeshim & Kucc, 2002). Values of standard errors are also not very large. We, finally, tumble on no multicollinearity. We reflect that this incongruity may arise, for either competence is not vital in labour market or not in accordance with work individuals were doing at the time of survey.

As a matter of fact, the demanding professions require higher competence level. Individuals in lower occupations have lower earnings and those in higher occupations have earnings compared to the *Professionals* (reference). Other occupation subcategories show earnings lesser than that of the *Professionals*. All occupation titles strongly determined earnings in present model as expressed through *excellent* significant difference.

Competence required levels shows strongly positive relation with *earnings* as have previously been witnessed in competence acquired level. It is surprising to notice statistically significant competences (these are three) with negative sign. However, competence-earning relationship is empirically evidenced for competences required level. Competence-earning relationship is also empirically evidenced for net level of competences as shown in the Table 2.

Table 2

Earnings, Competence, country, Occupation Title and Gender

Earnings (n=27252; $\bar{x}$ = 2376.4**;** σ =1558)

	Acquired Level				*Required Level*				*Net Level*			
COMPETENCE	β	***SE***	***t***	***VIF***	β	***SE***	***t***	***VIF***	β	***SE***	***t***	***VIF***
Willingness to question your own and others' ideas	- 0.01††	0.003	-4.66	1.63	**0.00**	0.002	0.14	2.10	0.01††	0.002	4.89	1.75
Mastery of your own field or discipline	- 0.01††	0.003	-4.76	1.47	**0.00**	0.002	1.46	1.43	0.01††	0.002	4.63	1.33
Analytical thinking	0.03††	0.003	12.14	1.56	0.03††	0.002	13.46	1.70	0.01††	0.002	3.80	1.72
Ability to write reports, memos or documents	**0.00**	0.002	0.61	1.38	0.00**	0.002	2.19	1.49	0.01**	0.002	2.30	1.43
Ability to work productively with others	0.01†	0.003	2.95	1.51	0.01††	0.002	3.64	1.60	0.01†	0.002	3.06	1.46
Ability to use time efficiently	**0.00**	0.003	0.63	1.62	- 0.01††	0.003	-3.71	1.86	- 0.01†	0.002	-3.09	1.59
Ability to use computers and the internet	0.02††	0.003	6.78	1.40	0.02††	0.002	9.58	1.45	- 0.01††	0.002	4.51	1.33
Ability to rapidly acquire new knowledge	**0.01**	0.003	1.61	1.75	- 0.01††	0.002	-3.30	1.84	- 0.01††	0.002	-3.53	1.79
Ability to perform well under pressure	0.04††	0.003	14.27	1.56	0.03††	0.002	12.47	1.57	**0.00**	0.002	0.05	1.44
Ability to make your meaning clear to others	**- 0.00**	0.003	-1.54	1.55	**0.00**	0.002	0.04	1.69	**0.00**	0.002	0.74	1.54
Ability to coordinate activities	**0.01**	0.003	1.57	1.83	0.01†	0.002	3.17	1.82	**0.00**	0.002	1.61	1.73
Ability to come up with new ideas and solutions	- 0.01††	0.003	-4.94	1.80	- 0.01††	0.003	-4.06	2.21	**- 0.00**	0.002	-0.42	1.94
COUNTRY (28091**)**												
Japan	-0.13††	0.01	-9.16	1.94	- 0.20††	0.014	-14.48	1.86	- 0.22††	0.014	-15.60	1.96
United Kingdom	0.07††	0.02	4.54	1.44	0.07††	0.015	4.39	1.44	0.09††	0.015	5.88	1.43
Germany	0.29††	0.02	19.33	1.47	0.27††	0.015	18.60	1.48	0.31††	0.015	21.01	1.46
France	-0.15††	0.02	-9.51	1.42	- 0.15††	0.015	-9.77	1.42	- 0.16††	0.015	-10.21	1.41
Czech Republic	-1.05††	0.01	-98.87	2.61	- 1.09††	0.011	-102.35	2.63	- 1.06††	0.011	-99.79	2.55
Italy	-0.40††	0.01	-28.24	1.52	- 0.42††	0.014	-29.79	1.53	- 0.40††	0.014	-28.31	1.52
Switzerland	0.47††	0.01	42.60	2.30	0.46††	0.011	42.06	2.31	0.49††	0.011	44.08	2.25
Spain	-0.43††	0.01	-36.42	2.05	- 0.44††	0.012	-37.46	2.05	- 0.45††	0.012	-37.39	2.03
Austria	**0.01**	0.02	0.72	1.46	**0.00**	0.015	0.10	1.47	0.05††	0.015	3.30	1.44
Belgium	0.09††	0.02	5.68	1.40	0.082††	0.015	5.40	1.40	0.083††	0.015	5.42	1.40
Portugal	-0.63††	0.02	-30.62	1.20	- 0.64††	0.020	-31.45	1.20	- 0.62††	0.021	-30.09	1.19
Norway	0.41††	0.01	30.81	1.63	0.41††	0.013	30.77	1.63	0.40††	0.013	30.04	1.61
Finland	0.07††	0.01	5.70	1.66	0.06††	0.013	4.63	1.66	0.07††	0.013	4.98	1.65
Estonia	-1.05††	0.02	-58.79	1.28	- 1.05††	0.018	-60.28	1.29	- 1.06††	0.018	-58.68	1.28
Netherlands (***Reference***)												
OCCUPATION (27157**)**												
Low Skilled Workers	-0.29††	0.04	-6.80	1.01	- 0.25††	0.043	-5.85	1.02	- 0.30††	0.043	-7.02	1.01
Service and Craft Workers	-0.25††	0.02	-14.79	1.05	- 0.21††	0.017	-12.19	1.08	- 0.23††	0.017	-13.49	1.06
Office Workers	-0.17††	0.01	-15.82	1.23	- 0.16††	0.012	-13.43	1.26	- 0.1††	0.012	-14.34	1.24
Technicians	-0.05††	0.01	-7.37	1.12	- 0.04††	0.007	-6.36	1.13	- 0.056††	0.007	-6.70	1.13
High Officials	0.17††	0.01	18.04	1.08	0.17††	0.009	18.24	1.08	0.19††	0.009	19.59	1.07
Other Workers	-0.40††	0.04	-10.43	1.02	- 0.32††	0.039	-8.15	1.03	- 0.37††	0.039	-9.30	1.03
Professionals (***Reference***)												

GENDER (27961)												
Male	0.21††	0.01	37.74	1.16	0.21††	0.005	40.26	1.09	0.22††	0.005	41.97	1.06
Female (***Reference***)												
CONSTANT	7.32††	0.02	317.15		7.28††	0.018	413.04		7.67††	0.009	831.08	
R^2 =	**0.65**				**0.65**				**0.64**			
n =	**26991**				**26936**				**26900**			
F =	**1487.35††**				**1504.84††**				**1442.61††**			

Discussion

Strong relationship between acquired competences and the required competences, found by Garci-Aracil and van der Velden (2008), encouraged us to make analyses for both acquired and required level of competences. Loo and Semeijn (2004) cited Green (2004) who proposed to use (self) assessment of required competence level in jobs as the indicator of individuals' acquired competence level. It is summarised that higher earnings are genuinely related with the higher required competence levels which in turn is profoundly related to higher acquired level of competence. It is found that both *higher acquired* as well as *required competence levels* are better paid. Analyses of net level of competences also show the same relationship. Findings of Allen and van der Velden (2001) had been supportive to our study. Henceforth, using such an established relationship as a *priori*, we set off for the establishment of the reliability of (self) assessment. Principles of *independent similarity* and *coherent consistency* convinced us to conclude that (self) assessment is reliable. Falsifiability theory of Popper (1963), encouragingly, strengthened our empirically researched idea.

Conclusion

Convinced with the proposal of Allen and van der Velden (2005), we decided to analyse both the *acquired* and *required* levels of competences. We found our conclusion coherent in theory and practice. It is a signal for the reliability of assessment of competence by the individuals. As nothing unexplained incongruence has been observed in our analyses, (according to Popper, 1963) we may say that competence assessment is reliable, however, to a modest echelon. Assessment of acquired and required (along with the net) competence level is, however, objectively, proved to be reliable.

We think that our findings would be arising curiosity among educationists, economists, administrators, policy makers, and the other stakeholders in the labour market, and the higher education institutions. This study may be used as a reference for future researches appropriately. It may also be used in policy as well as practice with a greater level of confidence. We recommend investigating the other available datasets (for example, HEGESCO – http://www.hegesco.org/) for better generalizability of the findings.

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APPENDIX A (Variables)

The individuals were required to tell their occupation twice in the Reflex Master Questionnaire; first and current job. After graduation (Section D; First Job) "What was your occupation or job title at that time (e. g. civil engineer, lawyer, assistant accountant, nurse)?"

F2	Please describe your current main tasks or activities. *(e.g. analysing test results, making diagnoses, teaching classes,* *developing a marketing plan)*	☐ the same as listed above for the first job ☐ other *(please specify)*:

The dataset included 10 subcategories of occupation titles. The first two ("Armed Forces", and "Legislators, Senior Officials, and Managers") were regrouped under a new title as High Officials. Second one is Professionals. The third was "Technicians and Associate professionals". Fourth was the "Office Workers". The next subcategory comprised "service workers", "shop and market sales workers", and "craft and related workers" and is renamed as "Service and Craft Workers". Second last subcategory, "Low Skilled Workers", included two subcategories ("skilled agriculture and fishery workers", and "plant and machine operators and assemblers"). The last subcategory was the "Other Workers". Earnings (total monthly earnings from all sources) were logged to normalise the variable. Following was the question in earnings in the Reflex Master Questionnaire.

F7	**What are your gross monthly earnings?** From contract hours in main employment	about |___|___|___|___|___|___|	EURO per month
	From overtime or extras in main employment	about |___|___|___|___|___|___|	EURO per month
	From other work	about |___|___|___|___|___|___|	EURO per month

Competence was the main variable of focus in present study. We selected 12 competences with high mean values on the basis of individuals' responses.

H1	**Below is a list of competencies. Please provide the following information:** **. How do you rate your own level of competence?** **. What is the required level of competence in your current work?** *If you are not currently employed, only fill in column A*	**A Own level** Very ⟷ low very high 1 2 3 4 5 6 7	**B Required level in current work** Very ⟷ low very high 1 2 3 4 5 6 7
a	Mastery of your own field or discipline	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
b	Knowledge of other fields or disciplines	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
c	Analytical thinking	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
d	Ability to rapidly acquire new knowledge	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐

e	Ability to negotiate effectively	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
f	Ability to perform well under pressure	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
g	Alertness to new opportunities	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
h	Ability to coordinate activities	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
i	Ability to use time efficiently	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
j	Ability to work productively with others	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
k	Ability to mobilize the capacities of others	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
l	Ability to make your meaning clear to others	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
m	Ability to assert your authority	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
n	Ability to use computers and the internet	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
o	Ability to come up with new ideas and solutions	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
p	Willingness to question your own and others' ideas	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
q	Ability to present products, ideas or reports to an audience	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
r	Ability to write reports, memos or documents	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
s	Ability to write and speak in a foreign language	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐

The variable gender includes male and female (reference subcategory) in this analysis.

K1	Gender	☐ male ☐ female

Beginning Teachers' Professional Self-Image: Reconciliation between Teachers and Head Teachers

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Adnan Tahir[**]
Muhammad Ilyas Chishti[***]

ABSTRACT

The head teachers play a vital role in the effective professional socialization of beginning teachers. This study was conducted to know the level of harmony and understanding between the Head teachers (HTs) and beginning English teachers (BETs) at college level regarding the latter's professional self-image in teaching profession. The study followed a mixed method survey approach collecting both kinds of data through open ended inquiries and closed ended questions. The data were collected from 295 BETs of 55 colleges, and the HTs from 23 colleges, sampled randomly from different strata including gender, institution type and nature of job. Rated responses Likert scale questionnaires were prepared for BETs and open ended and conceptually open questionnaire for HTs. The descriptive statistical analysis was conducted using SPSS 16 and the qualitative interpretations were made for open ended inquiries. Overall, the study has found the harmony between the perceptions of BETs and HTs. However, the HTs perceived differently the BETs' professional self-image related to their task mastery of teaching skills and classroom management, smooth working relationship with senior colleagues and Head teachers, freedom of expression and the presence of a democratic environment. The study suggests that more attention towards the mentoring role of Head teachers in promoting a strong self-image among the beginning teachers.

Keywords: Beginning teachers, professional socialization, head teachers, professional self-image

Introduction

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The global expansion of English language has created a lot of space for English language teaching (ELT), with the emergence of new roles and abilities of English teachers worldwide especially in the non-English Asian countries like Pakistan. Further to it, the dissatisfaction from the nonutility of the traditional off-the-job training of beginning English teachers, the new shift in the professional learning approach towards workplace learning and professional socialization is strengthening (Siddiqui, 2002; Tahir & Qadir, 2012). In this changing milieu, many state funded projects and organizational initiatives are being planned for enhancing teachers' workplace professional learning, teaching skill capacity, and self-image of professional identity. However, the teachers are not found much satisfied when their voice does not find the proper space in the decisions, programs, policies made for them. Even, the image of professional identity of teachers sometimes appears as quite different from that of their Head teachers, administrators and other educational authorities.

The heads play multidimensional role in the teachers' grooming as ELT professional: leader, guide, inspirer, facilitator, motivator and many more (Fedricks, 2001; Johnson & Birkeland, 2003). In this background, the main objective of this study was to know the level of harmony and understanding between the Head teachers and beginning English teachers regarding the latter's professional identity and effective professionalization into their jobs. The study remained significant as it highlighted the concerns of beginning teachers regarding their professional identity and the points where disharmony and misunderstanding were found between beginning teachers and their Head teachers. Accordingly, the appropriate recommendations can be considered for improvements and further researches may solidify them to deal with the professional learning concerns appropriately.

Literature Review

Vital Role of Head Teachers in Teacher Professional Socialization

According to Danziger (1971), teacher professional socialization is a long-term, complicated, communicative development whereby the individual teacher gradually and candidly adapts to the norms, values and practices of teaching profession over a period of time, particularly the institutions where they work. Further, the effectiveness of socialization process may be indicated by the rate of success of individual teachers throughout the organizational learning program and stable professional learning (Anakwe & Greenhaus, 1999). Professional identity of the teachers develops gradually over a long period of employment time with every step taken for the professional growth of teachers (Ganser, 2000). The studies conducted in the late 1990s shifted their emphasis and discussed the prominent and significant role of principals and Head teachers along with administrators and educational authorities of the organizations in developing professional identity and

institutional socialization of teachers (e.g., Fedricks, 2001; Johnson & Birkeland, 2003). Similarly, Stombus and Chodzinski (1998) strengthened the related viewpoint by highlighting the mentoring role of administrators and Head teachers in successfully contributing to effective enculturation of beginning teachers. In the academic environment of Pakistani institutions, the voices for highlighting the importance of workplace real-life professional learning with the effective role of senior colleagues, the principals and the campus administration are increasing their volume and worth (Jumani, 2007; Siddiqui, 2002; Tahir & Qadir, 2012).

Head Teachers Specifying the Beginning Teachers' Professional Needs

Beginning English teachers in Pakistani institutions, especially at college (higher secondary) level, are not required to pass through a rigorous practicum or in-service professional learning programs which could make them able to cope with the latest pedagogical approaches and technological advancements, particularly in their real classroom (Bashiruddin & Qayyum, 2014; Jumani, 2007). English teachers lack badly the proficiency in handling with the latest technological equipment to facilitate the language learning and teaching process (Abbas & Asif, 2012). Many studies in the context of ELT in Pakistan have pointed out a big gap between the emerging ELT trends the current practices of English teachers (Ahmad, 2016; Khan, 2011; Jumani, 2007; Tahir & Qadir, 2012; Warsi, 2004). Usually, it is the principal or Head teachers in colleges in Pakistan who are responsible for all academic and administrative activities within the institutions. In a detailed literature review in this field, Gimbert and Fultz (2009) have identified major themes discussing the significant role of principals in specifying the professional learning needs of (beginning) teachers for improving them professionally and thus enhancing their professional identity. Likewise, Youngs (2007) and Menchaca (2003) signify the role of principals to recommend those professional learning programs which should address the real classroom and workplace needs of teachers. Furthering to this role, Amoroso (2005) and Renwick (2007) have identified various needs of beginning teachers emphasizing the classroom management, curriculum implementation, and compliance with organizational policies.

Mentoring Role of Head Teachers

The studies in the area of teacher socialization have revealed that beginning teachers rely more on their senior colleagues and Head teachers for academic guidance and prefer to follow the institutional practices as advised to them (e.g., Southwell, I970). They seek assistance from their seniors for problem shooting in their professional and personal life (Taylor & Dale, 197I). These senior colleagues are also the source of inspiration for them (Fair, 1973). Most studies emphasize the need of developing a positive working association between the beginning teachers and the senior colleagues, especially the principals or Head teachers (e.g., Angelle, 2006; Fedricks, 2001;

Johnson & Birkeland, 2003). Calderhead and Shorrock (1997) have identified mentoring as a successful strategy for promoting strong professionalism among beginning teachers. They directly relate the mentoring influences on shaping teachers' professional identity. Carter (2000), in his comprehensive review of literature on mentoring as an effective workplace strategy has endorsed these findings.

Development of Theoretical Perspective

The fundamental assumption which led this study was the idea that the smooth and trustable working relationship between novice teachers and their heads ultimately promotes effective professionalization of beginning teachers in their profession and institutions. From the extensive study of literature pertaining to beginning teacher socialization, the following variables were identified for conducting this investigation (Figure 1):

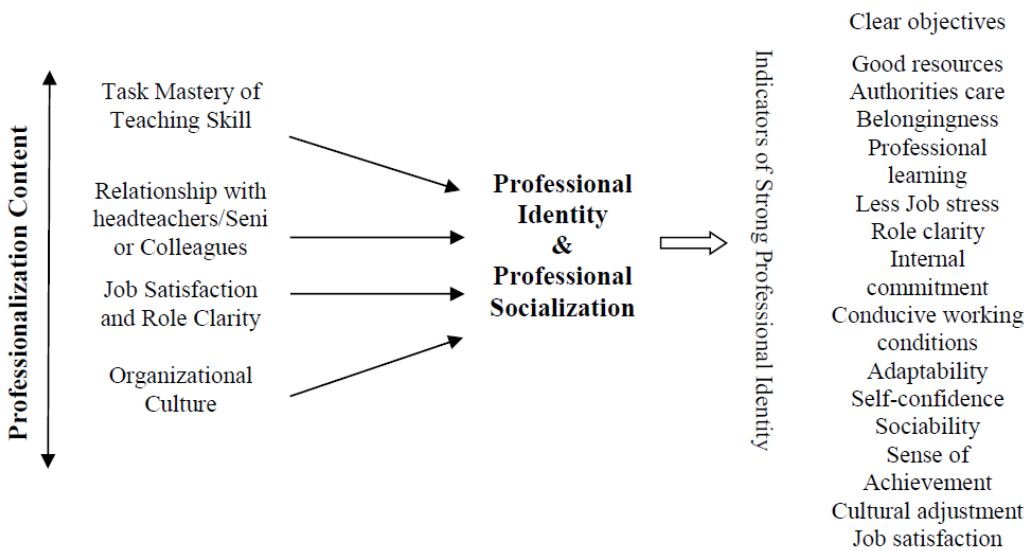

Figure 1. *Perception of professional identity variable criteria*

Methodology

Sampling

This survey study followed random stratified sampling technique and a mixed method approach for collecting data through closed ended questions from teachers and open-ended inquiries from Head teachers. The term *Beginning English Teachers* (BETs) was confined to the teachers having less than five years of teaching experience as regular faculty members in the colleges affiliated with Board of Intermediate and Secondary Education in Punjab or capital Islamabad. In total, 295 beginning English

teachers and 23 Head teachers 55 colleges participated in this survey study, sampled randomly from different strata to ensure the true representation of the population of beginning English teachers. The strata included: (1) gender; (2) institution type, i.e., public or private, rural or urban; (3) nature of job, i.e., permanent or contractual.

Questionnaire for Beginning English Teachers (BETs)

The questionnaire was used as a quantitative data collection tool. The beginning English teachers were contacted to express their opinions about their professionalization process. The questions were of mixed types: dichotomous, closed ended Likert scale based, and mixed with hints options. Questionnaire was mainly divided into four sections: section one seeking the demographic information; section two seeking the professional socialization related information through 15 item Likert scale; section three seeking the information on task mastery of teaching skill through 10 item Likert scale; section four seeking the information on relationship with Head teachers and senior colleagues through 16 item Likert scale.

Open-ended Questionnaire for Head Teachers (HTs)

The qualitative data in the form of opinions of Head teachers were obtained through open ended questionnaires to encourage a full, meaningful answer using the Head teachers' own knowledge and/or feelings. These open-ended questions, as Worley (2015) says, were grammatically as well as conceptually open in their responses and tended to be more objective and less leading so that they truly represent the opinions. The questionnaire was meant to discover if there were any differences between the self-perception of beginning English teachers and the viewpoints of their heads about the professional image. The questionnaire was designed to validate and compare the findings already obtained from the beginning English teachers. The following areas related to the construct of professional identity were included: (1) Job satisfaction; (2) Roles and duties; (3) Teaching skill; (4) Relationship with others; and (5) Organizational culture.

Piloting the Questionnaires

The statements and questions were either generated by the researchers or borrowed and molded from the previous studies conducted for the same purposes (Hudson, 2012; Ingersoll & Strong, 2011; Rees, 2015; Tahir & Qadir, 2012). After developing, the questionnaires were presented to 20 beginning teachers and two Head teachers so that the suggestions from respondents could be incorporated to improve the validity of the instrument. For reliability check, Cronbach's alpha was checked for the closed-ended questionnaire for teachers which resulted as 0.83, confirming the questionnaire tool as statistically reliable.

Results and Discussion

Description of Data: Univariate Analysis

Table 1

Univariate analysis for variable of effective socialization

		Clear objectives	Resource management	Belongingness	Professional Growth	Job stress	Role clarity & adiustment	Internal commitment	Adaptation	Conducive working conditions	Confidence	Sociability	Sense of Achievement	Cultural adjustment	Job satisfaction
N Valid		295	295	295	295	295	295	295	295	295	295	295	295	295	295
Mean		1.9	2.2	2.2	2.2	2.8	1.8	2.2	2.6	2.7	2.1	2.2	2.1	2.1	2.1
Median		2.0	2.0	2.0	2.0	3.0	2.0	2.2	3.0	3.0	2.0	2.0	2.0	2.0	2.0
Mode		2	2	2	2	2	2	2	3	2	2	2	2	2	2
Std. Deviation		.70	.96	.72	1.01	1.0	.83	.69	.97	1.09	.87	.82	.77	.72	.74
Skewness		.58	.64	.25	.81	.28	1.0	1.7	.34	.16	.78	.33	.26	.59	.50
Std. Error of Skewness		.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14
Minimum		1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maximum		4	5	4	5	5	5	5	5	5	5	5	4	5	4
Percentiles	25	1.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	50	2.0	2.0	2.0	2.0	3.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	3.0	3.0
	75	2.0	3.0	3.0	3.0	4.0	2.0	2.2	2.0	3.0	3.0	3.0	3.0	3.0	3.0

Table 2

Univariate analysis for variable of task mastery of teaching skill

		Individual concentration	Disciplinary measures	Students' interests	Subject knowledge	Individual attention for subject	Material preparation	Different teaching activities	Using new teaching ideas	Realization of Successful teaching	Self confidence
N	Valid	295	295	295	295	295	295	295	295	295	295
Mean		2.4	2.5	1.8	1.9	3.0	2.4	2.1	1.9	1.9	2.3
Median		2.0	3.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0
Mode		2	2	2	2	4	2	2	2	2	2
Std. Deviation		.93	.97	.85	.74	1.1	1.0	.84	.78	.70	1.0
Skewness		.28	.01	1.4	1.0	-.06	.46	.56	1.2	.28	.35
Std. Error of Skewness		.14	.14	.14	.14	.14	.14	.14	.14	.14	.14
Minimum		1	1	1	1	1	1	1	1	1	1
Maximum		5	4	5	5	5	5	4	5	4	5
Percentiles	25	2.0	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	1.0
	50	2.0	2.0	3.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0
	75	3.0	2.0	3.0	2.0	4.0	3.0	3.0	2.0	3.0	2.0

Table 3

Univariate analysis for variable of relationship with senior colleagues (RSC): frequency and quality of advice

		Organizing Classroom activities (Frequency)	(Quality)	Getting new ideas (Frequency)	(Quality)	Disciplinary problems (Frequency)	(Quality)	Administration rules (Frequency)	(Quality)	Personal problems (Frequency)	(Quality)	Head teacher's support	Head teacher's role model	Head teacher's attention	Head teacher's acknowledgement	Head teacher's tolerance	Head teacher's public recognition
N	Valid	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295
Mean		2.2	2.2	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.3	2.1	2.7	2.7	2.3	2.8	2.7
Median		2.0	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	3.00	2.00	3.00	3.00
Mode		2	2	2	2	2	2	2	2	2	3	2	3	3	2	3	3
Std. Deviation		.60	.59	.67	.73	.59	.65	.69	.63	.69	.63	.88	1.4	1.0	.95	1.1	.89
Skewness		-.1	-.1	.1	.1	.0	-.0	-.0	-.1	-.4	-.5	.83	.31	.34	.60	.06	-.2
Std. Skewness		.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14
Minimum		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maximum		3	3	3	3	3	3	3	3	3	3	5	5	5	5	5	4
Percentiles	25	2.0	2.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.00	
	50	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	2.0	3.00	
	75	3.0	3.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.00	

The results in the Table 1, 2 & 3 present the results of all the items which collectively form the composite variable of professional socialization content comprising the factors: (1) Job satisfaction; (2) Roles and duties; (3) Teaching skill; (4) Relationship with others; and (5) Organizational culture. The descriptive statistics presented in the tables are the amount of cases or subjects (*N*) of valid, average or *Mean* for the every single item, the *Median* (or middle) for all the items, *Mode* (or the frequently occurring) for all the items, *Std. Deviation* (standard deviation), and *Skewness* statistic and the *Std. Error* of the skewness, *Minimum* (smallest) and *Maximum* (largest) scores, and Percentile (in quartile fashion). The last row of the results demonstrates that the *Valid N* is 295, which is the total amount of the respondents in this file of data. All the items (*Modes, Means, Medians*) in the tables were found reasonable or according to the standards required by the normality.

Varied Perceptions of BETs and HTs

The main objective of this study was to know the level of harmony and understanding between the Head teachers and beginning English teachers regarding the latter's professional identity and effective professionalization into their jobs. Overall, the study has found that the BETs and HTs have similar perception about the professional identity of beginning English teachers. The heads, however, had some points of differences about their beginning teachers. Some tasks and areas were found where the beginning teacher had a better self-image about their professionalism whereas their heads were thinking differently, rather expressing an improvised image.

Varied Perceptions on Teaching Skills

As the study has investigated the points of differences between the BETs and HTs, the dissimilarity was found in their opinions related to the task mastery of teaching skills of BETs. The results indicate that 70% of the BETs held a very positive self-image of their teaching skills and perceived themselves as performing their best in implementing the appropriate teaching methods, completing the syllabi in time, initiating interesting classroom activities and managing pupil discipline during lectures (Table 1, 2 & 3). However, the HTs thought differently and perceived a rather weak perception about their BETs. About 63% of HTs (15 out of 23) expressed in their open ended responses that the BETs were *not good* in their classroom teaching and management skills. They thought that the BETs were not successful in paying the individual attentions to the learners and thus were not able to maintain interests of students in learning process. Similarly, they were not found happy with the beginning teachers' ability to maintain discipline in classes, which most of them defined in terms of silence in the class. There were only four HTs who were found satisfied with the performance of their BETs. The biggest problem highlighted by the HTs was of maintaining the classroom discipline and that was associated with the lack of confidence in the BETs.

Varied Perceptions on Relationship with Senior Colleagues

Another area where a wide gap was observed between the opinion of BETs and HTs was the smooth working relationship between the BETs and their senior colleagues including their HTs. Most of the HTs (N=20) were of the view that their BETs frequently consulted them to seek advice and guidance for their personal and professional matters. The HTs strongly affirmed that they inspired their beginning teachers in various capacities, e.g., enhancing motivation, creating new ideas and dealing with their personal problems even the family issues. These HTs also affirmed that they provided the best quality of advice and guidance to their junior teachers whenever they needed it. Conversely, the BETs were found hesitant in acknowledging the leading and inspiring role of their senior colleagues and HTs.

Most of the BETs did not show their agreement with the idea that they ever contacted their HTs for discussing their personal occupational problems like *feeling unsuccessful* or *workload* etc. Further to it, even those who sought the advice and guidance of their HTs were of the opinion that the quality of advice was not *so good* as could practically help them for dealing with real life encounters (Table 1, 2 & 3).

Varied Perceptions on Freedom of Expression and Disagreement

Another significant difference was found related to the freedom of expression and disagreement. The HTs presented themselves very liberal and accommodating for the BETs and their viewpoints. They thought they listened to the disagreements of the BETs openly and promoted a friendly environment of free talk. Some HTs also complained of the *reserved* behavior of BETs, however, they attributed it not to their arrogance but to their shyness and lack of confidence. Contrary to this, the BETs held the opinions unlikely as they didn't approve the inspiring and leadership role of the heads. Most of them didn't acknowledge their HTs as their role model. The HTs didn't tolerate their opposition on any issue and this affected their confidence and socialization process. The BETs also expressed their concerns related to public recognitions, attention and care from HTs, and tolerance of mistakes (Table 1, 2 & 3).

Varied Perceptions on Problems of Beginning Teachers

The HTs indicated various problems associated with the socialization process of BETs which the latter didn't realize themselves. The biggest problem was of the institutional micro-politics with which, according to HTs, the BETs were unaware to deal with. The BETs were unsuccessful in showing the befitting behavior in coping with the administrative and institutional policy guidelines imparted by the authorities time to time. Due to the lack of inner confidence the BETs always remain worried about the job security and thus tend to go for frequent job-switching. This confidence is shared by the institution head and administrators (Carter, 2000). Another problem highlighted by the HTs about BETs was of their belongingness to different cultural and linguistic backgrounds which affected their socialization process. Some common issues were also pointed out by the HTs related to the lack of resources, inadequate libraries and laboratories, less opportunities of professional learning and other similar issues.

Mentoring Role of Head Teachers: Need to Do More

The study suggests that more attention is required to enhance the mentoring role of Head teachers in promoting a strong self-image of professional identity among the beginning teachers, which could effectively contribute to the successful professional socialization process of novice teachers. The previous studies also affirm the similar findings that the Head teachers performing their role effectively can organize formal and informal mentoring events for establishing a healthy

professional relationship between them and their junior teachers (e.g., Malderez & Bodoczky, 1999). The institutional administration, as also suggested by Calderhead and Shorrock (1997), can initiate many socialization programs for lessening the differences and distance between the beginning teachers and their heads, for instance, planning mentoring agendas both a formal and informal levels, arranging informal parties where both HTs and BETs could talk freely in free social environment, designing some co-adventures where both of them can accomplish and achieve some targets jointly. Such measures should help improving this healthy working relationship between the beginning teachers and their Head teachers.

Conclusion

The study concludes that the gaps between the perceptions of beginning English teaches and their Head teachers may be bridged by promoting a friendly culture in the institutions and encouraging the new teachers to question and share their viewpoint on different institutional issues. However, the present study highlights a gap in this area in Pakistani educational institutions and the role of Head teachers needs to be redefined with the perspective that beginning teaches require their help and patronization instead of simply orders and commands. This communication gap blurs their perception to see the Head teachers as their role models. Such feelings, if sustain longer, ultimately, develop a weak self-image of beginning teachers about their social and professional prestige. This poor perception, however, can be enriched by recurring reassurance to the beginning teachers of their important position and it is necessary that all the members of teacher socialization process including, principal, senior colleagues, administrator, fellows and students participate in this course of development. It is very imperative to empower the beginning teachers in their real life classroom to strengthen their professional self-image.

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English Language Teachers' Instructional Clarity at the Intermediate Level in the Educational Institutions in Islamabad

Hazrat Umar*

Abstract

This research paper aims at evaluating the clarity in instruction demonstrated by the English language teachers at the Intermediate level. Teachers' instructional clarity is an important component of effective ELT practices, and plays a vital role in the pedagogy of English. This is a descriptive research and I have used the student questionnaire and observation sheet for data collection for this study. The questionnaires were retrieved from 361 out of 400 students and 29 out of 30 classroom observations were also a part of this study. The participants were selected from the government schools and colleges in Islamabad. The chi-square test and z-test for proportion were applied to analyze the data using Mstat, Excel, and SPSS software. The analysis of the data shows that the English language teachers employ the technique of exemplification. Similarly, the results of students' responses indicate that they do not answer students' questions in a satisfactory way. However, they follow a proper sequence and are organized appropriately. The results imply that the existing teaching techniques of English language teachers are partially effective as they do not demonstrate adequate clarity. It is recommended that the English language teachers should explain their lessons or the subject matter with examples during their teaching. Further, the teachers should be given training and professional development courses that may help them to overcome the problems.

Keywords: teaching clarity, presentation skills, English Language Teaching (ELT), Intermediate level

Introduction

Instructional clarity has an instrumental role in teaching and learning, and it results in meaningful learning. It is generally observed that poor and unclear instructions of teachers can confuse or misguide students and may adversely affect students' learning. Instructional clarity is linked to effective teaching, whereas poor instructions have been linked to ineffective pedagogy, which indicates student performance and satisfaction are dependent upon the teacher clarity (Hativa, Barak, & Simhi, 2001; Hines, Cruickshank, & Kennedy, 1985). In spite of being an effective pedagogical strategy, there is no much evidence as to how much language learners

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experience teaching clarity behaviours (BrckaLorenz, Cole, Kinzie, & Ribera, 2011). The research in hand explored the effectiveness of English language teachers' teaching practices in terms of their instructional clarity. The Higher Secondary School Certificate (HSSC) level is an important level in the career of students as at this level students decide upon different fields for further studies or choose different professional programmes. The English language has a significant role at this stage of the students and is taught as a compulsory subject. However, prior to admission to the university, these students do not perform well in English. They have rather poor communicative competence and underperform on the written entrance test at the National University of Modern Languages (NUML). There may be different factors involved in hindering students' learning. But the researcher feels that effective teaching has a desirable impact on students' learning of English and helps them overcome their problems to a large extent. Therefore, the researcher explored the effectiveness of the English language teaching practice with regard to the instructional clarity of the English language teachers in order to identify as to how far the English language teachers demonstrate teaching clarity at the Intermediate level at the Educational Institutions in Islamabad.

Effective teaching has various attributes and instructional clarity is one of its important components. According to Killen (2003) there are two key aspects of instructional clarity that researchers mostly emphasize, i.e. 'verbal clarity' and 'cognitive clarity'. The former is related to teachers' clarity while speaking in the class, i.e. what they utter or say in their teaching; it means that speaking clearly and with clarity is one of the crucial aspects of Quality Teaching. The latter, i.e. cognitive clarity is related to teachers' actions in the classrooms; it refers to making the learners clear as to what they have to demonstrate or achieve by the end of the lesson or the course, i.e. they have to have a clear understanding about the objectives and learning outcomes. Similarly, clear instructions are given to the learners about their homework and assignment and that how they can be successful. Instructional clarity also includes having a logical and systematic order and keeping an appropriate speed in teaching the lesson and organizing the teaching activities. Using the technique of exemplification, i.e. using appropriate examples while explaining the subject matter, and teaching the learners the specialized lexical items and words related to the subject, i.e. making them conversant with the concepts related to the subject or with the jargon are also related to learners' cognitive clarity.

Objective of this Research

This research attempts to investigate as to what extent the English language teachers have instructional clarity.

Research Question

How far do the English language teachers demonstrate instructional clarity in teaching English at the Intermediate (HSSC) level at the government higher secondary schools and colleges in Islamabad?

Literature Review

Instructional clarity is an important aspect of effective pedagogy (BrckaLorenz, Cole, Kinzie, & Ribera, 2011). Instructional clarity and teacher expressiveness reasonably correlate with students' cognitive outcomes (Pascarella, 2006 as cited in BrckaLorenz, Cole, Kinzie, & Ribera, 2011). Students' feedback on teachers' activities is a good source of identifying teacher clarity. Students can point out the activities that they find helpful in understanding the lessons and activities that make it difficult for them to understand the lessons (Killen, 2003). This feedback may further help the teachers to understand the learners' problems and thereby knowing about their understanding of the lessons.

Killen (2003) has identified various evidence based attitudes or 'enabling behaviours', which enable teachers to have clarity of instructions and improve students' performance. These attitudes, which include eagerness, the use of student ideas, probing, proper organization, and inquiring (Killen, 2003) are essential for effective pedagogy and are useful in learners' learning. The research tools developed for this research addressed these enabling behaviours.

Using students' ideas can help teachers make their teaching instructions more effective in teaching different language skills. Further, this can help teachers motivate their learners as it may positively impact their self-efficacy, thereby motivating and enabling them to master the language skills rather than to avoid them.

Organizing the new information in an appropriate way or structuring it in understandable patterns is also an important aspect of successful and effective pedagogy. Overviewing the erstwhile discussion and lesson, commenting on what is to be followed in the discussion or lesson, or linking the different sections of the lesson can help teachers achieve a logical structuring. Logical structuring of the lessons or discussion makes the new input meaningful for learners (Killen, 2003).

Questioning is another teaching strategy that makes learners thoughtful and curious about their studies and makes them more attentive to their teacher instructions. It also informs teachers about pupils' understanding of different language skills, and their achievement of the objectives. The questioning strategy is also referred to as the Socratic Method as Socrates involved his pupils in learning by arousing their curiosity through questioning. According to Gutek (2008) questioning and probing are the hallmarks of the Socratic Method, which force the learners to meditate on life, justice, truth and their meanings.

Probing is another way of questioning. It is an analytical approach that helps teachers know their learners' comprehension. It is the process in which teachers seek the clarification of answers from different students (Killen, 2003). Probing is especially an effective strategy for language teaching as it engages language learners in discussions. It indicates that it has a positive relationship with effective teaching. But this relationship needs to be probed.

Different dimensions of teachers' instructions and their behaviours such as course planning and preparation, and explanations of learning outcomes and homework have a positive relationship with an increase in students' thinking ability (Pascarella, Edison, Nora, Hagedorn, & Braxton, 1996). Teachers with clarity in their teaching practices understand what to do and how to meet students' learning outcomes, which subsequently results in students' better understanding of the teaching methods and outcomes of the course (Ginsberg, 2007b, as cited in BrckaLorenz, Cole, Kinzie, & Ribera, 2011).

Providing students with relevant examples and reviewing the important points of lessons are important aspects of instructional clarity. Chesebro and McCroskey (2001) conducted their research on the relationship of instructional clarity and students' outcomes. Their results indicate that student motivation, their good feelings for the teacher and the course are dependent upon instructional clarity. The results confirm that students of those teachers who have clarity are motivated, they like their teachers and the course, and see that they have learned more cognitively (Chesebro & McCroskey, 2001). These findings have been corroborated by Pascarella and Terenzini in their 2005 study (as cited in BrckaLorenz, Cole, Kinzie, & Ribera, 2011).

Methodology

The researcher used a mixed method approach, i.e. both qualitative and quantitative paradigms were used in this research and multiple sources were used for the data collection. It was a descriptive study and the survey methods were used for data collection. The data were collected through a student questionnaire and a classroom observation checklist(sheet). The questionnaire consisted of both closed- and open-ended items. The data are presented in the form of percentages and the inferential statistics used were chi-square goodness of fit test and z-test for proportions.

Instrumentation

The researcher designed student questionnaire and classroom observation sheet. The research instruments were reviewed by experts and were piloted in the field. They were modified in the light of the reviewers' and participants' feedback. This research is a part of a larger project whose Cronbach's alpha values for the student questionnaire and classroom observation sheet were .8 and .9 respectively.

The student questionnaire consisted of five closed- and two open-ended items. The closed-ended items on the student questionnaire focused on teachers using the technique of exemplification, answering students' questions satisfactorily, logical presentation of lessons or contents by English language teachers, teachers' instructional clarity for course assignments and homework, and teachers' organizing ability. In the open-ended items students were asked the good qualities of their teachers and suggestions for the improvement of the teaching practices. The observation sheet comprised five closed-ended items, which were similar to the closed-ended items of the student questionnaire.

Population

The data were collected from the Federal Government Educaional Institutions in Islamabad. The accessible population of the study comprised 30163 HSSC students and 164 teachers of English.

Sample

The questionnaires were administered to 400 Intermediate students, and 29 out of 30 classroom observations were also conducted. The students' response rate was 90.25%(*n*=361) and 96.6% (*n*=29) non-participant observations were also conducted. In order to reduce the researcher bias, the researcher employed other observers also for the classroom observations.

Results

The data were collected through questionnaire from the Intermediate students and classroom observations were also conducted. The data were analyzed using SPSS, Microsoft Excel, and MSTAT. The data were entered into SPSS to generate the frequency and percentages of the responses. Also, the chi-square results were generated through SPSS. using the chi-square goodness of fit test was essential in the current research as it was needed to determine the distribution of the responses across the positive (agree) and negative (disagree) scales in this research. Microsoft Excel was used for z-test for proportions. The formula of the z-test for proportions was added to the worksheet and it was properly set up to generate the results automatically from the data entered into the cells. The z-test for proportions was used to ascertain the significance of the positive responses. The MSTAT was used to generate the p-values of the z-test.

Students' responses about the instructional clarity of the English language teachers

The data are displayed in percentages using five-point Likert scales of agreement as shown in Table 1. Chi-square goodness of fit test and z-test for proportions are used.

Table 1 summarizes students' responses regarding the English teachers' ability to present the subject matter.

Table 1

Results of students' responses

Item No	Item statement	SD	DA	U	A	SA	Total Percent
1	Results of students' responses about teachers using the technique of exemplification	4.7	39.6	21.1	25.5	9.1	100
2	Results as to whether the students' questions are answered satisfactorily by their English language teachers	11.6	43.8	5.5	33	6.1	100
3	Logical presentation of lessons or contents by English language teachers	7.8	18.3	14.4	41.4	18.1	100
4	Teachers' instructional clarity for course assignments and homework	11.4	25.6	15.6	30.6	16.9	100
5	Students' responses about their teachers' organizing ability	13.1	19.8	5	23.7	38.4	100

Note. SD= Strongly disagree, DA= Disagree, U= Uncertain, A= Agree, SA= Strongly agree

The serial numbers of the Tables 1 and 2 exactly correspond to one another, i.e. the values given in Table 2 are the values of items of the respective serial numbers in Table 1.

Table 2

Values of inferential statistics from the questionnaire for students

S. No.	Chi-square value	Chi-square p-value	Z-test value	Z-test p-value
1	29.59	.000	-6.139	.000
2	139.95	.000	-4.26	.000
3	117.8	.000	3.65	.000
4	57.22	.000	-0.95	.17
5	175.63	.000	4.73	.000

The p-value ($p<.05$) for the chi-square test of item 1 of the student questionnaire indicates that the proportions of the positive and negative responses differ significantly (Table 1; Table 2). The z–test for proportions was applied to further identify the instructional clarity. The z-test p-value .000 is highly significant which signifies that the proportions of positive responses (Strongly agree and agree) are

significantly smaller than the proportion of the half of the total population. Similarly, the z–test p-value .000 of item 2 of the student questionnaire is highly significant, which indicates that the positive responses are significantly less and their proportion is significantly smaller as compared with that of the half of the total population. Thus, the results of items 1 and 2 imply that teachers are not adequately skilled to present the material, and they lack instructional clarity, which is an essential aspect of effective English language pedagogy.

The chi-square test was used to identify if the different categories of item 4 of the student questionnaire had an equal distribution of responses. Its p-value .000 is significant, which means that the responses of the different categories are distributed significantly differently from each other. The z-test for proportion was used to further identify the proportion of the agreed responses. Its p-value .000 is highly significant, which means that a significantly larger number of the subjects opted for the 'Strongly agree' and 'Agree' categories of the statement. Similarly, the chi-square p-value .000 of item 4 is significant. Its z-test p-value 0.17 is insignificant, which proves that the positive responses are insignificantly less than the half of the population. Similarly, the z-test p-value .000 of item 5 is significant which means that the positive responses are significantly larger in number as compared with the half (50%) of the population, which implies that their teachers are well organized.

The responses to the open-ended question 1 of the student questionnaire

Students' responses to the open-ended question 1 have been analyzed as follows:

In this question the participants of the study were asked that what they liked about their English teachers. Some students liked their methods (way of teaching). However, the majority of the teachers need to hone their way of teaching because most of the students have shown their dissatisfaction regarding their teachers' teaching methods in the open-ended question 2. This improvement may be brought about by giving training to teachers regarding their methodology.

The responses to the open-ended question 2 of student questionnaire

Students did not like the current teaching methodology employed by their English teachers. According to them their English language teachers did not explain the lesson in a good way. It may be because of the lack of training courses for the in-service teachers. English teachers should be given proper pre-service training of teaching English. In-service refresher courses can also be effective to overcome teachers' inadequacies in presenting the subject matter.

Results of the Classroom Observations

The researcher conducted non-participant observations of 29 classrooms. The results are presented in the form percentages and chi-square test, and z-test for

proportion are employed as the inferential statistical measures. The results are tabulated in the Tables 3 and 4.

Table 3

Results obtained from the observations about teachers' clarity

Item No	Item statement	Never	Little	Somewhat	Much	A great deal	Total Percent
1	The results of observation sheets about teachers using the technique of exemplification	6.9	62.1	6.9	17.2	6.9	100
2	Results as to whether the students' questions are answered satisfactorily by their English language teachers	10.3	27.6	34.5	17.2	10.3	100
3	Logical presentation of lessons or contents by English language teachers	-	24.1	27.6	41.4	6.9	100
4	Teachers' instructional clarity for course assignments and homework	34.5	37.9	6.9	10.3	10.3	100
5	Classroom observations about teachers being organized		27.6	27.6	37.9	6.9	100

The values given in Table 4 are the values of items of the respective serial numbers in Table 3.

Table 4

Results of the inferential statistical tests of the observation sheet

S. No.	Chi-square value	Chi-square p-value	Z-test value	Z-test p-value
1	4.17	0.04	-2.2	.013
2	1.69	0.194	-	-
3	7.7	.005	3.25	.000
4	5.8	.016	-2.7	.003
5	5.83	.016	2.7	.003

The results of item 1 of the observation sheet show that teachers do not explain their lessons with the examples as the results of the p-values show that significantly fewer observers than the half of the total population reported negatively in response to item 1 of the observation sheet (Table 3; Table 4). Similarly, the results of item 4 of observation sheets regarding the clarity of teachers' instructions for the academic tasks,

i.e. course assignments and homework show that teachers' instructions are not clear as a significantly large number of observers, in other words, more than the half of the total population have responded negatively.

The results of item 2 of the observation sheet show that teachers give satisfactory answers to students' questions as the p-value of this item shows that a significantly large number of the observers reported positively in response to this item. Similarly, the results of item 3 about teachers presenting the subject and the lessons logically show that teachers do not present the material in a logical sequence as the p-values are significant which show that a significantly large number of the population has responded positively. Similarly, the results of item 5 show that a significantly large number of the observations reported that the English teachers are well organized as the p-values are significant. The items 2, 3, and 5 support the null hypothesis of the study.

Discussion

The students' responses show that English language teachers do not deliver their instruction adequately clearly and that they do not explain the lessons properly. The results of student questionnaire and classroom observation sheet show that the English language teachers do not use the technique of exemplification in their teaching in order to make the lessons and the subject matter comprehensible. Examples are an extremely useful pedagogical strategy to clarify learners' concepts in ELT classrooms (Viñals, 2016). Similarly, Kane is of the view that giving examples is a useful technique to explain a difficult concept. There are different ways for giving examples such as "for example, for instance, as a case in point or, a bit more subtly, say, thus, consider" (2000, p. 108). The reason for students not understanding the lesson may be that teachers might not have enough time to explain the lesson by giving examples. Because of the shortage of duration their main focus is on completing the syllabus quickly. The academic session has many co-curricular activities and also as soon as they get their roll number slips, the majority of students at the Intermediate level stop coming to colleges a week or so prior to the exam. In such situation teachers' utmost efforts are to cover the syllabus rather than to explain the things in details by giving examples.

Answering students' questions is an important attribute of effective teaching. Similarly, asking questions not only helps teachers assess students' understanding of the subject, but also arouses students' interest (University of Nebraska, 2016). Answering students' questions can make them communicatively competent (Larsen-Freeman & Anderson, 2011). I have personal observations that if a teacher criticizes students' requests for further information or clarification, the students feel inhibited and lose interest in the class participation and discussion. Students are of the view that their English language teachers do not answer their questions in a satisfactory way, but the results of the classroom observations contradict the students' views. As a matter of fact, teachers give students opportunities to ask questions. Students' dissatisfaction may be

due to the fact that teachers want to finish the syllabus and due to the shortage of the duration of the periods the teachers do not have enough time to give detailed and satisfactory answers to their questions. If they give satisfactory answers explaining the things, they may not cover the course easily. Or another reason may be the large classes in which all the students cannot be focused or made satisfied on the individual basis.

It is important for a teacher to be properly organized. The student learning is affected by the selection and proper organization of the content (Stark, 2000). Besides the content, the organization of the time is also important for effective teaching (University of Technology Sydney). Similarly, instead of teaching the contents of the lessons in fragments or as independent units they should be structured (Biggs & Tang, 2007, p. 25). The results of the students' responses indicate that the English language teachers follow a logical sequence in presenting the subject contents of the lessons. This is intrinsic to effective English language teaching as weaving the subject contents with a disordered sequence may obfuscate the learners. Further, the students are of the view that their English language teachers demonstrate clarity while directing them about their homework and course assignments. Similarly, the results show that the English language teachers are well organized in their classrooms.

The results of the classroom observations coincide with those of the student questionnaire except for answering students' questions in a satisfactory way and instructional clarity for different tasks, i.e. homework and course assignments. With regard to answering students' questions satisfactorily, the results were not significantly different across the different scales, which implies that the observers found the teachers answering students' questions satisfactorily. However, the observers did not find the English language teachers giving assignments or homework to their students during their teaching due to which they could not identify the instructional clarity for course assignments and homework. According to Borich (2016) students most frequently blame the lack of clear instructions for their underperformance in their assignments or homework. Therefore, he holds that the instructions or the language explaining the exercise of the workbook, reading work, home assignment, and handouts should be as clear as the language of the instructions for the lesson content (p. 18), which suggests that clear directions for assignments and homework are as important as teaching the lesson content.

Conclusion

It can be concluded from the results that the teaching practices of English language teachers at the Intermediate level at the government educational institutions in Islamabad do not have adequate clarity, therefore, they are inadequately effective in regard to instructional clarity.

The teachers do not use the technique of exemplification while teaching the lessons. It is a very useful technique as students can understand the lessons easily when

they are explained with the help of examples. Similarly, the English language teachers do not answer students' questions satisfactorily. Answering students' questions in a satisfactory way may encourage them to ask more questions. It is an important feature of effective pedagogy as it not only clarifies their misapprehensions but also may make them active learners of English.

It can be concluded from the whole discussion that instructional clarity is a vital component of effective pedagogy. The English language teachers are, to a small extent, good at presenting the material. They are well organized. They present the contents of the subject and the lessons in a proper order and follow a logical sequence in presenting the material and delivering their instructions. Despite all this, they need further improvement with regard to using examples in teaching the lessons and answering students' questions in a satisfactory way.

Recommendations

1. The results show that the English language teachers do not use the technique of exemplification to explain the subject matter. It is recommended that teachers use this technique to make the lessons more comprehensible. The English language teachers can learn this technique through teacher training programs. Therefore, teacher training for teacher development should be organized more frequently so that the English language teachers can hone their teaching skills.
2. The English language teachers are well-organized and follow a logical sequence in presenting the contents of the lessons. However, the researcher identified during the classroom observations that time the span of the periods was rather short and the teachers could not finish the lessons in time to give homework to the learners let alone giving instructions about the homework. Therefore, it is recommended that the duration of the classes be increased.
3. The reviewed related research shows that student learning, motivation and achievement are dependent upon instructional clarity, which means "that teaching clarity is valuable, should be promoted as a goal in faculty development and evaluation" (BrckaLorenz, Cole, Kinzie, & Ribera, 2011). Therefore, pre- and in-service teacher training programmes in Pakistan should focus on instructional clarity.

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Gender Based Subject Matter Knowledge of Diverse Modes of Selected Teachers in the Light of Competency Based Teacher Education

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Abstract

The current research work was conducted to compare the male and female subject matter knowledge of secondary school teachers selected through Conventional, National testing Service and online process regarding competency based teacher education. The main objective of the present research was to judge the gender based subject matter competency of secondary school teachers selected through different modes in the light of competency based teachers' education. This research study was descriptive in nature. Systematic random sampling technique was used. A self-developed subject matter competency scale on five points Likert scale was used in this study. The expert team comprising different subject specialists as a respondent, who made observation and rating the questionnaire to the respective secondary school teachers. Data was collected through these subject specialists, from respective secondary school teachers while they were teaching. The descriptive statistic and t-distribution was used for data analysis by using SPSS-17. Finding indicates that mean score of the male secondary school teachers (conventional, online and NTS) was better than female. The standard deviation and coefficient of variation of male SSTs was less than female, so the subject matter competency of male secondary school teachers was consistent than female secondary school teachers. The result of t-statistic shows that there is no overall considerable difference in subject matter knowledge between the male and female secondary school teachers regarding competency based teachers' education.

Keywords: Gender, Competency based Teacher education (CBTE), Diverse Modes (Conventional, Online and National Testing Service).

Introduction

The teacher is an individual who impart knowledge to his students. A similar word like tutors, mentor or an educator can be used for the word teacher. A teacher helps the students to acquire knowledge, competencies or values (Storonge, 2018).

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Teacher is an architect of our future generations. It is the demand of every society that most competent and intelligentsia should join to this respectful career. These things come in our knowledge that most poor academic background and incompetent people of the society find their career in this occupation in Pakistan. Anyone who is unable to get his job from any other profession, he then joins the teaching profession and plays with future of the nation. The reasons behind this thinking are poor salaries and low social status in the society towards school teachers. The role of a teacher is valuable and important. Educator puts profound and extensive influence on the people who spent more time with him. Teacher's loves and affection, competence, character and moral commitment greatly affect the students. Teacher is a role model for his students. Students try to follow the etiquette, style of conversation, manners and costumes of his teacher. The impressing behavior of teachers always attracts the attention of the students (Gupta, 2007).

Teacher education is a profession that train competent and skillful individuals for the teaching profession, who play valuable role in the national development. The teacher is considered as nation's building role in the society. Therefore, it is necessary for a teacher that he should be skillful and competent. The importance of teacher is considered at every grade level. Teacher tries to establish a solid base of their students in academic as well as professional side. This is the reason that the teacher is considered backbone of the whole education system. So, the future life of the students mainly depends on the performance, competencies and teacher's effectiveness in teaching at every grade level (Iqbal, 2013).

The national and international standards of teacher's education compel teachers' must have deep knowledge of subject matter for the students' teaching. Teachers can guide their students for the construction of useful mental model. Teachers connect different ideas and clear misconceptions of the students. Teachers require how some concepts are interrelated across disciplines and can relate to everyday life. The pedagogical content knowledge in the part of competent teacher facilitates him to impart knowledge to others. Academic understanding for professional, competent and skilled teacher is necessary because it flourishes his methodology. Knowledge of curriculum development and subject related knowledge is necessary for teachers. Subject related knowledge means, facts about the principles, theories and concepts of particular subject. Curriculum development includes the most useful information about the behavioral and instructional strategies. It deals with how students can better learn some specific concepts of subject (Shulman, 1987).

The teachers who are professionally competent must possess the quality of instructive reasoning. Teacher follows some steps to make his teaching more attractive.

1. **Comprehension:** teacher must understand the purpose, composition and deep information about the subject matter. He should have knowledge about what to teach, how to teach and when to teach?
2. **Transformation:** It is the ability of the teacher to combine the subject matter contents with suitable methodology and also keep mental level, background and abilities of the students. The subsequent steps are included in the transformation.
   a. **Preparation:** Skilled instructor is well prepare about the given content material before educating.
   b. **Presentation:** Competent teacher present his subject matter before his students in a very easy way.
   c. **Instructional selection:** Teacher selects suitable instructional material among collection of various methods and models.
   d. **Adaptation:** Instructor gives a chance to understudies to the adaptation of different teaching resources and exercises to demonstrate the students learning styles and qualities.
3. **Instruction:** Direction comprises of instructing, managing, overseeing, introducing, connecting and addressing and so forth.
4. **Evaluation:** Evaluation means to judge the teaching effectiveness, teacher checks his own performance and wants to know how much his teaching effective or not if not, teacher re-planed his own teaching strategy.
5. **Reflection:** Reflection is the vital part of the professional development. Teacher acquires the knowledge to examine the results and decide the reasons of his failure and success. Teachers put his attention on the content area, understand his teaching style and improve himself as a teacher.
6. **New Comprehension:** Teacher learns from the multiple types of daily routine activities. This is called informal learning. These types of education cannot be found in school and colleges. The union of theory and practice occurs effectively when questions arise among the students in the work place, where research and discipline activities are conducted regularly (Shulman, 1986, 1987).

There are three types of teachers, which are working at the secondary level at District Dera Ismail Khan. These were inducted by three different modes of selections. These teachers are called conventional, online and last teachers category come through national testing service (NTS).

The two kinds of teachers at secondary level are generally known as SSTs (General) and SSTs (Science). These are those SSTs who are promoted from the posts like primary school teacher (PST), certified teacher (CT), drawing master (DM), Arabic teacher (AT), theological teacher (TT), physical education teacher (PET), Qari and Arabic teacher (AT). The existing service structure of Government of Khyber

Pakhtunkhwa is that 50% from lower cadres like (CT, PST, DM, PET, Qari and AT) and remaining 50% are directly recruited though Khyber Pakhtunkhwa public service commission (PSC). Both categories of SSTs are departmental promoted SSTs and PSC SSTs are called conventional secondary school teachers (Iqbal 2013).

In 2006, former Government of Khyber Pakhtunkhwa through its Schools & Literacy Department invited an online applications through internet from all interested candidates having BA/ B.Sc degree with B.Ed/ B.S.Ed: for appointment as SST. As a result of this advertisement, 1300 plus secondary school teachers were selected for the periods of six months on fixed basis. These secondary school teachers were recruited without any caudal formality (Iqbal, 2013).

In 2014, Government of Khyber Pakhtunkhwa decided to appoint secondary school teachers and others lower and higher category of teacher through National testing service (NTS). All those candidates who have the qualification, BA/ BSc with B.Ed degree, but they must lie in specified category i.e. i) Biology and Chemistry ii) Physics and Mathematics iii) General (Humanitarian group) can apply for the post of secondary school teachers. These categories of teachers are called National Testing Service Teachers (NTS SSTs) (Iqbal, 2013).

Much researcher focus on gender difference in the professional interest. Gender remain have an important factors in the selection of different profession. The Realistic, Investigative, Artistic, Social, Enterprising, Conventional model of Holland theory of professional selection stated that female are more motivated in social and artistic profession like societal worker, Artist, teacher and writer than male who are more encouraged towards the career such as engineering, carpenter and machine work. Researches revealed that women are extra involved in people-oriented and men tend to be motivated and involved in thing- oriented profession (Moses, Admiraal, & Berry, 2016).

Teacher impart knowledge, skill, and attitude to their students. The subject matter knowledge of teachers has many dimensions. The educator should be able to communicate key ideas of the subject material to the learners and can illuminates and simplifies misconception of the content material. When learners keenly involved in the teaching learning procedure, it means that teachers has the command over the subject matter (Mustafa , 2014).

Researchers introduce three components of the subject content knowledge:

1. Subject material content information
2. Pedagogical content information, and
3. Curricular content information.

Furthermore, researchers explained there are three aspects of subjects.

1. Content of the subject,

2. Organization of the content, and
3. Methods of inquiry used in the subject.

Teacher's understanding about the matter contents provides larger opportunities for students to learn. The subject matter knowledge of the teacher plays very important role in the teaching learning process. The researcher tried to explore, whether gender effects the subject matter competency of the teachers who are selected through three modes(Conventional, National testing service and online) regarding competency based teachers education (CBTE) (Akhtar, Shaheen, & Bibi, 2016).

Objectives of the Study

The objective of the present research work were following:

1. To find out the competency of secondary school teachers in the light of competency based teachers' education.
2. To compare the male and female subject matter competency of secondary school teachers in the light of competency based teachers' education.
3. To compare the gender wise consistency in the subject matter scores of Secondary school teachers in the light of competency based teachers' education.

Hypotheses of the Study

Following was hypothesis of the study:

1. There is no significant difference between male and female subject matter Competency scores Secondary School teachers in the light of competency based teachers' education.

Research Questions

1. Does the subject matter competency scores of male and female secondary school teachers is same?
2. Does the subject matter competency scores of male secondary school teachers is better than female?
3. Does the subject matter competency scores of male secondary school teachers than female?
4. Which groups of male and female secondary school teachers was better consistency.

Significance of the Study

The given research work obviously showed as one of the main chains of progress in the field of teachers training and recruitment. The present research absolutely be turning point in the area of teacher's education and training. Ideal teachers of the nation are pictures of the astonishing and gifted eventual fate of the youths. The research may help to the policy makers and educators selector to choose some suitable selection principles for every level of educators. This study may also guide the school

heads, educational administrators and educational policy makers to understand the subject matter knowledge of each category of teachers. Policy maker might better judge that which one teachers having better knowledge in the subject matter in comparative perspective. The study in hand may also provide guidelines for further researchers and recruitment personals that which one criteria of teacher's selection is the best one.

Limitation

There was not any standardized Instrument available to find the subject matter competency. The researcher developed self-made questionnaire to find out the subject matter knowledge of the teachers selected through regarding competency based teachers' education at the secondary school level.

Delimitations of the Study

1. The research work was restricted to merely public secondary and higher secondary schools of Dera Ismail Khan only.
2. Those Secondary School teachers who were selected through conventional, online and NTS way were taken for the study.

Explanation of terms and abbreviations

a.	NTS	National Testing Service
b.	SSTs	Secondary School Teachers
c.	CV	Coefficient of Variation
d.	KP	Khyber Pakhtunkhwa
e.	PSC	Khyber Pakhtunkhwa Public Service Commission
f.	B.Ed	Bachelor of Education
g.	B.Sc	Bachelor of Science
h.	BA	Bachelor of Arts
i.	B.S.Ed	Bachelor of Science Education
j.	CT	Certificated Teacher
k.	PST	Primary School Teacher
l.	DM	Drawing Master
m.	PET	Physical Education Teacher
n.	AT	Arabic Teacher
o.	CBTE	Competency Based Teacher Education

Dated Peshawar the 26/06/2012, Finance Deptt: Govt: of Khyber Pakhtunkhwa (Regulation Wing) Endstt: No. SO (FR)/ FD/ 10-22 (E)/ 2010.

Literature Review

Teacher's Concept

A word teacher defined by different authors in different ways. A teacher is a person who teaches and facilitates teaching learning process (Zombwe, 2008). A teacher is person who imparts knowledge and prepares the young adults for the future. Teacher has the ability to prepare the young generation for future challenges. He has such supreme power that determines the destiny of the nation. Both teacher and parents spent lot of time with their children. The teachers impart skills, knowledge and value to their children. The educated people get opportunities from the both public and private sectors. The educated person can easily protect their employment and try to get lifelong skills through education and prepare himself to live better life in the society (Nyerere, 2008).

Concept of Teacher in Islamic Perspective

The Islamic educator is generally a preacher. The transfer of Islamic belief, thoughts values and culture in smooth way to the young generation is the duty of teacher. In Islamic society preaching and teaching goes side by side. Here are the views of some philosophers and thinkers of Islam on teaching and teachers. Teacher has virtuous and principal place in the Islamic belief. The Prophet (Peace be upon him) personally decided to the name of teacher in the Quran by Allah. The job of teacher is not merely the promotion of literacy and imparting knowledge to pupils. Teacher has vital role in whole education process. Teacher should be a person, having command over the subject matter and respect the students by virtue of what he is. Teacher must grasp meaning of education and relate with daily life examples (Iqbal, 2006).

Teaching

According to Merriam-Webster dictionary the practice or profession or the act, of teacher is called teaching. The word "teaching" is using in three ways.

1. First it can be used in the meaning of the "Body of knowledge". In the expression "the teachings of Islam" means a body of ideas or a system of beliefs.
2. Secondly it can be used it in the meaning of "occupation" or "profession" of someone who educate or teach.
3. Thirdly it is used in the meaning the ways of making something known to other in the school environments (Merriam-Webster's Collegiate Dictionary, 2004)

Teacher Education

The education process develops self-awareness among the individuals and also among the nation too, who creates it. It is general but not a public view only. The education is social institution, which is responsible for mental, physical, moral and ideological training of the individuals of the nations. Education enables the individuals

to aware himself, purpose of their life and prepare them to achieve these purposes (Iqbal, 2006).

The effectiveness of any education system depends upon the quality of teachers and teacher education system. If the teacher education is not based on the strong foundation, then preset objectives of the entire education system are not achievable. Therefore, we can say that teacher education is the main cartridge of the completely educational development (Chauhan, 1984).

The teacher education program should be monitor in the following ways as:

1. Perspectives and in service teachers are the main targeting candidates in the present teacher education program from the recruitment till retirement.
2. Re-shaping and designing the structure and the content of teacher education with respect to the changing world, there must a link between in service and pre service education.
3. Teacher education program must be based on lifelong skills to meet the demands of the society in changing world (UNESCO, 2006).

Competency

Competency means performing right thing in right way, to do a work in accurate way. In other words to perform a job with quality, neatness, enthusiasm, fluency, originality and flexibility are qualities of competency. Competence is not the result of great amount of knowledge. Competence must be operative at right time. Knowledge integrates into pattern of the behavior for useful purpose (Burke, 2005). Competency means adequacy and sufficiency. So, teacher competencies (plural of competency) are skill, knowledge, values which a teacher possess; these are the tools of teaching" (Dutt & Rao, 2003).

Competency is a Skill, information, knowledge set necessary for adequate performance for the specific activity. The position of teacher demands some specific academic and pedagogical competency as described in standardized tests for licensing or certification. The academic competency and professional proficiency are necessary for instructor or teacher for authorizing or accreditation. Such competency can be acquired through quality education and competency based teacher education (Collins III & O'Brien, 2011).

Competency-Based Teacher's Education (CBTE)

The competency based teacher education is a movement of the late 1960s clarifies educators' job and roles linked with specific abilities in the areas of skills, information and attitude. This movement try to provide knowledge based teacher's education. This movement provides sound base for authorized teacher. Teacher able to demonstrate observable behaviors' in this types of teacher education. Teachers trainers

has the prominent role in competency based teachers education, who examine the trainee's skills and competencies and then assign new roles to them until they acquire command over the previous role (Collins III & O'Brien, 2011).Subject matter competency is one of the vital competency in this model. Subject matter content knowledge is very necessary for every level of teachers.

Subject Matter Content Knowledge

Teachers' appointment is related to specific term and conditions. Teacher teaches the students in some recommended subjects at every level. So the fundamental rule for the teacher recruitment is sound foundation in the subject matter. Teacher shows subject matter knowledge before the students. Teacher must have the information of essential standards, ideas, beliefs and guidelines about his subject. He/she can execute this obtained information in reality circumstance. The teacher competency in the subject matter is to teach the students what is meaningful for them. A teacher knows lot of things but his students requires an essential part of the knowledge which having the unique background. Teacher must understand basic concept of the subject matter then uses inquiry, method to teach them. A competent teacher must know the technicality of the subject matter and then create leaning environment and make it meaningful for their students (Gu, 2007).

Teaching is actually importing of knowledge, skill and attitude to an individuals. The subject information of the teacher influences teaching and learning in the schools. It is necessary for a teacher that what he is teaching. The idea of knowing subject matter for teaching does not mean that someone knows how to teach the students, but having command over the subject content material. The comprehension of the topic by an instructor implies that educator can educate the imperative purposes of the topic to the students and clarify the mistaken result of the topic, which put significant effect on students learning. The subject matter knowledge of a teacher improves the lives of the students they actively participate in the teaching learning process and understand the society in better ways (Jadama, 2014). The teacher's education researcher has his own point of view, who ignored studies relating with matter or components of the instructed lesson. Teacher not only have the information of content, but also the information of linking and re-structure of content material and teaching (Shulman, 1986). Pedagogical content knowledge having following fundamental elements:

i. Subject matter demonstration
ii. Students learning of the subject
iii. Teaching methodology and strategies
iv. Knowledge of curriculum
v. Awareness about educational context and
vi. Awareness about the Purpose of education (Shulman, 1987).

Gender Based Subject Matter Knowledge Studies

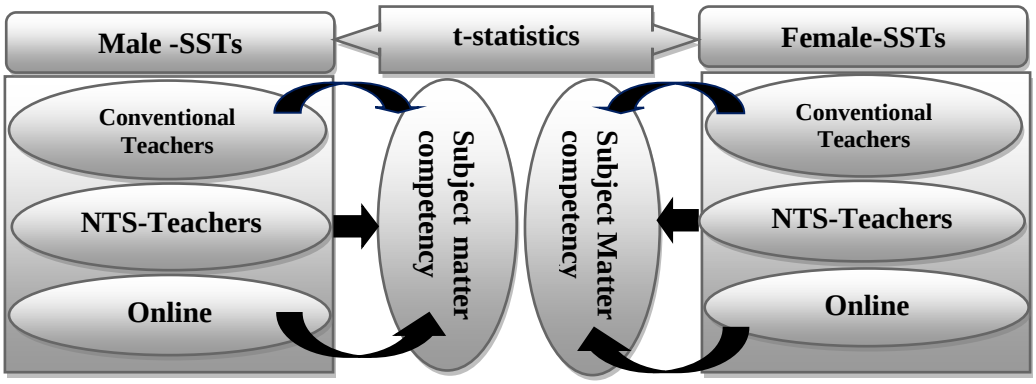
There exist no any sound theory about the nature of fundamental learning mathematics ability of male and female students. It is also difficult to define factors which promote and predictive mathematical ability among the students. General intelligence of a person is an important factors. Past mathematics achievement predicts the future performance. Previous grade in mathematics is the best predictors about the college's mathematics performance. There are strong belief in all over the world that males are more competent than females in the subject of mathematics. But the research records does not support this belief. Majority of studies in the United State does not reveal any sex differences in overall performance in the subject of mathematics prior to the secondary school level. But male and female mathematic test performance shows large difference by the end of secondary school level (Gallagher & Kaufman, 2005).

The study was conducted on the topic to examine the connection of subject matter knowledge in science theme and teacher entering, departure and retaining in the respective career. Biology and science marks are taken as subject matter knowledge of the teachers. Maximum likelihood logistical regression analysis was for data analysis. The connection between job status and knowledge in the subject matter of science, race and sex was determined. The finding of the study showed that thirty one out of eighty three was not fit for teaching and twenty two were fit for teaching as career. The main thing among the non-recruit versus career teachers was subject matter knowledge (Shugart & Hounshell, 2005).

The study was conducted on the theme the influence of gender on the students' choice of language teachers. The one hundred and forty six female students were included in the study among all female college. Five points Likert scale was used for the study. It was indicated that mostly learners favor male teachers as they believe that male teachers having the positive personal characteristics as compare to female teachers. But information displayed both male and female are good language teachers. So gender is not the standard for choosing the decent language teachers. So, this aspect put no any significant effects on any teacher competency in the long run (Taqi, Al-Darwish, Akbar, & Al-Gharabali, 2015).

Research frame Work of the Study

The following were the theoretical frame work of the current research work.



Methodology

Population

The population for the current research work involved all Secondary school teachers (SSTs) working in High and Higher secondary schools of District D.I.Khan. All these SSTs were selected through the different modes of selection on their initial selection like conventional, Online and NTS process. But only those schools were selected, where all these three types of SSTs were working altogether.

Sample

23-Schools on random bases were selected out of 151 secondary and higher Secondary schools situated in rural and urban areas of District D.I.Khan. From these 23-schools, 62-teachers (38-male and 24-Female) were selected as a sample on random bases. Multistage Sampling technique was used. At first Stage, a sample of twenty three schools located in District D.I.Khan was selected randomly out of 151 secondary and higher secondary schools. At second stage, a sample of sixty one teachers selected through stratified random sampling technique.

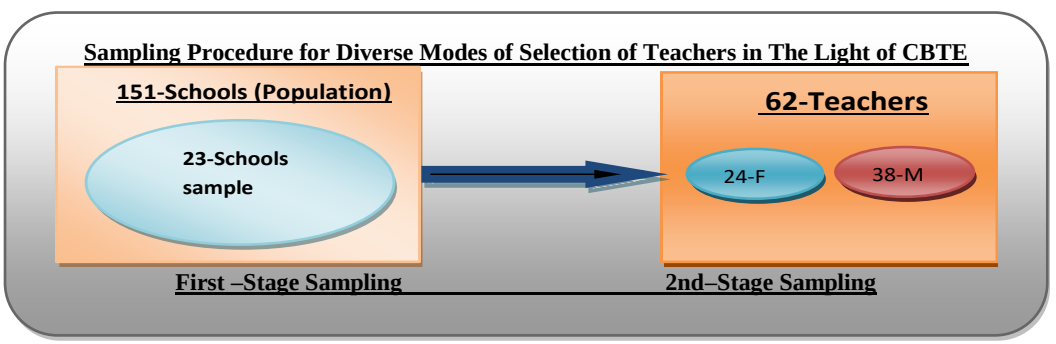


Table 1

Gender wise statistics of high and higher secondary schools in district D.I.K

District D.I.Khan Schools	High Schools	Higher secondary Schools	Total High Higher Secondary schools
Male	71	24	95
Female	45	11	56
Total	116	35	151

Source: District EMIS D.I. Khan 2014-15

Table 2

Gender wise statistics of secondary school teachers (Conventional, online and NTS)

Teacher's Categories	Online	NTS	Conventional
Male-SSTs	101	24	133
Female-SSTs	40	12	111
Total SSTs	141	36	244

Source: District EMIS D.I.Khan 2014-15

Instrument

The data were collected for the current study with the help of scholar self-made Subject matter Competency scale.

Description of the Instrument

Teaching competency scales comprising planning, presentation, closing and managerial used to measure teaching competency of secondary school (Passi & Lalita, 1976). The stuffs were associated to educator, class-room behavior in relation to pupil behavior. This was a five point Likert scale used to measure gender wise subject matter competency of secondary school teachers. The same five point Likert scale ranging from '5' for 'Strongly Agree' to '1' for 'Strongly Disagree' (Y Ganaie & Mudasir, 2014)was used. The researcher self-made questionnaire was used in the present study, items cover the teacher's subject matter knowledge. The questionnaire consisted six items based on 5-points Likert scale to measure the subject matter competency of the respective SSTs. The questionnaire was developed on the bases of State Professional Standards for Educators in Pakistan.

Administration of Subject Matter Competency Scale

The nature and purposes of the tool were openly and sincerely explained before the teachers from whom, the data were collected. This thing was ensure honestly before the respective SSTs that collected information would remain confidential and this would be used only for research purposes. Every effort was made by researcher to

maintain complete understanding among all sampled secondary school teachers selected through different modes. The Subject specialist of different subjects (Physics, Chemistry, Biology, Mathematics, English, Urdu, and Islamiyat) was responsible to judge the subject matter competency of the respective male and female secondary school teachers through self-developed of researcher competency scale. The observation of the respective teacher was taken when the same teacher was teaching to his students. The team of expert was judging him and give rating about the subject matter competency on prescribed scale. This procedure was adopted for each male and female secondary school teachers by three different modes (Y Ganaie & Mudasir, 2014).

Procedure of the Study

The subject matter Competency scale was administered among twenty three secondary and higher secondary school teachers (24-female and 38-male) to find out subject matter competency. The expert team administered the respective tool according to the instructions provided by researcher verbally and manually (Y Ganaie & Mudasir, 2014). The subject experts' team comprising Subject specialist of the respective subjects, was collected data on prescribed subject matter scale, when the respective secondary school teachers were teaching the class on prescribed time and venue.

Statistical Analysis

The data of subject matter competency was collected, ordered and organized of respective male and female secondary school teachers. It was then analyzed to make gender based comparison in the subject matter competency of Conventional, Online and NTS selected secondary school teachers regarding CBTE. The data was analyzed by using SPSS-17 by using mean, standard deviation and t-statistics to find the gender based differences in secondary school teachers(conventional, online and NTS) (Atta, 2013).

Table 3

Showing mean score of gender based comparison of the performance of three categories of SSTs in Subject matter competency regarding CBTE

Group	N	Mean
Male SSTs	38	3.63
Female SSTs	24	3.23

Above table indicates that there were about 38 male SSTs and 24 Female SSTs, which were selected from three different modes of selection (Conventional, National testing Service and Online). The mean scores of the subject matter competency of male and Female SSTs who were selected through different mode of selection were 3.63 and 3.23 respectively.

Table 4

Showing standard deviation of gender based comparison of the performance of three categories of SSTs in Subject matter competency regarding CBTE.

Group	N	S.D
Male SSTs	38	1.05
Female SSTs	24	1.23

Above table indicates that there were about 38 male SSTs and 24 Female SSTs, which were selected from three different modes of selection (Conventional, National testing Service and Online). The standard deviation scores of the subject matter competency of male and Female SSTs who were selected through different mode of selection were 1.05 and 1.23 respectively.

Table 5

Showing coefficient of variation of gender based comparison of the performance of three categories of SSTs in Subject matter competency regarding CBTE

Group	N	C.V
Male SSTs	38	28.92
Female SSTs	24	38.08

Above table indicates that there were about 38 male SSTs and 24 Female SSTs, which were selected from three different modes of selection (Conventional, National testing Service and Online). The standard deviation scores of the subject matter competency of male and Female SSTs who were selected through different mode of selection were 28.92 and 38.08 respectively.

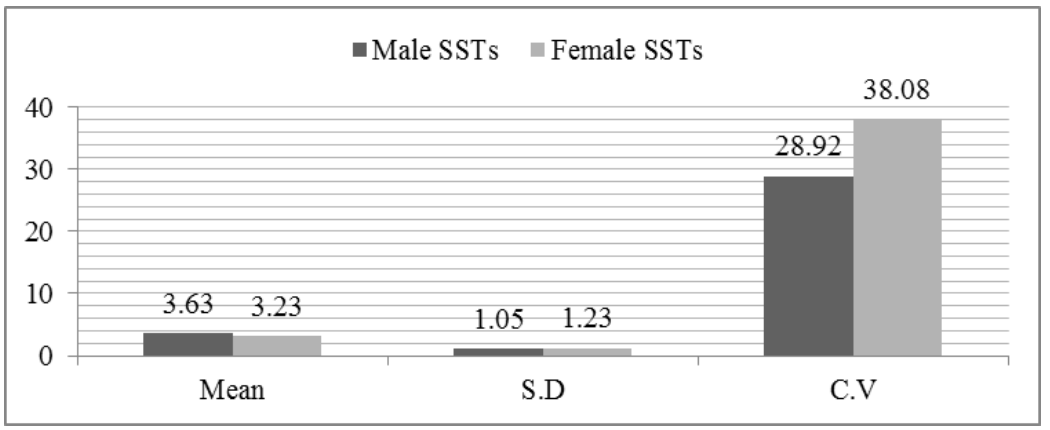
Table 6

Showing gender based difference between male and female SSTs in subject matter competency regarding CBTE

Group	N	d.f	α	t- tabulated	t-calculated	P-Value
Male SSTs	38	60	0.05	2.00	1.361	0.179
Female SSTs	24					

Above table indicates that there were about 38 male SSTs and 24 Female SSTs, which were selected from three different modes of selection (Conventional, National testing Service and Online). The t-Calculated value 1.361 was less than the t- tabulated 2.00, and also p-value is greater than α-value as 0.179 > 0. 05. So we accept H_0 and conclude that there was no significant difference between the Subject matter competency of male SSTs and Female SSTs.

Figure



Finding

Following findings were calculated

1. A comparison of mean scores of male and female secondary school teachers selected through different modes as perceived by different subject specialist through subject matter competency scale was ($M_{(male)}$= 3.63 and $M_{(Female)}$ =3.23)(Table-3).
2. A comparison of standard deviation of male and female secondary school teachers selected through different modes as perceived by different subject specialist through subject matter competency scale was ($S.D_{(male)}$= 1.05 and $S.D_{(Female)}$ =1.23)(Table-4).
3. A comparison of coefficient of variation of male and female secondary school teachers selected through different modes as perceived by different subject specialist through subject matter competency scale was ($C.V_{(male)}$= 28.92 and $C.V_{(Female)}$ =38.08)(Table-5).
4. A comparison of calculated t-values of male and female secondary school teachers selected through different modes as perceived by different subject specialist through subject matter competency scale was (t-calculated value =1.361 and t- tabulated 2.00, and also p-value = 0.179 and α-value = 0. 05)(Table-6).

Discussion

The mean scores through competency scale of the male secondary school teachers selected through different modes were better than female secondary school teachers. In the past studies the difference at secondary level between the male and female teachers was insignificant, but at the end of the higher secondary level there was unavoidable difference between the male and female teachers (Gallagher & Kaufman, 2005).

The value of standard deviation of male secondary school teachers was less than female, similarly the coefficient of variation (C.V) of Male SSTs was also less than Female SSTs. This indicates that there exist consistency in the performance of Male Secondary School Teachers (SSTs) than Female Secondary School teachers (SSTs) in Subject matter regarding CBTE. The past study on topic "Equal Mathematics Education for Female Students" showed that males and female teachers having different classroom experiences, their approaches for learning different and treatment towards the students differently. The females' achievement in the subject of mathematics is same to the males at elementary school level, but decreases at middle and secondary level. The literature review on teaching practice and communication in the classroom indicates that treatment of teachers towards female students discourage them to learn mathematics. This also shows that some negative attitudes towards female students by teachers and parents is responsible for the low competency in the subject of mathematics and other disciplines too (Wendy & Katherine, 1992). The past studies results match with current research work.

Conclusion of the Study

The finding showed that there is no significant difference among the gender based Subject matter Competency of all three groups of teachers, while they were teaching to their students. Besides this result, graphical representation and values of standard deviation and coefficient of variation (CV) of Male SSTs was less than female SSTs, which were selected through Conventional, NTS and online regarding CBTE, shows that subject matter competency of male SSTs was consistent and reliable than Female SSTs.

Recommendation

The findings of the study exhibit there is no significant difference between male and female subject matter competency, and coefficient of variation (C.V) demonstrated that male SSTs competency was consistent in the subject matter than female SSTs. Courses change with the passage of time at different school's levels. Therefore, it is recommended that in-service training may be arranged by the government to enhance subject matter competency of respective teachers.

Implication of the Study

The study has tremendous implication in teacher training institutions (TTIs). The Government of Pakistan started Associate Degree in Education and B.Ed (Hons) program in different TTIs across the country. The curriculum of these programs divided into three categories including content courses, foundation courses and professional courses. The main focus of the TTIs were on methods rather subject matter competency of trainees, which resulted poor grip over subject matter. Therefore, equal weightage to all categories of subject may be considered.

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Leadership as Distinguish Operative Total Quality Management Factor in the Public-Sector Universities of Pakistan

Tanzeela Arooj*

Abstract

This research study explores leadership and examines leadership as one of the distinguishing operative factor of total quality management in public-sector universities of Pakistan. Population of the research study comprised of all the Public universities located in the Pakistan. Total 245 respondents as described in self-developed questionnaire (Vice Chancellor, Deans, Registrars, Teachers and the students) provided abundant responses about the distinguishing operative factor leadership. By investigating leadership as distinguishing operative total quality management factor in public sector universities of Pakistan. This research shed lights on total quality management and exposed that without effective leadership quality culture cannot be flourished in the universities. Findings revealed that the effect of universities on total quality management operative factor leadership score is significant. Most of the respondents perceived that innovative, effective and bold leadership qualities needed for appropriate application of total quality management theories in universities.

Keywords: Total quality management, continuous quality improvement, quality assurance, leadership, customers.

Introduction

By seeing trends of 21st century higher education institutions (HEI's) are now focusing on quality of education and quality management of HEI's to reach quality benchmarks and to endure greatest advancements of highly competitive world (Zhang, et al., 2000; Khan, 2012). As changes are swiftly happened in the field of social, applied and natural sciences and these speedy growth and transformations stimulate HEI's to meet emergent requirements of the present times (Sorenson, 2002). These increasing demands also effects HEI's to implement philosophy of Total Quality Management (TQM) to improve their quality of education and management of an institution (Owlia et al., 1996, 1997). All the prominent universities of the world set great examples of application of philosophy of total quality as these universities always focused on their strategic plans, administrative and academic staff and learning processes for the socio-economic developments of their respective societies (Geddes, 1993; Vroeijenstijn, 1995; Sallis, 2014). Hence, TQM becomes necessity of the present times for the

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formation of zero-defect system and attainment of first-class outcomes (Anderson et al., 1999). TQM is scientific mechanism that uses strategies and effective communication to flourish the quality discipline into the culture and activities of an institution (Raouf et al., 2008; Tatoglu et al., 2008; Zubair, 2013). TQM is a holistic approach that can be summarized as a management system that involves total employees for the provision of quality services and quality improvement (Crawford et al., 1999; Zhang, 2000, Malek et al., 2000; Kefalas et al., 2003; Yasin, 2004, Ali et al., 2005; Jusoh et al., 2008). There are primary aspects of TQM required for its successful implementation in an institution like integrity, Trust, training, teamwork, leadership and communication. However, among them leadership known as one of the major element that elevate quality by using key measures and quality indicators (Feigenbaum, 2002; Foster, 2002; Feras et al., 2010). Leadership is fundamental part of TQM that take steps required to carry out the processes transforms them into outputs that are served to all stakeholders (internal or external), (Zhang, 2000; Malek et al., 2005; Jusoh et al., 2008). Leadership plays vital role in the ultimate achievements and failures of an organization. Leadership develops pragmatic vision and mission statements; detect unexpected variations, understand his roles and responsibilities to accomplish institutional vision and mission (Harvey et al., 1999; Goleman, 2000; Raouf et al., 2008; Ali et al., 2010). Although the role of leaders varies from institution to institution in corporate institutions they maintain autonomy, collegial atmosphere, quality of products and focus on what institution expected to be in coming times. On the other hand, in educational institutions both administrative and academic leadership put their maximum efforts to upgrade and nourish young individuals, integrates quality as a core component, foster collaborative environment, protect team autonomy and provide research and training opportunities. In higher education institutions leadership or top management consisted of vice chancellors (VC's), Registrars, Deans and Head of departments (Feras et al., 2010; Salaheldin, 2008; Alharbi et al., 2012; Khan, 2012). They all are key ingredients that implement TQM philosophy and its principles in the educational settings (Bayraktar et al., 2008; Asif et al., 2013). Although all employees work for the maintenance of the quality but leadership put continuous improvement efforts to integrate quality of education and an institution alike to reach educational and institutional objectives both (Creech, 1994, Burgoyne et al., 2000; Buch et al., 2002; Cortese, 2003; Bolden, 2004; Cartwright, 2007; Venkatraman, 2007).

Objectives of the Study

1. To explore leadership as distinguish operative total quality management factor in the public-sector universities of Pakistan
2. To examine gender differences in opinions about distinguish operative total quality management factor leadership in the public-sector universities of Pakistan.

3. To identify differences among universities about total quality management distinguish operative factor leadership

Hypotheses of the Study

1. There is no significant difference in the opinions of respondents about factor leadership as distinguish operative factor leadership in public sector universities of Pakistan.
2. There is no significance difference in the opinion of male and female about distinguish total quality management operative factor Leadership.
3. There is no significant difference among universities on total quality management operative factor Leadership.

Literature Review

History of Total Quality Management

The history of TQM began initially with the word inspection in the naval air academy of America command to designate its Japanese based management approach as the time is extended it filters its topographies and recognized as Total Quality Control (TQC) to Quality Assurance and finally turns into Total Quality Management approach. It's origin traces from 13th century when quality was typically controlled by the artisans and merchants in the form of craftsmanship model. By the 19th century the concept of TQM widens its annexes especially in the regions of Japan by the Shewhart who developed statistical quality control (SQC) methods for control of quality. At that time, SQC charts were used for inspection of manufacturing processes and products to satisfy the needs and expectations of the customers (Internal & external). Japanese named their total quality approach to total quality control approach around times of quality management approach arises. Moreover, many other quality gurus contributed to corporate world like Ishikawa's who is considered chief exponent in the development of quality initiatives and cause and effect diagram in quality circles of Japan. Similarly, Deming known for his system of profound knowledge used for transformation of business effectiveness. Likewise, Juran taught managerial breakthrough and concepts of quality control, equally, Feigenbaum's present's book Total Quality Control which initiated understanding of total quality management in the same way Crosby's introduces concept of zero defects that paved the way for quality improvement in various institutions (Owlia et al., 1997; Levinson et al., 2002; Zavacki, 2003).

Leadership and TQM

Often, the word leadership used for administrator or manager frequently however there are key differences in these lexes used for leadership in the literature as every word pose individual propensities according to the situations. According to (Boomer, 2014) leadership establish learning organizations by ascertaining vision and

planning while management create value and utilize their abilities to attain institutional goals although this requires time and a program if institutions aspires to improve upon their success fraction. While administrative personnel are expected to have all the capabilities especially in the small institutions to succeed. Leadership plays a significant role in the sponsorship of total quality culture necessary for institutions to flourish. Leadership is an ability and a practical skill of a person who stimuli behaviors and thoughts of the individuals, envisages future demands and set directions for the accomplishment of set goals and strategic plans (Collins et al., 2006; Suganthi, 2006, Montana et al., 2008*;* Al-Khatib, 2011; Nitin et al., 2011; World Bank, 2012). Leadership is a dynamic process in which leader effect employees and an institution coherently and successfully. To achieve quality into all activities of an institution leader ensures that institutional processes are efficaciously carried out on daily basis. Leader is a strong provocateur, investigator and a trainer to prepare employees to create quality institutional culture and promotional plans for proper application of TQM in an organization. Leader promotes quality culture, understand situations, liaison with all the stakeholders, provide guidelines about the TQM, determine policies and plans to take preventive measures for the protection of quality at all levels of an institution. Leadership make ethical discussions, anticipate future challenges, recognize individual differences, support and encourage employees to work as a team for continuous quality improvement (CQI) of an institution. Leadership aim at sustaining success through CQI because stakeholders always expect better services than earlier they received. Leadership ensures publication of improvement reports to all internal/external stakeholders through various periodicals to appraise institutional progress yearly (Collins, 2001; Aly et al., 2001; Feigenbaum, 2002; Everett, 2002; Ahmed, 2008; UNESCO, 2009; Arya, 2012)

Styles of Leadership

There are various types and styles of leadership described in the literature. However, from them six styles consider most vicarious known as authoritative, paternalistic, laisses-faire, transformational and transactional types of leadership (Bonstingl, 1992; Kotter, 2001; Foster, 2002; Goleman, 2000; Buch et al., 2002; Kumar, 2006; Martindale, 2011). Brief description of each style is as follows:

Authoritative leadership: This is autocratic leadership. In this style of leadership; leader decides everything by himself alone as this style is totalitarian. That's why leader do not own other's opinions, he himself dictate policies and institutional procedure's and directs and controls all institutional activities without involving employees. Such type of leadership has full control of the employees.

Paternalistic leadership: This is fatherly managerial type of leadership. In this style of leadership, leader act as patriarch or matriarch that treat employees as members of large family and demands loyalty, trust and obedience from them. This leadership

style might be suitable for corporate institutions with a hierarchical structure where creative thinking is not required from the employees.

Laisses-Faire leadership: This is derogative style of leadership. In this style of leadership, employees of an institution get very little guidance from leaders, they have full freedom to make decisions. Employees require provision of tools and resources only from the leaders as power is handed over to them yet leaders take responsibility for the decisions and activities of an institution. However, this style of leadership has both benefits and possible pitfalls.

Transformational leadership: This is charismatic leadership. This style of leadership brings change in people and social system. In this style of leadership leader works with employees to create vision, to identify the change and provide guidance to instigate change in tandem with full devotion and commitment. Leader serves to increase morale and job performances by using various techniques and strategies and by understanding the strengths and weaknesses of employees.

Transactional leadership: This style of leadership promotes compliance by employees through both reward and punishment motivational practices. Leader focuses on supervision and standardizes practices that support their institutions to reach maturity, increase efficiency of operations and productivity.

Theories of Leadership

Many authors and researchers defined various leadership theories, brief description of each theory is described below (Rahman et al., 2006; Montana et al., 2008; Wagner, 2008; Salahuddin, 2009; MacArthur, 2011; Alharbi, et al., 2012).

Great man theory: This theory was initiated by Carlyle in 19th century. He deliberated that history can be largely explained by the decisive historical impact of highly influential or great men who influenced people due to either their wisdom, political skills, intelligence or personal charisma. To him leadership is inherited as leaders are by birth leaders. They cannot be formed. This theory considers leaders to be epic, destined and heroic. They rise whenever and wherever leadership required (MacArthur, 2011).

Trait Theory: History is always designed by exceptional leaders. Thomas Carlyle explained that every leader has certain traits and behaviors (which are consistent across various situations. Different researches viewed effective leadership traits differently for example it includes, intelligence, knowledge, integrity, responsibility social skills, emotional control and self-confidence.

Contingency Theory: According to this theory certain variables that are associated with the environment determine the most suitable type of leadership good at the time of need to handle the situation. This theory assumes that no leadership style is

best in all circumstances internal and external factors like leader's personality, employees, specific situations, institution and its environment along with the qualities of the workforces do matter. All these factors induce leaders to choose the style, suitable in the prevailing situation to lead an institution effectively.

Situational Theories: The subject of this theory is same as contingency theory. According to this theory leader not only select the best strategy to handle the prevailing situation but also leads the employees effectively for accomplishment of the task within time frame. In this theory leadership has four aspects as telling, (direct approach that leads the people to accomplish the task), selling (making the people to understand the idea while giving them free hand to complete the given task), participating (leader himself discuss problems with the employees to get their views) and delegating (leader assign mission to his employees and permits them to work autonomously).

Behavioral Theories: B.F. Skinner, Kurt Lewin and Watson presented this theory in the earliest years of 19th century. It focuses on specific behaviors of an effective leaders as behavior of a leader is the best predictor of leadership effects and his success. Contrary to Great-man theory it believes that great leaders are born through continuous experiences and observations rather than being innate. The leaders when confronted with any situation are conditioned to behave suitably in any circumstances make them highly influential leaders.

Participative Theories: It is democratic style of leadership. In this theory leadership share knowledge with institutional employees necessary for decision making, encourage employees to communicate their thoughts, synthesizes all the views proposed by the employees for best solution of the pitfalls.

Relationship Theories: It is transformational style of leadership. It was originated by the James Mac-Grogor in 1978. This theory focuses on connections yielded between leaders and their employees. Leaders inspires their employees by their highly effective performances and ethical standards. Leader creates positive change and tries hard to achieve organizational goals for the success of an institution.

Leadership in Higher Education

At present, higher education becomes human capital industry as now higher education expects to play role in the socio-economic development of people. Universities become drivers of socio-economic development, center of learning, personal and social development of their people, especially "students" and provide benefits for society's financial opulence. This changing landscape of universities demands more responsible leaders for addressing real time issues related to quality of education and management of an institution from macro and micro perspective. The key emphasis is on the university leaders (Vice-chancellors, registrars, deans and academic leaders) in the changing era demands highly effective leadership traits to change

paradigms and to help an institution in its development by implementing philosophy of TQM in higher education institution to achieve competitiveness and growth of sound human capital (Imran *et al.*, 2008). Skilled and bold leadership is thought to be the real component whose real efforts can aid to implement TQM successfully to sustain total quality improvement in higher education (Campbell et al., 2002).

Leadership Roles and Responsibilities

In higher education institutions leaders play many roles and responsibilities. They accomplish various duties for the betterment of their institutions (Malek, et al., 2000). They remove barriers for the achievement of national and institutional goals to uplift quality of education and an institution (Burgoyne et al., 2001).

Vision & Mission: Vision and mission are strategic goals and performance objectives design to reflect institutions. Both are essence of leadership and every leader articulates them clearly, own them passionately and put their maximum efforts to achieve them. They determine how much time and efforts are required to achieve them. They regulate manpower to fulfill the tasks accordingly. They give directions to their employees to accomplish them (Bolden, 2004; Ali et al., 2010; Akhtar et al., 2012; Zubair, 2013).

Organizational Culture: It consist of behaviors, beliefs, values and working conditions a leader formed for the institution. Leader promote teamwork, create culture of trust and respect, interact and socialize among workforces (Bonstingl, 1992; Carnoy, 2006).

Team Work: It is an important ingredient of total quality management and one of the essential facilitating component. Teamwork basically refers to the strategies used by the team to their institutional strategic goals. However, leader influence them to be together enthusiastically and work collaboratively. Leader promote teamwork and enables them to accomplish mission and targets in time.

Physical and Financial Resources: Every organization needs physical and financial resources to run the system of an institution. For this reason, leadership should provide ample funding and resources e.g. fully furnished classrooms, modern instructional technology, quality learning material in the libraries and various other necessary material to bring quality in education and an institution (Feras, et al., 2010).

Devoted to improving teaching and learning process: For the improvement of teaching and learning process leader develops harmonious relationships and foster ideal situations (Kanji et al., 1999). Leadership raise organizational renewal by facilitating teacher's development and professional learning that improve student scholastic and non-scholastic outcomes.

Training and Education: Training and education is crucial for everyone in an institution hence leadership work efficiently for the provision of educational and managerial skills. As visionary leadership understands that lack of education and training may cause ineffective planning, overload and complexities in work execution as well as employee performance (Harvey et al., 2010). However, interactive and timely education and training help employees to improve their planning skills, decision making skills, performance management, work effectiveness and problem-solving skills (Asiyai, 2015).

Focus on Customers: There are two types of customers internal and external. Internal customers are those customers that are working within in an institution for delivery of best services and products for the external ones. Leadership play central role in the assurance of quality products and services to the customers for fulfillment of their needs and demands (Zhang, 2000; Barnett et al., 2005; Bayraktar et al., 2008; Asif et al., 2013; Kaur, 2014).

Dedication towards TQM and CQI: Total quality management and continuous quality improvement are quality management tactics required to improve policies and procedures. For modification of all angles of an institution these requires consistent struggle of leadership for steady extent of improvement in all associated processes. These improvement processes also compel leadership to focus on certain questions, like what an institution is doing for the promotion of quality culture and what an institution can do to make a process better. To answer all these questions leadership design and implement plans efficiently thereby transforming institutional processes in a way that effect exceptionally (Yasin, 2004; Bayraktar, et al., 2008; Zabadi, 2013).

Methodology

Research instrument was piloted before dissemination of the final questionnaire. Reliability and validity of the instrument was also examined through many techniques and appraised by the panel of experts. For further confirmation, questionnaire was also examined through pilot study and items were removed having low level of correlation. Subsequent methods were used to examine research instrument. To check reliability of the research questionnaire Cronbach's alpha coefficient was used to measure internal consistency and scale reliability. Total 14 items were included in the research questionnaire. It was found .644 score of reliability.

Population

All the public-sector universities, all the faculty members and all the students were treated as the population of the research study. List of all public-sector universities of the Pakistan was obtained from the website of Higher Education Commission of the Pakistan.

Sample

There are 74 public-sector universities located in the Pakistan; from them ten universities, ten vice chancellors (VC's), ten registrars and ten deans, fifty teachers and two hundred students were selected for the research study through convenient sampling technique.

Research Instrument

Research questionnaire was developed for collection of the data from the selected public-sector universities of the Pakistan as questionnaire is economical tool to obtain relevant information from respondents. Questionnaire was distributed to vice-chancellors, registrars, deans, teachers and students at ten public-sector Pakistani universities. Most of the data was collected through personal visits from sample universities of the Pakistan.

Results

Descriptive statistics of distinguishing TQM operative factor leadership:

Table 1

Comparison of Mean

S. No	Sample group	N	Mean
1	Vice chancellor (VC's)	10	7.9
2	Dean	10	15.8
2	Registrar	10	31.6
4	Teaching faculty	50	58.9
5	Students	200	72.7

Table 1 is descriptive statistics of distinguishing TQM operative factor leadership being operated in the public-sector universities of Pakistan. Analysis reveals mean values of distinguishing TQM factors leadership revealed by the VC's (Mean =7.9), Dean (Mean =15.8), registrar (Mean =31.6), teaching faculty (Mean = 58.9) and students (Mean =72.7) respectively. There was high mean score of VC's and lower mean of students. Vice chancellor (VC's) observes and perceives that distinguishing TQM operative factor Leadership was being more efficiently and resourcefully functioning in their universities**.**

Table 2

Comparison of Sample group about distinguishing TQM operative factor Leadership at university level

Sample Group	Mean	S.D
Vice chancellor (VC's)	2.16	1.251
Dean	2.57	1.269
Registrar	2.79	1.218
Teaching faculty	3.00	1.161
Students	3.17	1.353

Table 2 summarizes the mean opinion score of sample group ranging from the mean score of 2.16 to 3.17 out of the total score of 5. The individual opinions of each sample as reflected in SD scores are minor ranging from 1.251 to 1.35. All the sample group agreed with some dispersion in their distinct scores as entries indicate that the leadership is functioning appropriately to achieve institutional objectives and working properly to meet futuristic desires of the university.

Hypotheses of the Study

H01: There is no significant difference in the opinions of respondents about leadership as distinguish operative factor in public sector universities of Pakistan

Table 3

Mean score and t value on score of Leadership in the opinions of respondents

Sources of variation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1044.521	9	115.104	2.275	.007*
Within Groups	13220.723	270	43.056		
Total	14350.430	279			

Significant level $p \leq 0.05$

Table 3 shows mean difference on the scores of total quality management operative factor Leadership in the opinions of respondents. Table 2 shows that F-Value (2.275) regarding the effect of total quality management on universities operative factor Leadership scores is significant at $p \leq 0.05$ level of significance, so our null hypothesis that There is no significant difference in the opinions of respondents about factor leadership as distinguish operative factor leadership in public sector universities of Pakistan rejected.

H02: There is no significance difference in the opinion of male and female about Leadership as distinctive TQM operative factor in public sector universities of Pakistan

Table 4

Mean score and t value on score of Leadership of male and female

Respondents	N	Mean	S.D	t-value	Df	p-value
Male	147	79.58	7.085	1.541	278	0.003
Female	133	77.97	6.740			

Significant level p≤0.05

Table 4 shows mean difference on the scores of TQM operative factor Leadership of male and female. The mean of male was 79.58 and female was 77.97. The mean difference is 1.61. The mean score of male is greater than female. The value of ***t*** (1.541) is significant at p≤ 0.05 level of significance. Therefore, our null hypothesis that there is no significance difference in the opinion of male and female about distinctive TQM operative factor Leadership at University level is rejected.

H03: There is no significant difference among universities on TQM operative factor Leadership in public sector universities of Pakistan

Table 4

Analysis of variance on Leadership among universities

Sources of variation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1063.510	9	118.168	2.565	.008*
Within Groups	12440.832	270	46.077		
Total	13504.343	279			

*Significant level p ≤ 0.05

Table 4 shows that f-value (2.565) regarding the effect of total quality management on universities operative factor Leadership scores is significant at p ≤ 0.05 level of significance, so our null hypothesis that there is no significant difference among universities on TQM operative factor Leaderships is rejected.

Discussion and Conclusion

Total quality management seeks to amalgamate all institutional activities and focus on meeting customers (internal and external) needs and expectations along with institutional strategic objectives (Zhang et al., 2000; Zabadi, 2013). Total quality management improves processes continuously by incorporating experiences of internal customers to do the things right in time. Total quality management is a generic term that is variable and flexible, formerly it was applied in corporate sector for various years but now it is recognized as an essential entity of services institutions (Owlia et al., 1996;

Malek et al., 2000). There are various key components of total quality management required for application of TQM philosophy into institutions like strategic and systematic approaches, integrated system, education and training, total employee involvement, leadership, continuous improvement and fact-based decision making. But leadership is one the basic ingredient and critical success factor who assures right implementation of total quality management in all institutional processes and procedures (Campbel et al., 2002; Asif et al., 2013; Asiyai, 2015).

Hence, this research study was conducted to explore leadership as distinguishing operative factor of total quality management in public sector universities of Pakistan. From the analysis the findings revealed that the effect of total quality management operative factor leadership score on universities is significant. The result supports that quality culture starts with leadership as leader is one who understands an institution. To develop quality culture among an institution leader focused on processes and performances, monitored them on continuously to detect pitfalls for elimination. Leader deploys strategic plans, ensures employee involvement, maintains their morale, provide healthy and innovating environment, focus on customers and effective communication process, offers research and development opportunities, takes fact-based decisions, maintain transparency and adopts standardized parameters for the maintenance of total quality culture in the higher education institutions (Venkatraman, 2007; UNESCO, 2009; Sayeda et al., 2010; World Bank, 2012). Findings of the study also revealed that there was significant difference among opinions of male and female about distinctive TQM operative factor leadership in public sector institutions hence hypothesis was rejected because of statistical significance. So, it is concluded that both have unique differences among their opinions about the parameters of TQM (Eagly & Linda, 2007) Findings of this research study also revealed effect of leadership on universities is significant. More focus was noted that leadership has significant effect on successful implementation of total quality management in universities as leader is a key figure who controls quality by assuring quality of infrastructure, effectiveness of employees, education and training opportunities and customers' satisfaction (Ahmed, 2008; Sayeda et al., 2010; Akhtar et al., 2012; Alharbi et al., 2012). It becomes necessity of the present times to broad and modernize higher education sector accordingly there is acute need of improvement of managerial and analytical capacities of the academic and administrative leadership. Therefore, it is suggested that quality assurance agencies should provide international exposure for leader's chief capacity building training to sustain quality in the universities. Further, on implementation academic and the administrative leaders can also focus on various ways of successful implementation of total quality management persuasively so that the elements of total quality management may be prosper into the culture and activities of the universities.

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Role of Social Media for Promotion of Education in Southern Punjab

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Abstract

The researchers have explored the role of Social Media in promoting Education, the academic performance of students and their attitudes towards Social Media. The study conducted under the light of Social Presence Theory, Social Learning Theory and Social Cognitive Theory. For the data collection, survey method was used. Data were collected on this basis of the random sampling technique. In this way, a comprehensive questionnaire was prepared. The study concluded that Social media has strong relationships with the students and have an important tool for the students for getting knowledge about their study, social awareness and making a relationship with peer friends, family members and others. Furthermore, it is also concluded that there is some need for measures for the positive use of social media and check and balance is necessary for the parents, teachers and institutions.

Keywords: Social Media, Students, Learning Process, Effects.

Introduction

Social media is new form of media that have lot of features and characteristics. It offers various features like, texting, communicating, photo and audio video sharing, publishing and web link sharing with peer and friends. It is beneficial tool that can be used through desktop computer and cell phone. It keeps in touch people near or far from each other. It is most popular tool among all age of people especially among young people. The statistics of social media users are increasing rapidly round the globe. People are shifting from television viewing and radio listening to social media as social media is hub that facilitates users and provides variety of content at one platform. The rate of accepting social is high in young age people as it influence is higher on youth. Hence this trend of social media has led to various questions in the mind of people regarding its impact on society. Youth is identical symbol of society. Educated youth and is essential for progressed in any society. So, suitable educational environment and proper guidance is necessary for students to get better education. Technological tools especially social media can play significant role in promotion of education. Current

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research study hence, deals with role of social media in promotion of education as social media is in access of students round the clock (Shabir et al., 2014).

Social media has become an inevitable reality with many dimensions of usage in public and academic needs. Social media usually point out to the media that is often practiced to support to make social contacts. To understand more clearly, the phrase "Social Media Technology" (SMT) mentions about web-based and mobiles of programs that enable a single person and institutes as well to construct, to participate, and spread innovative user-generated or prevailing subject matter, in digital milieus throughout multiple-way of transmitting ideas and perceptions (Shabir et al., 2014a). It is of quite significant to examine the variation between user-generated subject matter i.e. Social media, which is technically superior as compared to traditional media like Television, radio and newspapers produced by individual users, and prevailing ideas Apart from these attributes, SMT also comprises project components that produce computer-generated social openings inspiring correspondence, there by extending the application of the machinery and sponsoring evolutions regarding the program rather than having a cross from each other communication (Neff, 2005).

The complete array of social media utilizations mentioned a fore allocate the inherent talent to empower social activities through the exchange of ideas multi direction always of negotiations furnishing the prospect to ascertain and impart novel particular sand facts (Shabir et al., 2014b). Consequently, we can deduce that SMT is a gigantic panorama of the program with many divergent advantages by implementation such advantages that are not merely narrowed to social networking, video sharing, or blogging. Relatively, the comprehensive explanation of SMT comprises the entirety of electronically displayed merchandise and facilities supporting online, user created societal conduct and exchange of ideas everywhere, mainly user generated content (Junco & Cole-Avent, 2008).

Over the past ten years, social media technology has changed people's philosophy about their affiliations, their acquaintances with those cross cultures, but people who have like mindedness, and the impact and influence power of online groups on how they meditate, consolidate, and perform in political subject matter. From the time when there is a commencement of internet along within corporation of email technology in to the individual and professional lives of people, their ways of connecting started to transform. Nonetheless, such advanced ways of communication are an inevitable part of people's daily routine (Smith, 2011).

Social media plays important role in higher education aggravating in to the activities of human beings of different societies, indigenous, racial and ethnic, trans-border, and socio economic surroundings. Regular and matured college students have welcomed social media technology with open arms; as it has developed in to the main part of their day to day activities. For the most part, as we think through the age groups

who are born in this leading era of high tech, there is a free flowing tradeoff between artificial intelligence and substantial participation. For these age groups, Social Media Technology (SMT) is a principal resource of correspondence and knowledge, pursuing, and probably, a fundamental aspect of their character and society building (Lin, 2008).

Objectives of the Study

- To analyze the role of Social media in promoting Education in Southern Punjab.
- To assess the impact of the social media on students in Southern Punjab.
- To explore the use of social media for promoting the awareness of education.
- To analyze the strength of social media in teachers and Student interaction.
- To access the potency of Social media in the learning process.
- To investigate the value of social media network in educational institutions.
- To discover the potential of social media network to affect learning and academic outcomes.

Research Questions

- To what extent social media are creating educational awareness among students?
- Do social media play any role motivating the students to participate in the learning process?
- Do social media motivate the students to achieve higher goals in education?
- Do Social media have the power to enhance the academic performance of students in Southern Punjab?
- Do students of Southern Punjab prefer social media for their academic tasks?

Hypotheses

- H_1: It is more likely that students of Southern Punjab rely on social media related to education.
- H_2: It is more likely that learning through social media is same as in the classroom.

Significance of the Study

The use of social media by the students in their class rooms has been an under discussion subject matter for many years. Many parents and educationalists have been apprehensive of the outcomes of usage of social media in the classroom. Consequently, the use of cell phone has been prohibited in the classrooms and many educational institutions have obstructed scores of well-liked social media websites. Nonetheless, regardless of grown-up's fears, students are (or will be) using social media. Therefore, several academic institutions have become conscious that it is inevitable to have as a feature these tools in to the classroom for there a son that the system of learning is

changing rapidly. Thus keeping in mind the above mentioned importance of social media the researchers therefore, intends to conduct research study regarding the growing role of social media in promotion of education.

Literature Review

Al-Rahmi, Othman, and Yusuf (2015) conducted research study entitled "The Role of Social Media for Collaborative Learning to Improve Academic Performance of Students and Researchers in Malaysian Higher Education" they stated that social media is being used among students to improve their educational learning at wide range. The aim of their study was to spotlight on mutual learning and to recognize interactive factors that affect educational performance. Study also explored factors that contribute to enhance academic performance. Results of the study showed that social media playing significant and positive role in collaborative learning among students to cooperate with their peers, teachers and supervisors to improve their academic performance.

Al-Mukhaini et al. (2014) conducted study entitled "Adoption of Social Networking in Education: A Study of the use of Social Networks by Higher Education Students in Oman." They argued that in current age, social networking sites are being significant in both personal and educational life. Social sites are tools of social interaction. Using of social sites has enhanced the teaching method in the classrooms. The aim of study was to investigate changes in traditional teaching and learning after innovation of web. Social networking sites usage and their impacts on students were also the motive of the study. Study was survey based and data was collected from various university students of Oman. The type of data collection was both qualitative and quantitative. The results showed mixed results that at one place social networking sites are proving themselves as beneficial for students and providing new ways of learning whereas on the other hand, social media has negative impacts that may affect negatively on students in learning process.

Chandra and Watters (2012) conducted research study entitled "Re-thinking physics teaching with web-based learning". The desire of study was to know about effects of web based learning among students. They noticed that text communication using internet provide facility to teachers and students to contribute in learning and can discuss study topic sitting in their homes who might not usually do so in the classroom, even though alliance among students were limited.

Shirky (2010) illustrates that the social media network has provided fundamental picture which has common elements of the community that is the basic reason for the survival of such technologies. Social media technology connects individuals together in a way that is a rare semblance to traditional feelings of relation and freely defined memberships, sharing of feelings and thoughts and describing the

experiences and events by providing innovative forms of communication and problem solving techniques.

Bennett and Maton (2010) stated in their study entitled "Beyond the 'digital natives' debate: towards a more nuanced understanding of students' technology experiences" that how can students understand internet technologies to get benefits in their study, especially social media can be more beneficial to support students learning. Now, students usually use new ways of learning and in this way social media can be more fruitful for students in educational settings.

Caraher and Braselman (2010) stated in their report that now mostly students preferred to use social media to work on their assignments, to connect with classmates, and to some extent to keep in touch with their teachers. Social media has provide the way to share material with friends, making groups of similar interests and to make pages where educational material could be easily shared with others. By giving more detailed understanding, their quantitative result could however be extended that how social media could support them in connecting them with fellows and teachers and working on assignments.

Haase and Young (2010) conducted research study entitled "Uses and Gratifications of Social media: A Comparison of Facebook and Instant Messaging." The basic aim of the study was to analyze the difference between Facebook and instant messaging using cell phones. Study was survey based that findings showed that Facebook is more popular and primarily tool for students to maintain their relationship with others they are familiar with who live near or far from them. Facebook make it easier to communicate with multiple people simultaneously. By using social media anyone can monitor the activities of other people to whom they cannot see in a while as well as reconnecting with old and new friends.

Wishart and Triggs (2010) conducted study entitled "Museum Scouts: Exploring how schools, museums and interactive technologies can work together to support learning." They argued that for any activity time is most important as learning process may take longer time and to understand the new technologies is also important. Social media enable students in successful learning. For more learning, extensive experience of social media usage is necessary and chatting is basic mean of communication in developing relationships.

Austin et al. (2010) stated in their research study entitled "Collaborative digital learning in schools: Teacher perceptions of purpose and effectiveness." That social media such as Facebook, Twitter, Wikis and blogs are synchronous and as a result, students should take turns for meaningful engagement with their work. Careful and deliberate response are advantages of asynchronous social media, though interaction on social media is not as fast as verbal interaction and it may take lot of time if responsive

person is not online. Hence activities may need to be extended over a period of time especially if the collaborators are in other school, college or university or even abroad. Due to different geographical areas and different time zones may cause of delay in response.

Theoretical Frame Work

The present study conducted under the light of social presence theory, social cognitive theory and social responsibility theory. Degree of prominence between two communicators using a medium is basic theme of social presence theory. As social presence theory stated that medium may differ in their degree of social presence, the current study is related with the concept of theory as in presence of various social sties, students prefer more to that medium that more fulfill their requirements and how people interact with each others. As the theory conceptualized quality of communication medium that determine the way of interaction and communication among people, the study also similar theme that how students chose best social site as medium to fulfill their studies' need. From the work of Alber Bandura's psychological and behaviour model of social cognitive theory is also relevant to this research work as study explore social behavior of students while using social media. According to social cognitive theory, learning occurs in social context and much from that is learned is achieved through observation. On the other hand social learning theory stated that people learn to other people while their observations. The current study was conducted to know the role of social media in promotion of education, on the basis of these theories, as they are most relevant with the study conducted.

Methodology

To achieve any target, researcher adopts proper methodology that provides the way to conduct research. Current research study was conducted to investigate student's response regarding usage of social media to fulfill their educational needs. So, by keeping in view the nature of study, the researchers adopted survey methodology to collect data from the target public. The researchers used questionnaire as data collection tools that is considered most suitable for data collection in survey. The study of the universe was the students of schools, colleges and universities, including both males and females belonging to Southern Punjab, Pakistan. The researchers intentionally selected those respondents who were internet users as it was the necessity of the study. To meet the requirement of this study, the researchers adopted probability sampling method. The sampling technique was based on random sampling technique. The sample size of the study was 510 respondents.

Representation of Data

Table 1
Demographic Characteristics of the Respondents

Sr. No.	Demographic Characteristics	Description of Characteristics	F	%
1	Gender	Male	255	50
		Female	255	50
	Total		510	100
2	Age	15-20	188	36.86
		21-25	287	56.28
		26-30	35	6.86
	Total		510	100
	Education	Metric	170	33.33
		Intermediate	170	33.33
		Graduation/ Master	170	33.33
	Total		510	100
3	City	Lodhran	85	16.7
		Multan	85	16.7
		Bahawalpur	85	16.7
		Bahawalnagar	85	16.7
		Rahim Yar Khan	85	16.7
		Rajan Pur	85	16.7
	Total		510	100

A total of 510 respondents from Southern Punjab filled the questionnaire, 255 males and 255 females filled the questionnaire. Respondents were the students including matric, intermediate, graduation and master level. As shown in the table, the majority of respondents were 21 to 25 years old (56.28 percent), 15 to 20 (36.86 percent) and 26 to 30 (6.86 percent) respectively of the total population. The table shows that the graduate and master respondents are (33.33 percent), intermediate (33.33 percent), and matric is (33.33 percent) respectively and 85 respondents selected from each district.

Table 2
Net facility and usage of Social Media

Sr. No.	Question	Yes	No	Total
1	Do you have internet facility?	90.6	9.4	100%
2	Do you Do you use Social Network?	91.4	8.6	100%

Table 3
Social media usage for educational purpose

Sr. No.	Question	Yes	No	To Some Extent	Total
3	Do you think that social media is a perfect tool for gathering educational knowledge?	71.2	6.9	22.0	100%
4	Do you rely on educational material collected from the social network?	66.3	5.9	27.8	100%
5	Do you feel that social media provides enough material for your assignment?	74.9	12.9	12.2	100%
6	Do you feel that educational content shared on social media network are helpful in the learning process?	74.5	7.8	17.6	100%
7	Do you think that social media can prove an alternative to the classroom?	33.7	36.9	29.4	100%
8	Do you think that learning through the internet is same as in class and at home?	36.3	46.9	16.9	100%
9	Do you feel that face to face contact with the instructor is necessary for learning?	57.6	30.2	12.2	100%
10	As a student, do you like to work in group activities through social media?	69.2	21.4	9.4	100%
11	Do you use Facebook for educational purpose?	44.5	35.5	20.0	100%
12	Do you use Twitter for educational purpose?	17.6	62.4	20.0	100%
13	Do you use Blog for educational purpose?	22.0	62.7	15.3	100%
14	Do you use YouTube for educational purpose?	39.8	41.6	18.6	100%
15	Do you think social media plays a vital role in increasing educational knowledge?	69.4	6.7	23.9	100%
16	"Social media is an empowering tool to enhance the academic performance of students" Do you agree with this statement?	60.8	8.2	31.0	100%
17	Do you personally prefer social media for your academic tasks?	45.1	25.5	29.4	100%

Table 4
Use of the social website

Sr. No.	Question	Facebook	Twitter	Blog	Myspace	Total
18	Which network you prefer to use?	91.8	7.1	0.8	0.4	100%

Table 5
Purpose of usage of social media

Sr. No.	Question	Entertainment	Time Pass	Knowledge	Education	Total
19	For which purpose you prefer to use social media?	18.0	14.9	54.7	12.4	100%

Table 6
Effect of social media in learning ability

Sr. No.	Question	High	Medium	Low	No Effect	Total
20	Because of social media, what kind of effect you observe in your learning ability?	32.2	59.6	3.5	4.7	100%

Table 7
Social media as Platform to interact with teachers

Sr. No.	Question	Very Greatly	Greatly	To Some Extent	Never	Total
21	Do you realize that social media provides a platform to students to interact with their teachers?	17.6	49.4	23.3	9.6	100%

Table 8
Social media rating in knowledge

Sr. No.	Question	Excellent	Impressive	Good	Average	Poor	Total
22	How would you rate your social media knowledge?	15.5	39.6	25.3	17.6	2.0	100%

Discussion

Current study deals with social media's role in promotion of education as social media is favourite platform for students and key source of interaction. Result s of current study revealed that majority respondents have internet facility and are regular user of social media. Furthermore, majority of respondents argued that social media is the perfect tool for gathering educational knowledge as Al-Rehmi, Othman, and Yusuf (2015) stated that social media is improving educational learning at large scale and mutual learning is more effective in educational performance. Their study resulted that social media had significant and positive role in collaborative learning among students. On the other hand, Al-Mukhaini et al. (2014) argued that social media has significant role in both personal and educational life. Their study was also resulted that social media is beneficial for students and providing new ways of learning as well as negative effects on students also. Chandra and Watters (2012) also argued that know how about web based learning is necessary for students and use of social media facilitate students to communicate, discuss and share educational material. Shirky (2010) found experience to technology may beneficial for individuals and easy to share and communicate problem solving techniques. Bennett and Maton (2010) found that now students usually use new ways of learning and in this way social media can be more fruitful for students in educational settings. Caraher and Braselman (2010) stated in their report that now mostly students preferred to use social media to work on their assignments, to connect with classmates, and to some extent to keep in touch with their teachers. Wishart and Trigss (2010) argued for more learning, extensive experience of social media usage is necessary. Hence by keeping in mind all above discussion and results of the study, it may conclude that social media has attraction and affects on students.

Hypothesis.1: It is more likely that students of Southern Punjab rely on social media related to education.

The present research study conducted in Southern Punjab Pakistan to know about the role of social media in promoting education. To test the hypothesis, the researcher asked the relevant question to respondents "Do you rely on educational material collected from social media?" in the response of the given statement, 66.3% respondents agreed with the statement and said yes they rely on social media related to the educational material. On the other hand, 5.9% respondents disagreed with the statement and said they do not rely on social media related to the educational material. Whereas 27.8% respondents said that they rely on social media related to the educational material but to some extents. Hence the majority of the respondents agree with the statement. In the way the Hypothesis "It is more likely that students of Southern Punjab rely on social media related to education" is true.

Hypothesis 2: It is more likely that learning through social media is same as in class room.

To test this hypothesis, the researcher, asked the relevant question to respondents that "Do you think that learning through the internet is same as in class room or at home?" the results show that 36.3% respondents agreed with the statement and said yes learning through the internet is same as in class room at home. On the other hand, 46.9% respondents disagreed with the statement and said that learning through the internet is not as same as in a class room or at home. Whereas, 16.9% respondents said learning through the internet is same as in class room or at home but to some extent. Hence most of the respondents disagreed with the statement. So, the Hypothesis "It is more likely that learning through social media is same as in class room" is not true.

Conclusion

This study was planned to determine and analyze the role of social media for promotion of education in Southern Punjab. The researchers selected this research topic because now a day there is huge amount of people who use social media for academic needs. The researchers wanted to know the effects of social media on educational performance of the students of Southern Punjab. The study concluded that social media have a greater impact on students in term of learning with interest and enjoyment. Furthermore, in this present age social media is a strong tool for getting latest knowledge about the real world learning. Social media has facilitated the students to contact with each other and share educational material. Furthermore, the study has also concluded some disadvantages of the social media. More interaction with social media can track the students away from their original purpose. So, the check and balance is necessary for the parents, teachers and educational institutes. The study concluded that by using social with the positive mind and motivation, the results could be fruitful.

Recommendations

1. Educational institutes provide guideline to students to get educational and career endeavors benefits from social media.
2. Institutional heads and staff who utilize social media for professional and educational purposes should endeavor to create proficient social media environment that reflect the rationally supportive environment of educational institutions.
3. Educational departments should create pages on social sites to address realistic instructional, educational and extra-curricular activities program matters and periodically, parents should be notified about professional social media activities of their children.

4. Departments should use more social media space to highlight their educational and other activities to create competitive environment that can be beneficial for all departments to boost-up.
5. There should be adequate privacy for supervisor, students and employees and there should be recommended educational level to become the member of that site or group and only then purposive use of social media can possible.
6. In order to maintain a professional and appropriate relationship with students, employees of the educational institutes should not communicate with students frequently. It is considered that there should be a reasonable distance in the relationship between a teacher and student, so that the academic performance of the student may improve. It's better to develop a formal relationship to achieve desired goals. They might be communicated in case of urgent situation.
7. The professional media sites should be registered by the higher education authority. And they should maintain their credibility, according to the rules and regulations formulated by the higher authority.
8. The parental control must be strict on their children. They should check their browsing content's history and chat details, to stop them from the use of vulgar and inappropriate content that can harm their cognitive, emotional and physical health & development.
9. Social media offer students a way to collaborate on a global level to solve problems on global issues. So all the educational institutions should establish social forums for effective communication, and collaboration with other students and most on smart phones.

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Employers' Satisfaction with Professionally Qualified Secondary School Teachers in Pakistan

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Abstract

Higher Education Commission launched professional training programmes for secondary school teachers in Pakistan. That is significantly important for teachers' professional development. In this study, the employers' satisfaction with secondary school teachers' practices, who have acquired professional training, was explored by administering questionnaire to 180 school heads and interviewing 14 district educational administrators in Pakistan. Descriptive analysis of the study revealed employers' partial satisfaction with the practices of professionally qualified teachers. Relatively, the practices of female teachers were more satisfactory than their male counterparts.

Keywords: Employers, Teachers, Satisfaction, Professionalism, Teaching

Introduction

The educational process is wholly moulded and shaped by instructors who have an active participation in any educational system. They are the principal stakeholders of teaching learning process, who not only create appropriate learning environment for their students but also quench their thirst of knowledge (Johansen, 2008). Variation in the teachers' effectiveness is not only the predictor of school excellence (Glewwe & Kremer, 2006; Hanushek & Wößmann, 2011) but also of students' learning quality (Goldhaber & Brewer, 1999; Hanushek, 2002). This profession is unmatchable by other challenging and thought-provoking professions. Since teachers undertake heavy responsibilities of nations building. It is generally acknowledged that a competent and loyal teacher develops capable individuals who occupy leading positions in society (Lun'e, 2014). However, the competency of teachers in Pakistan remained under criticism since decades (Memon, 2007). A study by Sadruddin (2013) found that teachers lack expertise in content knowledge, while Mushtaq and Kayani (2013) revealed that some deficiency in few teachers overshadowed the recognition of

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dedicated teachers which harmed their self-esteem. UNESCO and USAID (2006) declared that low level of teachers' performance is a major cause of dismissive education quality by public sector institutions in Pakistan.

Researchers concluded that quality education can only be imparted by well qualified teachers; the teachers who can transform an ordinary personality into a well versatile personality (Teoh, Volbrecht, & Savoy, 2015) with their commitment, affection for learners, mastery of subject, morality, effective strategies, professional collaboration, and aptitude (Hopkins & Stern, 1996; Sakarneh, 2014; Teoh et al., 2015). Teachers' motivation to teach, ability to transfer knowledge, healthy relationship with students, maintenance of friendly classroom environment, pedagogical approach and teaching in-demand content are considered as the major characteristics of professionally qualified teachers (Oliveira, Oliveira, & Costa, 2012). Undoubtedly, teachers are a vibrant model for their students. They try to equip the students with prime knowledge, skills and values (Sakarneh, 2014; Stronge, Tucker, & Hindman, 2004). In this regard the professional competency of teachers for using various instructional strategies and adoption of content according to the needs of learners is important (Sakarneh, 2014). The command on outcome based curriculum is another requirement for this purpose. This type of curriculum is normally deployed through learner-centred activities, which are usually loaded with first hand learning experiences along with proper learning environment (Beausaert, Segers, & Wiltink, 2013; Plecki, 2000). To monitor these instructional practices and to assure the achievements of learning outcomes, continuous assessment is vital (Sakarneh, 2014). In essence, teacher quality includes their professionalism, curriculum knowledge, pedagogy and assessment approaches in effective learning environment (Ministry of Education, 2009).

In order to accomplish all these responsibilities, teachers need extensive training (Lovat, 2010; Lovat, Dally, Clement, & Toomey, 2011; Osterman, 2010). The future of education depends largely on quality of teachers groomed in the teacher education institutions (Hamidullah, 2005; Zafiropoulos & Vrana, 2008). In most of the cases, universities are responsible for preparing school teachers (Odhiambo, 2011). In 21st century, most of the teacher education programmes are generally based on developing awareness among learners about the contemporary world by incorporating the habits of creative thinking, making smarter about new sources of information, developing interpersonal skills such as teamwork and providing social leadership. Teacher education system in Pakistan is generally based on the development of sound and solid base of theoretical acquaintance, orientation of practical life, professional skills, attitudes and interests. It enables the teachers to acquire knowledge, skills and techniques for effective teaching (Higher Education Commission, 2012). There are 275 teacher education institutions in the country (Government of Pakistan, 2009). General universities and privately managed teacher education institutions are also offering teacher education programs. In-service training is the responsibility of the Curriculum

Boards and Extension Centres. In addition, the provinces have assigned in-service training responsibilities to one or more Government Colleges (Memon, 2007). In result, 90% in-service secondary school teachers have acquired teacher training (Author, 2015) regardless of quality concern.

The search of quality has become an important consumer trend (Costas, Zafiropoulos, & Vrana, 2008). Indicator of quality education is, "Outcome", specified by UNICEF (2000). Outcome that comprises of knowledge, skills, attitudes and positive participation in practical life (UNICEF, 2000). Although few studies have reported the quality of teacher training in Pakistan (Dilshad, 2010; Reba & Afridi, 2011) by taking opinions from pre-service teachers and educators but employers' views are still unexplored. It is the most crucial aspect as the quality of any service have direct positive relationship with employers' satisfaction (Ahmed et al., 2010; Athiyaman, 1997; Shemwell, Yavas, & Bilgin, 1998). Employers of teachers are usually known as the administrative bodies in educational settings; therefore current study has focused on retrieving satisfaction of educational administrative bodies at institutional and district level by taking their perspectives. Perspectives were specially taken because satisfaction is usually based on consumers' expectations and perception of service quality (Christou & Sigala, 2002; Ekinci, 2004). It is imperative to research the outlook of professionally qualified teachers' at their current practice places, which not only identifies the positive changes in teachers but also shed light on silently weakening areas of teacher training in the context of Pakistan. The target audience of this study is mainly policy makers, education planners, curriculum developers; and practitioners who are given employers' feedback to make necessary amendments in mechanism.

Teacher Training in Pakistan

In Pakistan, educational policies are majorly controlled by federal government. Though provincial government independently supervise its district education departments, nevertheless, policies and plans are implemented, which are developed by central ministry of education (Shah, 2003). Teacher's role is fundamental to achieve the target of quality education. The number of teachers in Pakistan is reaching 1.35m in public educational institutions from primary level to higher education. There are 275 institutes of teacher training, which provide pre-service training along with degrees, diplomas and certificates. Moreover, 300 resource centres of teacher training are working actively in districts. These teacher training institutions are being managed by Extension for pre-service programmes and Bureau of Curriculum, while for in-service teacher training, Provincial Institutes of Teacher Education (PITEs) are carrying responsibilities and are playing a major role.

During the last few decades, a number of initiatives and projects were taken by Government of Pakistan, NGOs, and Higher Education Commission to enhance the teaching and teacher education programmes. In spite of all these, systematic teacher

evaluation is still a weak area of education system in Pakistan. Teacher education graduates are assessed only by their respective universities or institutions, from which they have graduated (Huma, 2013). Once a teacher is recruited in government school, there is no proper mechanism of performance evaluation of educators. Only the satisfaction report for probation period is required from school head (International Labour Organization, 2000). No common criterion is established for good teaching or to evaluate teaching quality at several levels (Siddiqui, 2010) as cited in Huma (2013). However, in some studies conducted by local and foreign researchers, a deficit of quality in government schools is repeatedly reported. Ministry of Education (1998), (2009) has declared in National Education Policies that teacher education programmes are responsible for performing poor teaching quality. After the National Education Policy of 1998, few main initiatives were taken, which involved affiliating all colleges of education with universities; laying foundation of regional and provincial teacher education institutes for in-service education; and establishment of National Accreditation Council of Teacher Education (NACTE). Educational experts from USA have imparted major role through USAID, which is amongst biggest contributor in the field of teacher education assessment in Pakistan (Huma, 2013). A serious initiative was taken for teacher education in 2009 when Ministry of Education, Pakistan developed National Professional Standards for Teachers in Pakistan. A broad vision of quality expectation from Pakistani teachers was framed in these standards. Pre-service Teacher Education in Pakistan was launched during the same year and improvement of teacher education policies and practices was the main agenda of this project. It was funded by USAID. Now BS programmes of teacher education has been initiated in several institutions. Moreover, curriculum was upgraded to meet the expected quality and effectiveness of initiated programmes.

Employers of Secondary School Teachers

The Teaching Council (2015) nominated Chief Executive of education, school board of management, and executive of training board as the employers of teachers. In connection with types of jobs and employers available in teaching and education, teachers in profit oriented schools, most of the times are known as independent or private schools that are recruited by the certain organization running that school. If one renders services in a government school, he/she can either be employed by local authority or other governmental organization. Often local authority run community schools; free schools and academies are directly funded by federal government, which has almost total control over teachers' salary package, conditions and curriculum. In several studies school heads, local educational executives and authorities, and principals were considered as employers of teacher education graduates as they are employing teachers in educational institutions (Aquino, Del-Mundo, & Quizon, 2015; NCTQ, 2014; QILT, 2016). In the view of the situation, the study focused on public sector

teachers because in Pakistani context the recruitment committee for teachers include local governments, school heads and provincial governments.

Satisfaction with Teachers

There is a lot of debate found in literature regarding quality of teachers in Pakistan while very few of the studies discussed about satisfaction of stakeholders. Alderman, Orazem, and Paterno (2001) reported that parents choose private schooling for their children just because they were dissatisfied with teacher quality in Government schools. Mushtaq and Kayani (2013) stated lack of content knowledge among school teachers. Moreover, Hussain (2004), and Malik and Behlol (2014) questioned the teacher education institutions for failing in developing professional attitude among secondary school teachers. Chang (2014); Dilshad (2010) also found dissatisfaction of teachers and students with teacher training programmes in Pakistan. Contrarily, Khan (2015), and Chishti, Tahirkheli, Raja, and Khan (2011) expected teacher training programmes to improve teacher quality in terms of their knowledge, professional development, instructional strategies, classroom environment, and evaluation processes.

Methodology

Research Tools

Mix-method approach was used in the study to investigate employers' satisfaction with teachers having professional qualification. The goal was accomplished by developing the scale of satisfaction and semi-structured interview. Scale is a most widely used instrument in survey research. Cohen, Manion, and Morrison (2000), and Fraenkel and Wallen (2009) have recommended this type of tool due to its cost-effectiveness and time saving attribute and coherence. Thus, by following previous studies (Khalkhali & Taghizadeh, 2012; Nicolescu & Păun, 2007), doing an extensive study of literature, official standards and definitive documents, a structured scale was developed and further devised by accounting experts' opinion. Construct of the items was based on teachers' characteristics within and out of classroom in secondary schools and the scale comprised of four points (e.g. Highly Dissatisfied, Slightly Dissatisfied, Slightly Satisfied, and Highly Satisfied). Demographics of the respondents were also added in first section of scale (i.e. gender, age, administrative experience, frequency of observation of teachers' practices).

Validity of the scale was established by using statistical and judgemental means. Convergent validity refers to the strong correlation among items of the scale. As measured by previous studies (Borza & Crisan, 2012; DuPre & Williams, 2011; Zait & Bertea, 2011), it was determined by calculating Pearson correlation between the items. The inter-item correlation was significant at 0.01 level. Face and content validity was assured by taking expert judgement. Reliability of scale was tested by using Cronbach's Alpha in SPSS, which was 0.95. Furthermore, interviews with employers enabled the researcher to get in-depth and detailed evidence about the phenomena in the study.

Perspectives on lacking in teachers' competencies, factors influencing their performance and suggestions for improvement were taken (e.g. Eurobarometer, 2010; Khalkhali & Taghizadeh, 2012; West, Noden, & Gosling, 2000).

Population and Sampling

To explore quality expectations and satisfaction administrators were taken as population of the study (Sandmaung & Khang, 2013; Srikanthan & Dalrymple, 2003). The study area was delimited to public sector secondary schools in Pakistan; therefore heads of those schools, District Education Officers (DEOs), Executive District Officers (EDOs), and Deputy District Education Officers (Dy. EDOs) were addressed in the study. Targeted schools (9953) were scattered in all over the provinces of Pakistan (Government of Pakistan, 2013) therefore school heads' selection was made on multi-stage sampling for appropriate representation of targeted population. On first stage, districts from each province were sampled through stratified random sampling technique by following previous studies (Brown & Mazzarol, 2009; Khan, Ahmed, & Nawaz, 2011; Reba & Afridi, 2011). Based on School census as retrieved from Government of Punjab (2013), 15 districts were selected (Eight from Punjab, two from Sindh, three from Khayber Pakhtoon Khwa, one from Balochistan, and one from Gilgit Baltistan. Capital of the country (Islamabad Capital Territory) was also included in the sample. At second stage, 58 administrative areas (Tehsils) of selected districts were identified on available statistics. Equal representation was given to each administrative area (Borza & Crișan, 2012; Dilshad, 2010; Nelson, 2006) and four schools (two male, two female) were selected from each by snowball sampling technique. There were total 232 schools estimated to be included in the study. At third stage, one administrator from each selected school was considered to participate in the study. Sample distribution of the study is given in Table 1.

Table 1

Sample Distribution of School Heads

Province	Districts Selected	Tehsils in Selected District	Schools Selected for Sample	Administrators Selected for Sample
Punjab	8	30	120 (30*4)	120
Sindh	2	8	32 (8*4)	32
Balochistan	1	8	32 (8*4)	32
Khaiber Pakhtoon Khwa	3	8	32 (8*4)	32
Gilgit Baltistan	1	3	12 (12*4)	12
Islamabad Capital Territory	1	1	8	8
Total	16	58	232	232

From 265 accessible educational administrators of district level (EDOs, DEOs and Deputy DEOs), 20 were selected by using simple random sampling technique.

Data Collection and Analysis

During data collection, 180 administrators were given questionnaire of satisfaction while 14 employers were telephonically interviewed. Responses on the scale were coded as 4 for Highly Satisfied, 3 for Slightly Satisfied, 2 for Slightly Dissatisfied and 1 for Highly Dissatisfied. Percentage and mean score were calculated for each statement of the scale as used by previous studies (Borza & Crișan, 2012; Davies, Csete, & Poon, 1999; Dilshad, 2010; DuPre & Williams, 2011; Khan et al. (2011); Reba & Afridi, 2011) preferred to calculate frequency, percentage and mean score to derive results from stakeholders' viewpoints for each variable of quality service. Independent Sample t-test with 0.05 level of significance was undertaken to differentiate satisfaction level among males and females. Moreover, to find out difference among employers having diverse administration experiences and their frequent observations, One-way ANOVA was employed with LSD as Post-Hoc analysis. Responses retrieved during telephonic interviews were categorized into main dimensions, summarized and reported.

Results and Discussion

Five dimensions of satisfaction scale were extracted by undertaking factor analysis through Principal Component Analysis (PCA) following Varimax Rotation and the selection of factor loading in which the Eigen value for each factor was greater than one. Factors were entitled: professional attitude of teachers; teachers' expertise of classroom management; teachers' abilities of effective teaching; evaluation proficiency of teachers; and students' learning quality.

As regards the demographic information of the respondents 66% were aged above 45 years, 21% were from 36 to 45 year old and only 13% were from 25 to 35 year age group. Among all of the participants, 73% had administration experience of less than 10 years while only 27% were highly experienced of administrative post. 66% school heads used to observe teachers' observation on daily basis whereas the rest observed either weekly or monthly.

Table 2

Professional behavior among teachers

Item #	Statement	Satisfied (in %)	Dissatisfied (in %)
1	Teachers Collaborate with their peers	70.0	30.0
2	Teachers share their professional experience with others	60.6	39.4
3	Teachers are committed to students' well being	65.0	35.0
4	Teachers know the ways to develop students' potential	66.1	33.9
5	Teachers keep professional relationship with students	62.2	37.8
6	Teachers respect their students	72.8	27.2
7	Teachers are honest with their profession	65.0	65.0

It is shown in Table 2 that school heads were partially satisfied but not highly regarding professional behaviour adopted by secondary school teachers. Same as the reporting of Hussain (2004) that teacher education institutions were failing in developing professional attitude among secondary school teachers. According to 70% school heads, teachers had cooperative and respective behaviour with their peers and students. Results are similar of the findings of Mehmood and Rehman (2011). One of the employer also revealed during interview:

Teachers sometimes do not cooperate with their colleagues

It can be interpreted from above statement that all of the teachers did not fall in uncooperative staff but some of them. Results are aligned with the finding of Ahmad et al. (2013). Another told during the dialogue about professionalism:

Teachers have lack of respectful attitude towards their students

Here it seems that teacher education could not develop respectful attitude among teachers of secondary schools that they may respect their students inside or outside classroom. Results from quantitative data also showed that 40% head teachers were not satisfied with secondary school teachers' commitment to students' well-being, their knowledge of developing students' potential and their professional relationship with students while the rest were satisfied. While discussing about teachers' commitment, an employer said:

There is a lack of commitment and goal orientation among teachers because of a rapid change in government policies of education.

Changing in policies is discussed also by Amin, Shah, Ayaz, and Atta (2013) that it is responsible for poor performance of teachers in schools. He also highlighted:

Newly appointed teachers usually have motivation for their quality services but with the passage of time it decreases.

In conclusion, 60% employers mentioned in their interviews that teachers have lack of professional attitude among them such as lack of motivation, lack of collaboration, absenteeism, non-acceptability of responsibility, lack of interest, absent-mindedness, insincerity for purpose, unwillingness to accept change and individual behavioural problems.

Table 3
Teachers' efforts to maintain classroom environment

Sr. #	Item #	Statement	Satisfied (in %)	Dissatisfied (in %)
1	8	Teachers use democratic values in the classroom	73.3	26.7
2	9	teachers engage all students in the classroom	67.8	32.2
3	10	Teachers maintain creative environment in the classroom	68.9	31.1
4	11	Teachers have knowledge of their content	72.8	27.2

According to Table 3, 73% school administrators satisfied about teachers' abilities to maintain effective classroom environment. Moreover, 72.8% school administrators satisfied about teachers' knowledge of content and instructional strategies. The results are aligned with the report of Rizwan and Khan (2015). Furthermore 60% administrators were in view that teachers used multiple ways to solve problems.

Table 4
Perspectives on instructional processes used by teachers

Sr. #	Item #	Statement	Satisfied (in %)	Dissatisfied (in %)
1	12	Teachers have knowledge of general methods of teaching	74.4	25.6
2	13	Teachers use pedagogy of collaboration	58.3	41.7
3	14	Teachers use multiple ways to solve problems	60.0	40.0
4	15	Instructional strategies are based on students' needs	60.0	40.0
5	16	Teachers use multiple techniques to develop learning material	54.4	45.6
6	17	Teachers use results of assessment to improve teaching	68.9	31.1

Instructional strategies used by teachers were based on students' needs and pedagogy of collaboration, nevertheless, 54.4% were satisfied with the use of multiple techniques to develop learning material (Table 4). Likewise, an employer also specified.

> *Teachers have knowledge of multiple teaching strategies but there is a lack of implementation due to several reasons; such as lack of instructional resources and teachers' motivation.*

This finding is aligned with the report of Solangi (2016) and Ahmad et al. (2013) that teachers' motivation is affected due to lack of resources and teaching facilities in schools. With regards of another employer's point of view:

Teachers are less successful in implementing multiple instructional processes particularly since they faced difficulty for updated contents.

It can be concluded from results and interview statements that teacher education programmes should have curriculum about updated content and medium of secondary school classes. Similarly, as per according to Mushtaq and Kayani (2013), medium of instruction was changed from Urdu to English but secondary school teachers did not improve their qualification. They need training for upgraded English medium contents. Another study by Shakir, Hussain and Zaffar (2011) also reported about lack of content knowledge among teachers.

Table 5
Perspectives on assessment strategies

Sr. #	Item #	Statement	Satisfied (in %)	Dissatisfied (in %)
1	18	Teachers have knowledge of multiple assessment techniques	68.7	31.3
2	19	Teacher use variety of assessment techniques	48.3	51.7
3	20	Teachers interpret results to make decision about students' promotion	63.3	36.7

In perspective of 68.7% school administrators, teachers have satisfactory knowledge of multiple assessment techniques but 51.7% were dissatisfied with the implementation of such bulk knowledge (Table 5). An employers declared during interview:

Teachers knew about evaluation procedures. But then they used to test students in only written and oral tests rather than multiple assessment techniques.

It was found from quantitative data that feedback from students' evaluation and tests is used for progression of students (63.3% administrators were satisfied). While talking about the problems in evaluation processes one of the employer told:

There are some external factors which hinder in transparent evaluation procedures such as political interference.

This view is supported by previous study of Ahmad et al. (2013) that there existed political interference along with other external factors which hinder teachers' performance. In conclusion, employers suggested to change the curriculum of teacher training courses which could prepare teachers to guide their students. That guidance would be according to students' needs. This suggestion is aligned with the findings of Sadruddin (2013).

Table 6
Perspectives on the quality of students' learning

Sr. #	Item #	Statement	Satisfied (in %)	Dissatisfied (in %)
1	21	Students have complete understanding of their courses	59.4	40.6
2	22	There is positive change in behavior of students	63.9	36.1
3	23	Students have acquired skill in practical work	52.8	47.2
4	24	Students' personality has been groomed	61.1	38.9
5	25	Students' learning is long lasting	56.7	43.3

With reference to Table 5, 59.4% of the view that students have complete understanding of their courses, their personality has been groomed as well as there was positive change in behaviour of students however only 52.8% satisfied with their acquired skills in practical work. Moreover, school heads did not highly satisfy (56.7%) with long lasting learning of students (Table 6). While being interviewed, employers mentioned that students have competitive grades in their courses but they showed somewhat dissatisfaction regarding their technical skills.

School heads with less than 10 year experience of administration have significantly lower satisfaction level with secondary school teachers' characteristics as compared to those who were administering for more than 20 years in schools. Probability of difference value was .015 which was significant at .05 level with mean difference of .454. As the administering experience increased, employers were more satisfied. Difference of employers' satisfaction based on their experience of administration is shown in Figure 1.

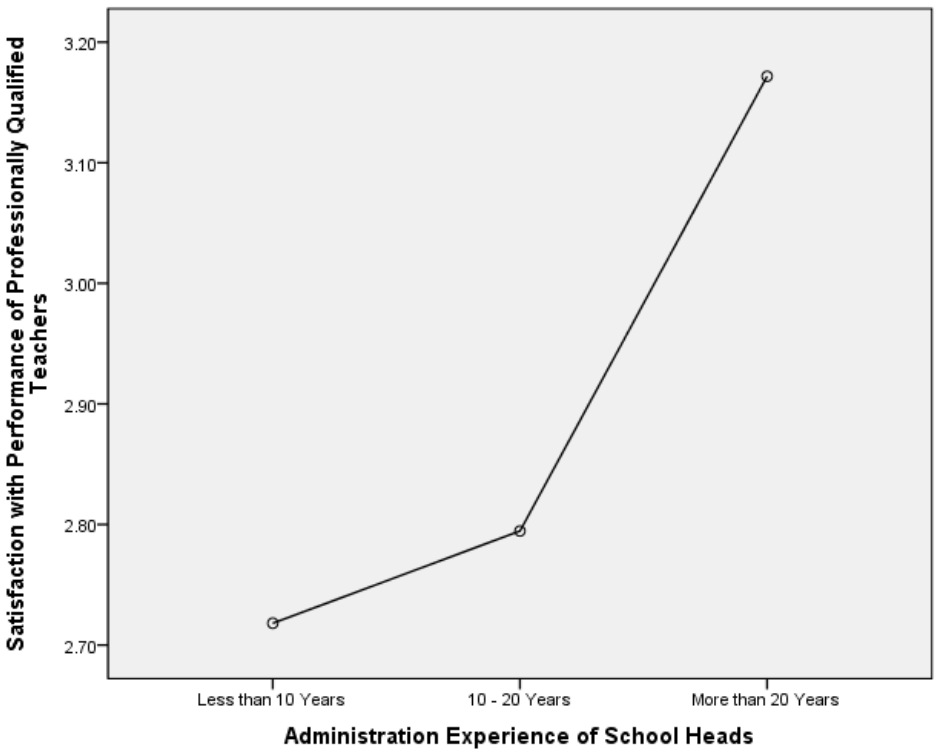

Figure 1. *Impact of employers' administration experience on their satisfaction with professionally qualified in-service teachers*

According to the results of the study, females have more confidence, satisfaction and belief in their work quality as compared to males. A remarkable difference of opinion among male and female secondary school heads was found. Female administrators were more satisfied as their male counterparts. Difference was significant at .05 level (Sig. = .010, mean difference = .294). Alike the results were revealed by Hussain (2004), Farooq, Chaudhry, Shafiq, and Berhanu (2011), Nudrat, Asdaque, Nawaz, and Haider (2011), and Saleem and Naseem (2013) in which female respondents had more positive attitude towards under study topic than males. Overall satisfaction level of administrators across all dimensions was estimated by building line graph of separate variable, as shown in Figure 2.

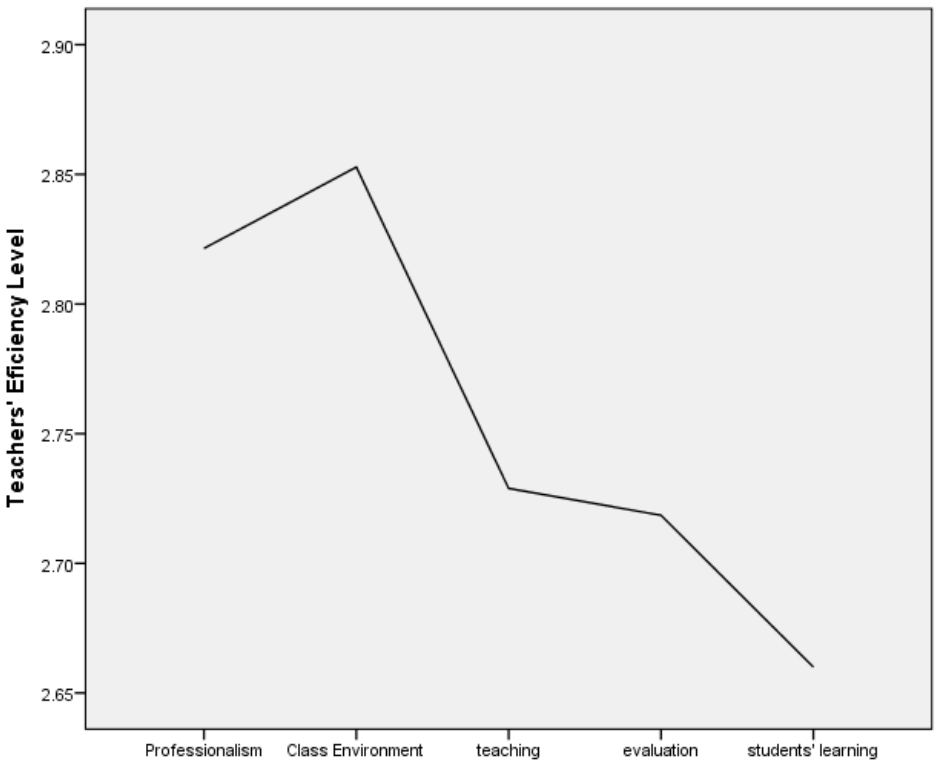

Figure 2. *Employers' satisfaction with teachers' efficiency in five dimensions of their profession*

Result shows comparatively higher satisfaction for teachers' professional behaviour and expertise in maintaining classroom environment than their teaching and evaluation proficiency. They were least satisfied with the quality of students' learning in public secondary schools. Alderman, Orazem, and Paterno (2001) and Ahmad et. al. (2013) also showed similar circumstances that parents in Pakistan least choose government schools for their children due to low quality of education there.

Results were similar to the discussion by Malik and Behlol (2014). They described that teacher education institutions are not training the teachers who practice their learning at satisfied level. Chang (2014) and Dilshad (2010) also found dissatisfaction of teachers and students with teacher training programmes in Pakistan. Contrarily, in the view of Khan (2015) and Chishti, Tahirkheli, Raja, and Khan (2011) teacher education programmes expected teacher training programmes to improve teacher quality in terms of their knowledge, professional development, instructional strategies, classroom environment, and evaluation processes.

Conclusion

Almost half of the administrators and less than half employers were satisfied about the classroom maintenance by teachers and their evaluation efficiency. Teachers have required knowledge of instructional and assessment strategies but there was a lack of implementation at classroom level. Students got competitive grades in their academics but their skills in critical thinking and technical practices were not up to the mark. Females had high favourable attitude regarding their performances, skills and their impact on students as compared to males. Employers having more experience of administration were highly satisfied with teacher education outcomes in secondary schools. There was a lack of competent quality among teachers, which would have enabled them to give quality education such as commitment and motivation for their profession. Government has upgraded the medium of content in secondary schools from Urdu to English but secondary school teachers were lacking upgraded knowledge about the English medium contents. Lack of resources in schools hinder the effective implication of instructional and assessment strategies. They should be trained and refresher courses should be organized for them in order to promote their professional skills.

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Comparing the Stress Level of Teachers at Public and Private Universities in Pakistan

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Abstract

The aim of the present study was to compare the stress level of teachers at public and private universities. An instrument developed by Glazer (1978) was used to assess the stress level of teachers. It consisted of twenty opposite sets of questions based on work experience. A total number of 307 teachers from public and private universities in Islamabad participated as sample of the study. Results of the study revealed that majority of university teachers reported high level of stress. The teachers of public sector universities reported moderate level of stress at their workplace while teachers of private sector universities reported high level of stress at their work place. There was no difference found in the stress level of male and female teachers. The implication of the findings is some measures should be taken by the private universities on how to assist their teachers to overcome their stress problem. Some measures could be: universities may focus more on the stress control techniques in the form of counseling, workshops, and seminars among teachers as well as students. So that, they may focus more on the students' progress.

Keywords: stress level, university teachers, public and private universities, gender, workplace

Introduction

In universities, teachers are facing higher stress level than nonacademic staff. Insufficient resources, poor management practices, work overload, insufficient recognition and job insecurity are some of the factors of causing stress among university teachers. Stress in university teachers causes a negative impact on their personal welfare and professional work (Gillespie et al., 2010). Negative consequences of stress include negative effects on the physical health, poor performance, and poor

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students' outcomes. Teachers with greater stress are less likely to create a conducive classroom environment (Greenberg, Brown, & Abenavoli, 2016).

Teachers shapes the lives of our children. Teachers facilitate child's learning and socio-emotional development (Greenberg, et al., 2016). In an energetic and positive learning environment, both students and teachers learn from each other. There are multiple rewards of good teaching for the students and teachers alike. These rewards are source of generating enthusiasm, satisfaction, excitement and sense of purpose in the life of teachers. Stress among teachers can cause difficulties in the life of teachers at workplace. Major stressors in the life of teachers are to bring balance in students' needs & problems, parents' expectations and curriculum demands (Hayes, 2006). Encountering increased level of stress at workplace is not only threatening for the individual but also harmful for the organization (Masuku & Muchemwa, 2015). High stress among teachers are not only affecting teacher well-being and health but also causing teacher job dissatisfaction, burnout, poor performance, and lack of engagement (Greenberg, Brown, & Abenavoli, 2016).

There are multiple theories which discuss the stress and its coping strategies. Selye's theory discusses about the systemic stress which relates stress with physiological functions. According to Selye's stress can be described in terms of biological response of body to physiological mechanism. Stress is a nonspecific response of our body towards the demand on it. There is a limited capacity of our body to respond to demands or stressors. At workplace individuals face lot of demands which causes a constant stress for them. Stress with high intensity with long period of time definitely exhausts the ability of individual to cope with stress. Selye is considered as the father in the field of stress researches (Selye, 1974). Lazarus (1999, 2001) in his theory, identifies the primary and secondary appraisal. He ascertains three primary appraisals: harm/loss, threat and challenge. Secondary appraisal identifies the strategy of individual for coping the situation keeping in view the resources. Appraisals are associated with emotions which explain either positive or negative appraisals.

According to Canadian Centre for Occupational Health and Safety (2000), stress can be stated as feelings, result of an individual reaction to the demands on his/her energy. Stress is a natural phenomenon of life and occurs as an outcome of change. These changes can be positive or negative. All stresses are not bad. Some changes which cause stress are good and known as positive stress and challenge. In certain a situation in which individual is unable to cope with the high intensity of stress may cause psychological and physical changes in person.

Stress is described as mind-body naturally occurring response to the emergency and demanding situation. It can be episodic or chronic in nature. Individual responds to stimuli either psychological or physical are commonly known as demands or stressors. When individual encounter demand or stressor, s/he also analyze encounter in the

context of its significance. Individual's evaluation process is the result of its cognitive appraisal. In the case, when cognitive appraisal process of individual defines the negative response towards stressor as individual perceive stressor as harmful or threatening then it is termed as distress. Distress is linked with adverse health outcomes, turnover and absenteeism (Quick, Horn, & Quick, 1987; Quick et al., 2000). Stress can also be described as a way of individual's thinking and behaving which lead to tension, physical disease and worry. It is caused by interaction between organism and environment (Woolfolk & Richardson, 1978).

Mostly stress is perceived as negative. Stress has a positive side as well. Selye (1974) introduced a term eustress which can be explained as an event which follows something positive. Another side of stress is its positive value. People also use stress for enhancing the performance. Some professionals take deadlines and heavy workload as positive challenge for increasing their work quality (Cavanaugh et al., 2000). Stranks (2005) also favors that all types of stresses are not bad for people. Certain level of optimistic or positive stress is important for the individual to perform well. Some people have a capacity to perform well and deal with high but positive pressure. This is known as 'butterfly feeling' or classic fight response. Such type of stress is also felt by people before going for interview or examination hall. Mature leaders and competent managers have the ability of positive stress. Positive stress helps to fuel achievement, improve performance and wellbeing. Skakon et al. (2011) also favor the stress to some extent and consider it essential for completion of a task efficiently. So, positive stress has significant effect on the effectiveness and satisfaction of managers. It is also evident in teaching profession that positive stress enables teachers to perform better in teaching tasks. Positive stress enhances the performance of teachers. If task is not challenging and rewarding the performance of the teachers will suffer (VanSlyke-Briggs, 2010).

With positive side of stress, the harms stress cannot be ignored. Most common stressor for the teachers are poor working conditions, ill-discipline and low motivation of students. Stress among teaching profession throughout the world is getting worse. Most of the teachers experience stress due to demoralization, disillusion and exhaustion in work (Cosgrove, 2000). Increased workload, long working hours and deadline pressures are also the cause of stress among the teachers working in schools (Masuku & Muchemwa, 2015).

Teachers encounter stress throughout the journey of their career. Teachers become worry about their students due to the emotional attachment and close working with their students. Stressors among teachers include mountains of never seeming diminish paperwork, accumulation of hours to the professional development, keep up the test score high, meet the litany of standard and making the career place. Teachers may start honoring and take pride of their work for getting relief from stress. The stress teachers are taking today will not be with them tomorrow (VanSlyke-Briggs, 2010).

Delegation of responsibilities and deadlines are also the causes of stress. Stress with high intensity leads to ill health. Stress also destroys the quality of individual's life (Stranks, 2005).

For overcoming the harms of distress, stress coping strategies may be followed by educational intuitions. Mindfulness program, mentoring programs, workplace wellness program, social and emotional learning programs may help to reduce the teachers stress (Greenberg et al., 2016).

Mostly educational institutions focus on the academic success of students. Teachers are the key contributor in the whole process. Unfortunately universities are paying least attention to teachers' stress. The result is that they cannot perform even their routine tasks with as much that proficiency and dedication which is demanded. The present research on stress in the university teachers will not only capture the attention of the researchers and educational institutions but will also provide useful information for how to cope with the stress and how universities can contribute in minimizing the stress for teachers.

Rationale of Study

Above discussion on stress among teachers provides a basis for research about stress among the university teachers. Teaching is multitasking and teachers at all levels are performing multiple tasks. University teachers are also performing numbers of teaching and non-teaching assignments. Pressures to complete all these teaching and non-teaching assignments on time are also causes of stress. Two sectors public and private for the higher education are working side by side in Pakistan. Both public and private educational institutions are facing different circumstances and work environment. Present study explored the stress among teachers in both public and private universities.

We cannot ignore the negative consequences of stress. Stress has many harmful effects on the physiological mechanism of body. Those who have low self-efficacy are at higher risk. These illness can be in the form of poor functioning of immune system, upper respiratory illness (Schaubroeck et al., 2001) and heart disease (Kivimäki et al., 2006).

Prolonged stress is not only harmful for the individual but also detrimental for the organizational output. This is also a fact that stress in normal range is good because it also works as motive to do something better. According to Palmer et al. (2004), stressed employees are likely to be less productive, unhealthy, feel insecure at workplace and poorly motivated. Some symptoms of stress are related with the behavior which include absence, reduction in production, and turnover. Increased smoking, forgetting, rapid speech and sleep disorder have also been observed in the people due to stress (De Croon et al., 2004; Robbins & Judge, 2013)

Much of the focus of organizations is on the increase of productivity and ignoring the employees who are the source of increase in productivity. Organizations may conduct surveys for measuring the stress of their employees and especially work on the strategies for overcoming stress among employees.

Not only the business organizations are dealing with the problem of stress among employees, educational organizations are also facing the same. Stressed workers cannot be ignored by any organization especially in educational institutions. Future of our generation is dependent on the teachers. Teachers with stress cannot perform better and put in their best for the students' progress.

Teaching is a profession where teachers promise for best teaching, but also want personal satisfaction rewards and accomplishment which is being unfulfilled. In spite of this, teachers are facing stultifying conditions, tensions, and unrealistic demands. Professionals including teachers facing pressures. These are in the form of upgraded knowledge and complex responsibilities, social changes, role ambiguity, varied professional expectations and greater job demands. Result of all these are in the form of decrease in personal as well as professional satisfaction (Gold & Roth, 2005). Students' academic outcomes and teaching performance is also linked to teacher stress. Stress among teachers results in lower students' achievement and higher schools costs (Greenberg et al., 2016).

Unfortunately, in Pakistan, researches on stress among teachers are still less focused especially in universities. Students of universities are our future contributors for development of our country. Stressed teachers cannot produce productive students.

Conceptual Framework of Study

The purpose of present research is to compare the stress levels of teachers at public and private universities. The main construct of the study is stress among teachers. For this purpose teachers working in public and private universities were selected. An instrument on stress control lifestyle was used. The conceptual framework of this study is based upon the theoretical orientation of Friedman and Rosenman's Type A and Type B theory. During 1950s, Friedman and Rosenman defined Type A and Type B personalities. They pointed out that Type A people want to achieve more in less time, have high aspiration, highly competitive, work hard, hate failures and measure their success in terms of quality with high risk of heart disease. While Type B people are less competitive, more relaxed and are lower in risk. Type AB are striving type (Friedman, 1996). Glazer (1978) developed a questionnaire on stress control lifestyle based on these behavioral styles Type A, Type B and Type AB.

Stress control lifestyle instrument consisted of 20 pairs of statements. They described five types of behavior. These are type A1, A2, AB, B2, and B1. Type A1, A2 behavioral styles are more inclined towards the very high and high level of stress, Type

AB are more inclined towards the moderate stress while Type B1 and B2 are more inclined towards the less level of stress. Common characteristics of type A behavior are being competitive, always in hurry, being aggressive, do many things at the same time, ignores the stress signs, being impatient and fast moving.

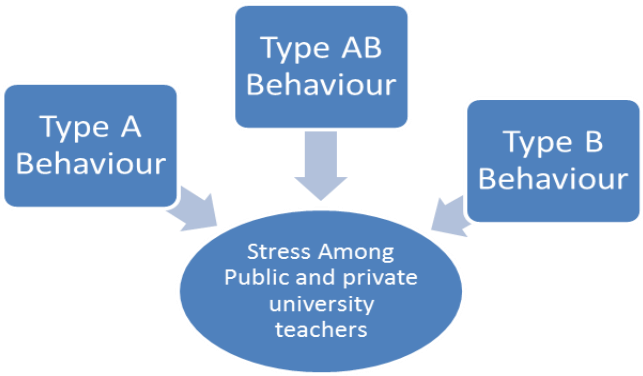

Figure 1. *Conceptual Framework of Study about Stress among teachers of public and private university*

People with Type B behavior are generally relaxed and adequately cope with stress. People with type AB behavior have the qualities of both type A and type B and they also have the tendency to slip into the type A behavior category.

Objectives

Objectives of study were:

1. To determine the stress level of private and public universities' teachers.
2. To determine whether there is any significant difference in the stress level of public and private universities' teachers.
3. To determine whether there is any significant difference in the stress level of male and female teachers.

Hypotheses

1. H01: Stress control behavioral patterns of university teachers are independent of public and private sector.
2. H02: Stress control behavioral patterns of university teachers are independent of their gender.

Methodology

Present study was comparative survey which employed quantitative research design. All public and private sector university teachers of Islamabad Capital Territory were the population of the study. 307 teachers from three public and three private universities were selected as sample of the study by applying stratified sampling

technique. 150 teachers were from public sector universities while 157 teachers were from the private sector universities. From 307 teachers, 143 were male participants while 163 were female participants.

Instrument of Study

Stress level of university teachers was assessed with the use of Stress control life-style instrument developed by Glazer (1978) based on twenty opposite sets of questions ranging from 1-7. These statements described the work experience. There are five types of stress control life-style: A1, A2, AB, B2 and B1. Scores from110-140 describe very high level of stress and indicates A1 type of personality, whereas the scores from 80-109 indicate A2 personality type and is associated with high level of stress. While scores from 60-79 describes the moderate level of stress with AB types. Whereas scores from 30-59 and 20-29 describe low level of stress and very low level of stress with B2 and B1 types respectively.

Results of Study

Table 1

Description of Stress level among Teachers (N=307)

Stress Control life-style	Frequency	Percentage
Type A1	3	1
Type A2	224	73.0
Type AB	78	25.4
Type B2	2	.7
Type B1	0	0

Results show that majority of the teachers were experiencing a high level of stress and fall under the stress control behavioral style A whereas a large number of teachers were also experiencing the moderate level of stress. No teacher was found in the category of very low stress. Fewer teachers were having the very high level of stress and low level of stress. The findings of this study also matched with the study conducted by fSlišković and Seršić, (2011) which also identified that university teachers are facing high level of stress.

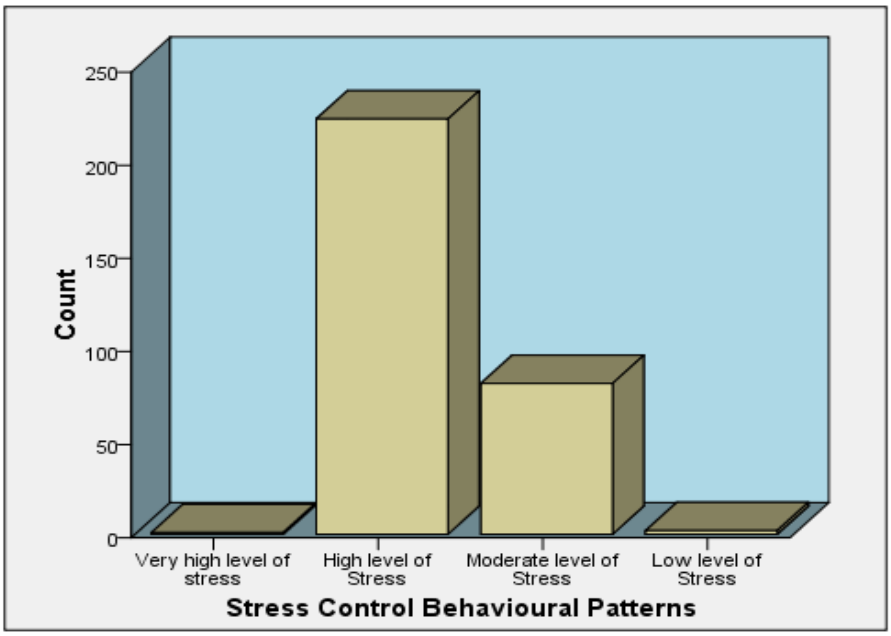

Figure 2. *Stress level among University Teachers*

Results of the Figure 1 revealed that majority of the university teachers were experiencing high level of stress at their workplace.

Table 2

Stress Level of Teachers at Public and Private Universities

S.no	Statements regarding Type B1, B2 types	Public Sector	Private Sector	Statements regarding Type A1, A2 types
		Mean/SD	Mean/SD	
1	Doesn't mind leaving things temporarily	3.60/1.31	4.74/1.02	Must get things finished once started
2	Calm and unhurried about appointments	3.88/1.19	4.85/.791	Never late for appointments
3	Not competitive	3.85/1.40	4.78/1.05	Highly competitive
4	Listens well, let's others finish talking	3.97/1.31	4.75/.933	Interrupts/ Anticipates others in conversation
5	Never in hurry	3.95/1.21	4.73/1.04	Always in hurry
6	Wait calmly	4.07/1.30	4.83/1.05	Uneasy when waiting
7	Easy going	3.94/1.31	4.93/.914	Always going full speed ahead

8	Takes one thing at a time	3.97/1.37	5.01/.984	Do more than one thing at a time
9	Slow and deliberate speech	3.93/1.24	4.89/1.10	Vigorous and forceful in speech
10	Satisfying self, not others	3.98/1.44	4.84/1.04	Wants recognition from others
11	Slows things down	4.14/1.45	4.83/1.03	Does things fast
12	Relaxed	4.02/1.39	5.01/1.17	Hard driving
13	Expresses feelings openly	4.00/1.42	4.89/1.03	Holds feelings in
14	Has a large number of interests	3.97/1.42	4.67/1.06	Few interests outside work
15	Satisfied with job	3.98/1.31	4.83/1.00	Ambitious
16	Never sets own deadlines	3.93/1.32	4.76/1.14	Often sets own deadlines
17	Feels limited responsibility	3.93/1.36	4.69/1.02	Always feels responsible
18	Never judges things in terms of numbers	3.95/1.43	4.83/1.20	Often judges things in terms of numbers
19	Casual about work	3.97/1.38	4.87/.985	Takes work very seriously
20	Not very precise	3.91/1.16	5.11/1.05	Very precise

Seven point scale was used for describing the stress control behavioral patterns of teachers in both public and private universities. The mean score (4-7), indicates types A1, A2 which explain the high stress level. The mean score (1-3), indicates B2, B1behavioural patterns of teachers with low level of stress. The mean score between the mean value 3 and 4 describes the type AB behavioral style which is associated with low level of stress.

Results of mean value shows that teachers in public universities scored high on statement "11" so inclined towards "does things fast" while lower on statement "1" so, more inclined towards "leave things temporarily". While teachers in private universities scored high on the statement "20, 12, 8" which indicates that they are more inclined towards "very precise", hard driving and they do multiple tasks at a time consecutively. Teachers of private universities scored low on the statement 14 and inclined towards the "little interests outside work".

In public universities, the teachers have moderate level stress at their workplace and are more inclined towards "leave things temporarily", "calm about appointments"," competitive attitude of employees", "listen to others", "hurry attitude", "easy going", "one task at a time", "deliberate in speech", "self-satisfaction", "large interests", "job

satisfaction", "deadlines", "responsibility", "judgment in numbers", "precise and casual about work". They only have high level of stress that is exhibited by "uneasy while waiting", "does things fast", "hard driving", and "can holds feelings".

In case of private sector universities, the findings reveal that teachers have high level of stress and are more inclined towards "finished things once started", "hurried about appointments", "highly competitive", "interrupts conversation", "hurried attitude", "can't wait", "tries to work on more than one task", "vigorous speech", "recognition from job", "quickly tries to finish the job", "hard driving holds feelings", "more concentration on work", "ambitious", "sets deadlines", "have feelings of responsibility", "quantitative", "precise and "take work seriously".

Results also indicate that in public sector university teachers are more tending towards the type AB behavioral style regarding the stress control while teachers in private sector universities have more inclination towards the type A stress control behavior.

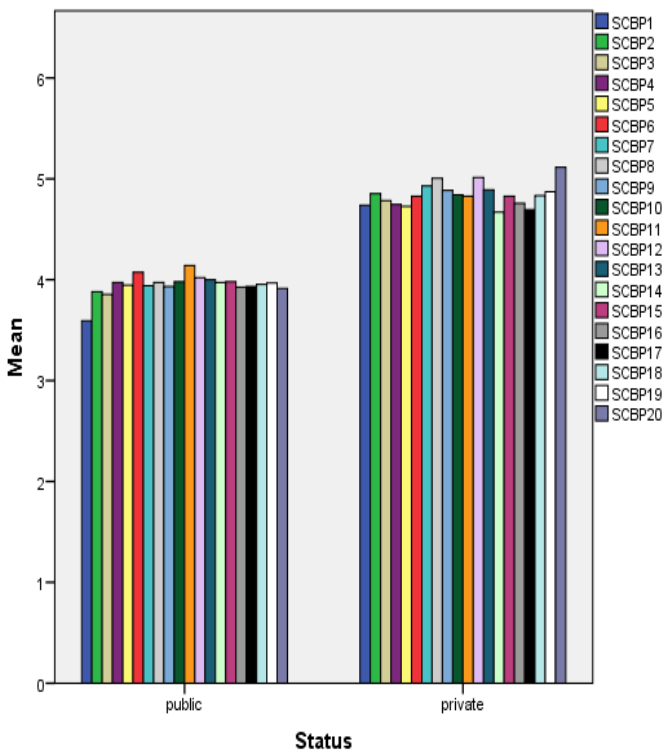

Figure 3. *Stress Level of Teachers at Public and Private Universities*

Results on comparison of public and private university teachers on twenty statements regarding the stress control behavioral style revealed that private university teachers were experiencing high level of stress. While in the public universities, teachers were experiencing moderate level of stress at their workplace.

Table 3

Comparison of stress among public and private university teachers

University Teachers	N	mean	*Df*	*t*	Sig
Public Sector	150	79	305	19.052	.000
Private Sector	157	97			

Results regarding stress control behavioral pattern of public and private university teachers indicate that teachers of public sector universities were falling under the behavioral pattern of type AB, which describes the moderate level of stress regarding the work environment. Because values show that teachers are at the marginal type of AB stress control behavioral style that is why can take a shift towards the type A stress control behavioral style. In case of private sector university teachers, results indicate that teachers fall under the category of Type A2 stress control behavioral style. This also reject the hypothesis H01 that university teachers have same Stress control behavioral style in spite of public and private sector.

In a study conducted by Aslam (2013) identified that work load is a cause of stress among both private and public colleges but teachers of private colleges are facing more workload than teachers of public colleges. Teacher in the private colleges also mentioned that time management is also reason of stress among teachers. Teachers have to manage the classes, meetings and extra efforts for betterment. So workload management in limited time brings stress

Table 4

Comparing the Males and Females Teachers Stress level (N=307)

Gender	N	Mean	*Df*	*t*	Sig.
Males	143	87.41	305	1.368	.172
Females	164	89.29			

Results of mean-value indicate that both males and females have type A2 stress control behavioral style. This explains that both males and females fall under the same category and have high stress level. So, stress control behavioral patterns are independent of gender, thus accepts the null hypothesis H02 and also insignificant. Another research conducted by Slišković and Seršić (2011) reported opposite results than the present study. Stress in females was found higher than males.

Discussion

The purpose of present study was to compare the stress levels of teachers at public and private universities. For this purpose total three hundred and seven teachers from universities of Islamabad were selected as a sample of study through stratified sampling technique. 150 teachers from public while 157 from private sector were selected from total six universities. For analyzing the objectives and hypotheses of the study, mean, standard deviation, and t-test was applied.

First objective of the study was to determine the stress level of private and public universities' teachers. Results of the frequencies and percentages showed that majority of the university teachers were having high stress level. Results also divulged that no teacher was found on type B1 behavior pattern and few teachers were having the type B2 and A1 behavioral style. According to Robbins, Judge, and Sanghi (2009) people with type as behavioral style are under high level stress. They put themselves in pressure and make deadlines for themselves. In contrast to the Type As behavioral patterns, people with Type BS behavioral style are less nervous, easygoing, many supportive friends and relaxed (Mahajan & Rastogi, 2011).

For further clarification, mean score and standard deviation was also calculated on all twenty opposite pairs of items. Results revealed that in public sector universities, teachers were more tended towards the type AB (people who display moderate level of stress) behavioral patterns while responding majority of the statements as: "leaves things temporarily", "calm about appointments", "competitive attitude", "listen well", "not in hurry", "easy going", "perform one task at a time", "deliberate speech", "self-satisfaction", "satisfied with their jobs", "setting deadlines", "limited responsibility", "qualitative judgment", "casual about work", and "not precise" . While in fewer statements teachers of public universities displayed type A2 (People who display high level of stress) behavioral patterns as "uneasy while waiting", "hard driving", "do things fasts" and "hold feelings". As far as teachers of private universities were concerned, they displayed type A2 behavioral patterns in all of the statements, except "do more than one thing at a time", "hard driving" and "very precise" where they exhibit type A1 behavioral pattern (person show very high level of stress). Results of Wainwright and Calnan (2002) explain that people with type A behavioral patterns have more risk of experiencing the serious effects of stress. Another study identified that there are two types of stressor: challenge and hindrance. Stressor related with work pressures, workload and time urgency work as a source of challenge and employees work better. While there are some stressors which become hindrance in the accomplishment of goals like ambiguity about their role, office politics and red tape work as hindrance stressors in performance (Wallace et al., 2009).

Second objective of the study was to determine whether there is significance difference of the stress level based on different types of universities. Results identified

that public university teachers were having the moderate level of stress while Private university teachers were having the high level of stress.

Third objective of the study was to determine whether there is significance difference of the stress level of male and female teacher. It was derived from the results that both male and female teachers have same stress control behavioral patterns and don not differ in their patterns due to their gender. A study by Matud (2004) explains that women relate stress with health and family related events while men relate stress causes with work related events, finance and relationships.

Conclusions

The findings of the study reveals that majority of the teachers have high level of stress. While it is also concluded that teachers of public and private sector universities are significantly different on their level of stress. Teachers of public sector universities have moderate level of stress among teachers. Teachers of private universities exhibit high level of stress among teachers. Whereas, while describing the differences in male and female teachers stress control behavioral patterns, no difference is found. Both male and female teachers have high level of stress therefore, it is recommended that some measures may be taken by the private universities to assist their teachers to overcome their stress problem. Few proposals may be followed for reducing the stress level among teachers. Universities may identify the stress enhancing factors among employees and take specific measures to eliminate or reduce the stress. In addition to this, recognition and rewards may be given to employees for better performance and reduce stress among employees. Organization may encourage the social support groups and mentoring to employees. Trainings about time management may reduce the stress level of employees. Availability of counselling services to the teachers may also improve the stress among teachers. Universities may also encourage supportive work attitude among teachers to reduce the stress level. Furthermore, organization may work on the better interpersonal relations among employees through formal and informal gatherings.

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Development of Number Concepts in Students with Intellectual Disability by using Digital Game based Learning

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Abstract

Intellectual disability is characterized by substantial limitations in both intellectual functioning and in adaptive behavior. Teaching students with intellectual disability is not an easy task. Use of computer assisted techniques to teach students with intellectual disability is a recent initiative in developing countries. Digital game based learning is an example of computer assisted teaching technique. The objectives of the study were to investigate the use of digital games to develop number concept among students with intellectual disability and to highlight the effectiveness of digital game based learning in attaining number concepts among students with intellectual disability. The researchers used quasi experimental research design (pre-test, post-test control group) to conduct the study. The population of the study consisted of students with intellectual disability at the age of 8 to 16 years having mild to moderate level of I.Q. A sample of 30 students with intellectual disability was taken by using random sampling technique. The students were randomly assigned to two group (15=control group, 15= experimental group). Two (2) mathematical achievement tests were used as an instrument of the study (one for pre-test and one for post). Total 10 sessions were given to teach the number concept to the subjects of experimental group by using digital game as an intervention. The data were analyzed by using IBM version22. The results of independent sample t-test show a significant difference between the pre-test and post -test scores of experimental group after treatment. The study recommended use of digital game to teach the number concepts to children with intellectual disability.

Keywords: Digital Game Based Learning, Number Concept, Efficacy, Intellectual Disability

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Introduction

Learning Mathematics is an essential skill for all students including students with intellectual disability. Mathematical concepts include problem solving skills, Algebra skills and computational skills (Fritz, Ehlert, & Balzer, 2013). At initial level, the most prominent primary concepts are finding patterns, building rods and making blocks of different sizes (Soyke, 2015). Mathematical skills help students' prepare for the world outside the school. These skills help them make a firm foundation for success in mathematical content (Gravemeijer, Stephan, Julie, Lai, Lin, & Ohtani, 2017).

Use of digital games for learning is a recent trend in the education of children with intellectual disability. According to research, digital games has potential to hold the attention of students and develop their interest in task and give them confidence about their potential to attain the targeted skill (Radford, 2000; Woo, 2013; Nussbaum, 2007; Ke & Abras, 2012), the attention skills of students with slight intellectual disability (Karal, Kokoç, & Ayyıldız, 2010), the social problem solving skills of children with intellectual problems (Rezaiyan, Mohammadi, & Fallah, 2007) and the psychomotor abilities of students with attention and hyperactivity problems (Goldsworthy, Barab, & Goldsworthy, 2000). The features mentioned above has placed digital games among most effective learning tools.

Use of digital games has also made teaching of number concepts less difficult for intellectually challenged students (Abramovich, 2010; Bottino, Ferlino, Ott, & Tavella, 2007; Moreno & Duran, 2004; Wang & Chen, 2010.). Although for many children with intellectual disability, learning number concept is a difficult task (Sedig, 2008).

In Pakistan, the uses of information and communication technology (ICT) to facilitate in the education of students with intellectual disability are still not evident particularly in the institutes of children with intellectual disability, which causes lack of mathematical skills in intellectually challenged children. Therefore, it is need of time to take revolutionary steps in the teaching of intellectually challenged children through the use of innovative methods for teaching mathematics. Keeping in view the above discussion on importance and role of DGBL for teaching students with intellectual and other disabilities, it is desirable to conduct a study on the use of DGBL as medium of instruction for students with intellectual disability in the area of Mathematics.

Objectives of the Study

This research was conducted to achieve the following objectives:

1- To highlight the importance of digital game based learning for the acquisition of number concept in students with intellectual disability.
2- To explore the use of digital game based learning to develop number concept in students with intellectual disability.

3- To highlight the efficacy of digital game in acquiring number concept among students with intellectual disability.

Methodology

The research was conducted by applying quasi-experimental research design (pre-test, post-test and control group).

Participants of the Study

Population of the study comprised of total number of 192 students at the age of 8 to 15 years with mild to moderate level of I.Q. A number of 30 students with intellectual disability at the age of 8 to 15 years having mild to moderate I.Q level were selected randomly as subjects of the study. The school situated in the University of the Punjab was selected for the place of experimentation due to the availability of computer lab/latest computers, internet and volunteers. For experimentation, researchers formulated two groups, control and experimental and assigned 15 students randomly to each group.

Instruments of the Study

Two different tests comprised of items on number concepts were developed as an instrument of the study. First test was applied to check the current level of performance by taking pre-test and second test was administered after the experimentation to see the improvement in the performance of the students in number concepts after intervention. Content validity was estimated by taking experts opinion related to the field of Special Education and Mathematics. Test was piloted on a sample of 13 students with intellectual disability. The Cronbach Alpha reliability of this test was .850.

Treatment

The researchers used digital game as treatment. For the selection of the game the researchers searched the games from the internet from BBC math's games on http://www.bbc.co.uk/bitesiz/ks1/maths. The games were developed for the students of 3 to 5 years age. Initially researchers had searched and selected 3 games. After it, the games were presented to the experts for the final selection of 1 game to be used as intervention. The experts were provided following 4 point criteria for the selection of final game, 1) developed for number concepts, 2) suitable for the students with intellectual disability (SWID), 3) age appropriateness and 4) free and online availability. The detail of rating of experts against each game has been presented in the table no.1. Which game was selected and why preferred

Table 1

Frequencies and percentages calculate on the basis of experts rating against each game (N=7)

Name of games	Developed on number concept		Age appropriateness		Suitable for SWID		Availability of the game	
	F	%	F	%	F	%	F	%
Game 1	6	86	6	86	5	72	5	72
Game 2	3	43	2	29	4	57.2	5	72
Game 3	2	29	2	29	2	29	5	72

Implementation of Treatment Plan

After selection of one game, researchers developed a plan to implement the intervention. Experimental group was instructed number concepts by implementing intervention i.e., use of digital game for 30 minutes daily (five days in a week). Total 10 sessions were administered for teaching number concept to students with intellectual disability. Every student was instructed independently by the researchers and with the help of volunteers. Uniformity for providing instruction had been ensured through training of the volunteers.

The subjects of experimental group had been taught number concepts in four phases. The first phase was designed to develop the skills of count through objects. In second phase the skill of count and match was developed. And third phase was designed to color the desired numbers of objects. Fourth phase was on write in serial.

Table.2

Implementation plan of sessions

Phases	Concepts	Time of one session	Total
Phase 1	Count the objects	30 minutes	(3 session)
Phase 2	Count and match	30 minutes	(3 session)
Phase 3	Colour the desired number of objects	30 minutes	(2 session)
Phase 4	Write in serial	30 minutes	(2 session)

Data Analysis

Data analysis was carried out by using SPSS. Independent sample t-test was performed to see the difference in the learning of mathematical concepts of students belongs to control and experimental group before treatment. Whereas, paired sample t-test was applied to see the difference between the performance of control and experimental group after treatment.

Results

The results of independent sample t-test show no significant difference between the performance of control and experimental group (Mean of group 1= .77, Mean of group2= .53) in pre-test. Results showed no difference in scores on number concepts of both control and experimental before the intervention. (Table.4)

Table4

Independent sample t-test on pre test scores on number concepts of both groups

Control group		Experimental groups		sig
M	*SD*	*M*	*SD*	*.601*
.77	.74	.53	.53	

The above table shows no significant difference between the mean of control and experimental group before treatment/intervention (Mean G.1=.77, Mean G 2=.53).

Table. 5

Paired sample t-test applied on experimental groups before and after intervention

	T	*Df*	*Sig*
Pre-test	.99	28	.33
Post-test	-2.05	28	.049

Above table shows significant difference between the performances of experimental group on number concepts before and after intervention/treatment. After implementing the intervention, both groups were given post-test and tabulated (Table.6)

Table 6

Independent sample t-test to see the difference between the performance of control and experimental group after treatment

	Control Group			Experimental Group		
	Mean	SD	Sig	Mean	SD	Sig
Post Test	.77	.40	.96	1.09	.45	.001

The above table shows significant difference between the performance of control and experimental group on number concepts after treatment (sig=.001 which is less than .005).

Discussion

This study was conducted to observe the effect of digital games on the acquisition of number concept skills in students with intellectual disability. The results of pre-test indicated no significant difference between control and experimental group on scores in number concepts. Post-test results showed significant improvement in number concept score of experimental group. These findings are inconformity with the

findings of many previous researches (Sugimoto, 2007, Hill, 2006). These researches had reported that use of digital game motivates learning, offer immediate feedback, and influence changes in behavior and attitudes (Huang, 2011: Pastergiou, 2009). According to the Panoutsopoulos and Sampson (2012) there are multiphase educational benefits in the instructional technology of DGBL. These digital games are helpful in improving the knowledge and have the capacity to teach the desire learning skills.

Conclusion

In this study, students from experimental group showed improved results in the acquisition of number concept through count objects and click on relevant number, count the objects and match with relevant number through mouse, color in desired numbers of objects and put the objects according to serial number. This study is very important for the acquisition of number concept skills of students with intellectual disability. Participants of intervention group enjoyed to played games activities during 10 session as reported by their concerned class teachers.

Limitation and Directions for Future Research

The researchers used self-developed instruments due to unavailability of standardized instruments. The study has been conducted only on number concepts due to financial and time constraints. The researchers believe that more mathematical concepts would have been included for determining the efficacy of digital game based learning in the future researches.

Recommendations of the Study

On the basis of findings of the study following recommendations have been made.

1. Students with intellectual disability should be taught with new instructional technology of Digital Game Based Learning.
2. There is a need to train the teachers of students with intellectual disability to use the digital learning techniques for teaching students with intellectual disability by arranging the training courses and workshops.

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The Role of ICT in Motivating Learners in ESL Classroom at University Level in Lahore

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Abstract

ICT integration in language classrooms is the subject of research for many decades. The purpose of this descriptive study was to investigate the effect(s) of using ICT tools (in ESL classroom at undergraduate level in Lahore) on motivation and learning. In this study, teachers (from government and private sector) were interviewed to evaluate their stance, perception and behaviors towards ICT usage in ESL classrooms; and what, according to them, are the impacts of ICT on students' motivation. Course outlines used in Punjab University and University of Central Punjab were reviewed. A survey was also conducted from students to quantify students' behavior and attitudes towards ICT tools and its impact on their motivation. Gardner's AMTB was adopted in the questionnaire and the data was analyzed through SPSS. This study shows that ICT tools have motivational impacts on students' attention and learning. Results obtained reveal correlation between students' and teachers' opinion and attitude towards ICT.

Keywords: ICT, ESL, Motivation, Students' attention, Learning.

Introduction

Motivation plays a vital role in academic as well as life-long learning (Sanacore, 2008) and educationists have been researching and working hard to find solutions to motivate their students in order to maximize their learning (Linnenbrink & Pintrich, 2003; Granito & Chernobilsky, 2012).

Second and foreign language learning achievement may greatly influenced by motivation (Gardner & Lambert, 1959). English, undoubtedly, has become more enjoyable and practical after the language teachers started using computer and technology for their day to day lectures. Hence, it indicates the strong role of computer used in class may results the improvement in learners' attitude and motivation for

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learning English as a second language. According to many researchers, exploring the patterns of the ways learners behave while learning a language; the vigor, the direction, the very motive of students' behavior are basically the ways to identify and study motivation (Deci & Ryan, 1985; Prinzessinnadia, 2013).

Literature Review

ICT has become a beneficial and an inevitable pedagogical tool in education (Brown, 1980; Lenhart, Madden, & Hitlin, 2005; Randall, 2006; Irshad, 2008; Irshad & Ghani, 2011). ICT is the abbreviation for Information Communication and Technology. This abbreviation is currently being used for all technologies which are adopted to communicate and work with information in terms of hardware and software (Lee-bihni, 2012).

Prensky (2004) stated that a world without computers and digital media is meaningless for the students and their approach towards the world of information and communication technology is different from their forefathers who are viewed as 'digital immigrants'. Integration of ICT in education has started in 1970 with the introduction of computer and technology in classrooms and teachers have started taking great interest in it (Cunninghan, 2000: Lee, 2000).

Many researchers have realized that the integration of technology has very constructive impacts on motivating students. According to Genç and Aydın (2010), the role of technology in language classrooms is under investigation for students' personality, ways of learning and motivation; in short evaluating the effectiveness of CALL is the main aim. Learning students' behaviors was the main key for Lumley (1991) as he noted that students' were observed to be bored in traditional classrooms when too easy tasks were assigned whereas; when given too difficult tasks, it made them upset and annoyed. So, the main key is to use technology in accordance with students' needs and strengths. It helps them thrive. Technology can be used in diverse ways to make language learning more appealing and involving and learners are always intrigued to participate and learn when shown different Audio and visual learning treats. As per Soo (1999), the role of a teacher becomes really crucial in this regard as if the pedagogy and style of a teacher do not match with students' learning style; it would result in loss of motivation on the part of students as this would cause boredom and incomprehension for learners (Nunan & Carter, 2002; ICT in English Language Teaching and Learning, 2013).

The feature of speakers and smart technology in computers is exceedingly motivating and when computer reads the text loudly, students feel more motivated and their listening skills improve (Jakobsdottir & Hooper, 1995). An improvement in

learning and grades is observed by the teachers due to improvement in attention and hence motivation due to integration of multimedia in the classrooms (Prinzessinnadia, 2013). Teachers also believe that use of multimedia results in improved attention, inquisitiveness and interest (Boster, Meyer, Roberto, & Inge, 2002).

As Roger (1996), Lai (2006), and Nobar and Ahangari (2012) stated that concurrence of computer and traditional second language learning constitute students' independent and autonomous learning, and teachers obtain ample time for those areas of language teaching which, otherwise, can't be taught through computers. The accessibility of computer and multimedia has increased, due to such pedagogical advantages, in both schools and domestic level. People, all over the world, started realizing its practical results in teaching and learning and hence making it an imperative part of ESL.

Mayer (2005) believed that being presented with words as well as pictures has enabled learners to create a verbal along with picturesque mental image so that students can have better connection with image and learning (Nobar & Ahangari, 2012). Learners can more successfully internalize information via ICT in classrooms and can access multiple resources in order to understand and learn.

The multitude of authentic resources can be accessed through one simple click. Both educators and students can use these resources in diverse and significant ways to improve cognition in ESL class. This access has enabled teachers to develop pedagogically more creative recourses for their class (Leloup & Ponterio 2003 as cited in Nobar & Ahangari, 2012). Even giving feedback to the students is and can be done through computers.

Internet is proved more promising in providing helpful material as compared to tape recorders and videocassettes (Szendeffy, 2005). ICT is a treat for the people who want to improve their listening skills with countless audio and visual resources. Researchers state that having examined the available sources on developing learners' listening skills in ESL classrooms, no wonder the internet has achieved popularity (Kavaliauskienė, 2008; Nobar & Ahnagari, 2012). Computer(s) can adapt the nature of learning by pushing the responsibility and control more in the hands of the learner; , means making it more learner-centered than teacher centered (Bruce, 1993; Jonnasen, 1999; Smith, 2004).

Conceptual Framework

While more and more emphasis is given to the integration of CALL or ICT in Pakistan, there is a need to identify how promising this idea sounds and how promising

it actually is. The study explores that to which extend ICT is helpful in language learning in ESL context. As Gardner suggested that the success of ICT can only be ensured if students adopt positive attitudes towards ICT because only then it seems to become a motivating tool for second language learning.

This study is set in the context where enriching the institutes with latest and high profile technological tools is considered a must for the development and learning of the students both in schools and universities. With the increase in demand, the current study investigates that how the output of the ICT tools as motivated learning is occurring in English as a second language learning classrooms, at university level, from the perspective of both teachers and the students.

Statement of the problem & Research Questions

The major aim of this study was to investigate the role of information and communication technologies (ICT) and its impacts on students' motivation. Though there are many studies available which already proved that ICT have many motivational impacts on students' learning both inside and outside classroom; the motive of this study was to investigate such phenomenon where the use of technology is highly emphasized, and to measure the motivational learning. The focus of the study is at undergraduate level. So, keeping in view the aim and focus of the study, following research questions are advanced:

- What is the perception of the teachers about the motivational effect of using ICT in the classroom on students' learning?
- What is the students' level of satisfaction with using technological tools?
- What factors motivate students while learning through ICT tools in an ESL classroom?
- What are the impacts of those motivational factors on students' language learning?

Method

Sampling

Data was collected, through convenience sampling method from 192 students studying English in University of Central Punjab (UCP) and 120 students studying English in Institute of Administrative Sciences, University of the Punjab (PU). A survey was conducted for the undergraduate students who were selected through convenience sampling in order to understand and have an idea about the integration of ICT for motivation from the students' perspective. According to Karlinger, survey method is considered best to get individual and social specifics, viewpoints, motivations, approach

and apprehensions (1986). The scope of a survey based investigation can vary due to large scale investigation or small one by single researcher (Nunan, 1997) as its foundation is, most of the time, based on the snapshot of circumstances, occurrences and attitudes at a particular instant (Gorard, 2003), and also questionnaires are an easy and practical mean of gathering data (O'Maley & Chamot, 1990; Netemeyer, Bearden, & Sharma, 2003).

The researchers chose convenience data sampling technique in order to maintain the validity of the data gathered in a short period of time and also easy access to the respondents. Researchers made sure that this sample is taught through some of the information and communication tools and has familiarity with these tools.

Interviews were conducted through face to face method and teachers were asked to give short and long responses and also to give suggestions. The data were treated through SPSS 21 and a battery of advanced statistical technique was used to analyze data.

Instrumentation and Data Analysis

A quantitative research framework was adopted to analyze the role of ICT as a motivational tool for learning in the classroom at undergraduate level in Lahore. Quantitative research aims to quantify the relationship between two variables. In case of this study, it was to quantify the impact of using ICT tools on motivational learning in the classroom. The current study is descriptive in nature**.** In a descriptive study, "no attempt is made to change behavior or conditions--you measure things as they are" (Hopkins, 2000).A survey is conducted on 312 students in which 136 are males and 176 are females. Interview conducted on 25 Teachers. M.A/M.Phil teachers included for interview. 1 to 6 years' experience counted for interview. For data collection two universities Govt. and private included.

The self-constructed adaptation of questionnaire was done from Gardner's (1985) 'Attitude Motivation Test Battery' (AMTB). Major reason for selecting this test was that it was adapted in huge number of quantitative studies (Gardner & Lambert, 1972; Masgoret & Gardner, 1994; Kristmanson, 2000; Williams, Burden, & Lanvers, 2002; Pineda, 2011; Altasan, 2016; Özel, 2017), which consequently established its validity and reliability for more than two decades. Since present research dealt with Motivation for learning through ICT, so different questions were adapted and modified keeping in mind Passay and Rogers model for motivation (2004) and for its relevance to research cornerstone.

A five-point likert scale (strongly agree, agree, neutral, disagree and strongly disagree) questionnaire was developed of total 30 questions as to determine the students' level of satisfaction with each statement or question asked.

To evaluate the validity of the questionnaire, researcher conducted a pilot testing of the tool developed. A class of BBA Fall, 2015 was asked to give their feedback and suggestions to how this tool could be improved. Students suggested using simple vocabulary to make it easier to understand. After redrafting the questionnaire, researcher asked three educational experts, who are related with ESL teaching or expert in quantitative studies, to evaluate each statement as valid and authentic. They gave their consent to the validity of the questions asked. So, necessary changes were made and a survey comprising of 30 questions was drafted. Before conducting the survey, the last step was to further check the validity, reliability and internal consistency of the questions through Cronbach alpha.

Table 1

Scale Statistics

Mean	Variance	Std. Deviation	No. of Items
70.92	158.231	12.579	33

Table 2

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.857	.869	33

As it is clear in Table-3B, the Cronbach's alpha result of the questionnaire is 0.87 which is more than 0.6 and is nearest to coefficient 1, so the questions in the survey had enough reliability and internal consistency to test students' motivation.

Results

Descriptive: Interviews from Teachers

Teachers, who were interviewed were all M.Phil and have had an experience of more than 5 years, except for one teacher who was a Master of English, but had an experience of almost two decades.

When asked about training, few teachers have got training of ICT tools integration in the classrooms. Institutes and organizations are only interested in equipping their classes with ICT tools but teachers are not trained to use those tools.

Teachers showed great interest in teaching through ICT tools and believed that it is very important to incorporate these tools for students' learning and motivation. All teachers were 100% agreed that ICT tools motivate their students (Fig-2). The use of clips and movies make simple lecture interesting for the students and that motivates them as well.

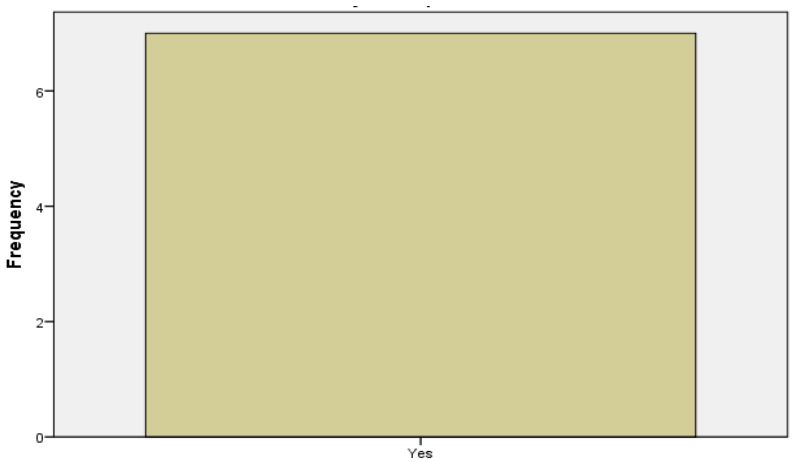

Figure 1. *Does using multimedia and other communication tools motivate your students? Pl share your experience*

When asked about that whether using ICT has a positive effect on all four basic skills of second language learning (Listening, Reading, Speaking& Writing) or not, all were agreed that it definitely does. According to them, mostly speaking skills develop or improve, whereas listening and writing also advance.

Table 3

ICT improves for basic skills

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	25	100.0	100.0	100.0

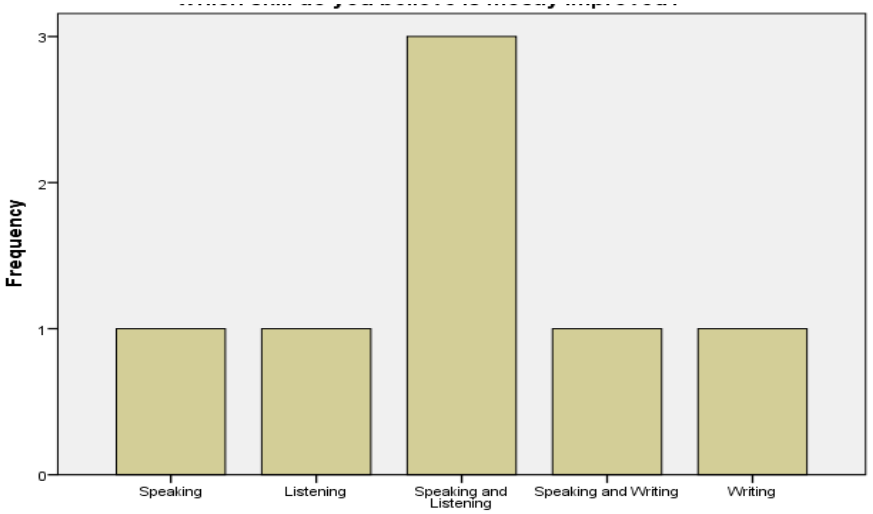

Figure 2. *Which skill do you believe is mostly improved?*

Seventy out of 25 teachers said that ideally a class should be based on 70% or more teaching and learning through ICT tools. Unexpectedly, 2 teachers of a local private university believed that there is no need as such to incorporate ICT tools in classrooms, yet they were of the view that ICT definitely motivates their students. Most of the teachers believed that teaching through multimedia and other ICT tools adds a lot to their confidence and a PPT file or video clip saves a lot of time and effort.

Teachers believed that rather than depending on one, either ICT or traditional method, a blend of both may work better to meet the needs of postmodern learners.

Teachers shared multiple issues and problems that they face in the classrooms when integrating ICT tools; the majority faced technical problems and the internet based issues.

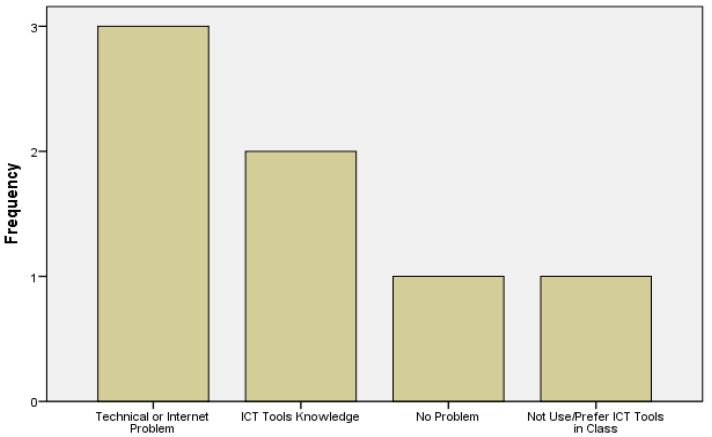

Figure 3. *Any problems dissatisfaction that you feel related to ICT integration in your classroom*

During interviews, interestingly, teachers apparently realized the importance of ICT inclusion, but few were of the view that it is not compulsory and their simple traditional class lecture also works the same way as lecture through ICT tools. Most of the teachers agreed that a proper training and understanding of the CALL or ICT tools is a must.

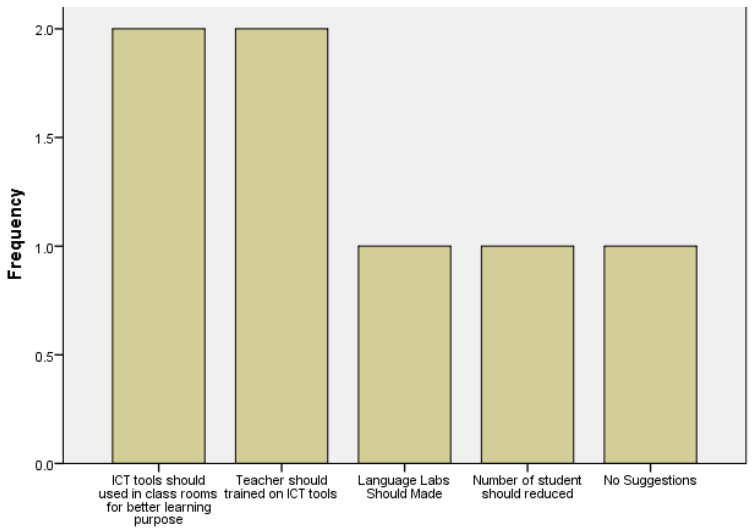

Figure 4. *Any suggestions*

Students' Survey

As the second part of this research, a survey was conducted in UCP and IAS, PU to record students' opinion and perception of ICT in language classrooms. Students showed great interest (as predicted by teachers) in the incorporation of ICT tools in their language classrooms. 71.8 % of the students' sample population believed that computer and technology is very important for learning language. Though the students love the use of technology in their ESL class, they feel that it is not a compulsion.

Interest and Understanding (I&U)

ICT, according to many people, develops an interest in learning and teaching. When students were asked to give their view on the statement, more than 75% of the students agreed with this statement and find ICT more comprehensible method of learning as compared to traditional learning in an ESL classroom. Students considered PPT based lectures more comprehensible and interesting (Figure below) and took it as indication of the fact that teachers are well prepared.

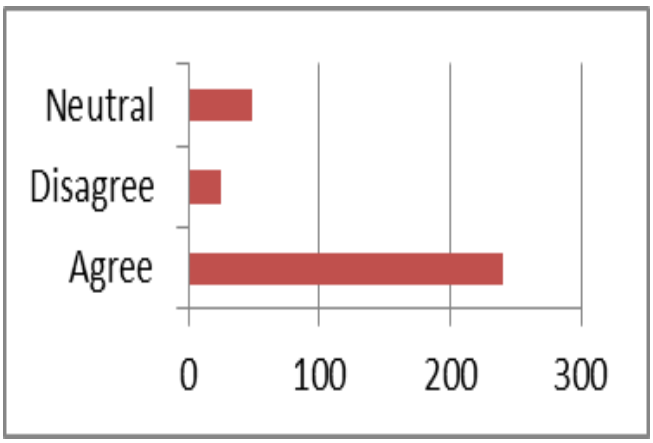

Figure 5. *ICT tools make lecture interesting and comprehensible*

Autonomy (Au)

When students are taught from a variety of tools and methods, it adds to their confidence and autonomy. Students, from both private and government university, were agreed with that use of ICT gave them sense of freedom and motivation.

Grammar (Gr)

Students showed mixed responses regarding learning grammar through technology and communication tools. 135 students agreed to the statement that old grammar books are better than learning grammar online, 96 recorded their

disagreement, whereas 80 students showed neutral stance to the statement. Still, students like online grammar exercises as they immediately get the results. This immediate feedback is important for the students.

Result Oriented Approach (ROA)

As indicated in Passay's Model for Measuring Motivation (2004), results and future outcomes play an important role in motivating learners. Researchers, in a questionnaire, added 2 questions related to result oriented approach. Students, both male and female, confirmed that they expect to show improvement, in terms of both results and learning.

Personal Satisfaction (PS)

The researchers added 3 questions in order to evaluate students' personal satisfaction and admiration towards ICT tools. Mostly, students consider that ICT tools are making classroom learning more interesting and enjoyable.

On the whole, students really like and appreciate the integration of technology in their classes. Their approach towards its incorporation in an ESL classroom was also affirmative.

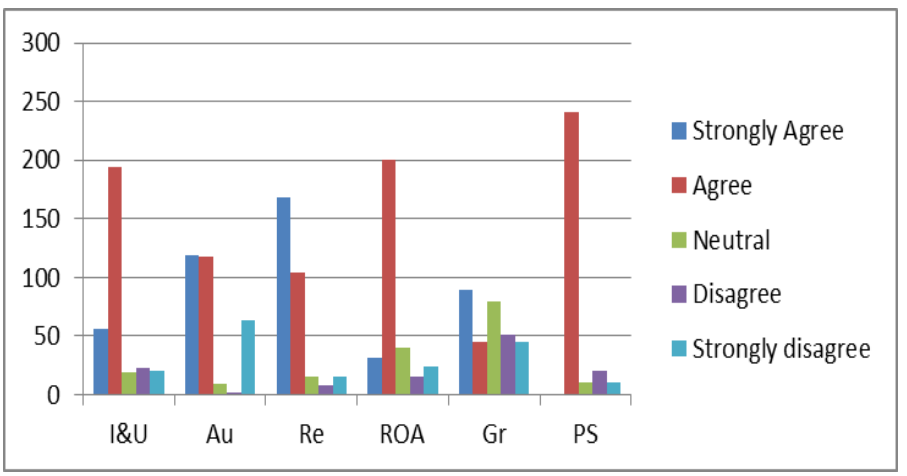

Figure 6

Students' Comments

When asked about the difference in students' behavior when taught through ICT and when through traditional lecturing, many students shared their experience that students are more attentive when taught through ICT tools. Most of the students stated

that learning activities through ICT are more engaging as compared to traditional teaching because the music, light and colors attract their attention.

Students were not very enthusiastic when asked about 100 percent ICT based classrooms. Female students mostly, were against this idea. One of the students wrote that she would not like this idea because, in such labs, teacher role will be minimized. Moreover, male students were also little hesitant as they liked the idea of language lab, but mostly wrote that they want a class based on blended learning.

Correlation Analysis

Through correlation relationship is measured between teachers and students point of view for ICT. Teachers feel more satisfied and confident when they teach through multimedia and other communication tools likewise students feel that technology tools add more confidence while giving a presentation. As p value is 0.02 which is smaller than alpha=0.05($p<\alpha$) so we can say that there is a positive relationship between students and teachers satisfaction and confidence for technology tools as correlation value is 0.132.Teachers and students thought that technology tools are important in language classrooms. It is an important part of classrooms during lectures. As p value is 0.019 which is smaller than alpha value=0.05. So we can say that there is a positive relationship between teachers and students point of view about the importance of ICT as correlation value is 0.076.Technology tools also affect student's grades in a positive way. Teachers also agree that students got higher grades due to technology tools. As p value is 0.041 which is smaller than alpha=0.05. So, we can say that teachers and students agree with that grades improved due to technology tools as correlation value is 0.070.Teachers' interview showed that students took more interest through technology tools used in classrooms. ICT tools to motivate the students to do more. As p value is 0.039 which is smaller than the alpha value so we can say that students and teachers have a significant relationship about students' understanding and motivation as correlation value is 0.010. Teachers feel that technology tools affect teaching-learning process positively and students found learning language more comfortable and interesting. As p value is 0.049 which is smaller than alpha so we can say that ICT method is a far better method because students feel enjoyment in classrooms as correlation value is 0.146. There is no relationship between the students' point of view that power point method is boring and teachers view is that technology tools are motivator for students. As p value is 0.072 which is greater than alpha so we can say that there is negative correlation as correlation value is -0.336. Students love to use technology tools in classrooms and teachers feels satisfactory during lectures using technology tools. As p value is 0.01 which is smaller than 0.05 so we can say that as

student loves to learn in ICT classrooms and then teacher more satisfied during lecture as perfect correlation value is 1.

Factor Analysis

Table 4

Descriptive statistics

	Mean	Standard Deviation	N
Satisfaction and confidence	5.08	0.79	337
Importance of ICT	6.08	1.00	337
Skills improvement	5.75	1.29	337
Grades	5.25	0.86	337

Using factor analysis, different items included in the questionnaire can be measured that how teacher and student views about ICT can affect each other. There are five factors and in each factor there are more than 2 items. The amount of total explaining variance in each variable is 67.133%.The value of KMO statistic is 0.717 showing sampling adequacy appropriate for the data. Bartlett's test which measures the null hypothesis that the variables are significantly correlated or correlation matrix is an identity matrix. For the current data the Bartlett's test of Suphericity yielded a Chi-Square statistic 8676.12. The null hypothesis was rejected at 0.01% level of significance with p=0.000. Thus we can proceed to the factor analysis. As Cronbach's Alpha is greater than 0.05 in all factors, so we can say that the data shows the reliability and internal consistency of a set of scale or test items.

Conclusion

Technology is a modern need and reality. Day by day, people are becoming more and more reliant on technological and communication tools. A little kid now learns poems, counting and many different things from either YouTube or Baby TV. So, from a little toddler to a grown up old man, everyone now finds these ICT tools as an inevitable reality. The purpose of this research was to investigate the impact of ICT tools on students' motivation towards learning English as a second language.

According to the results gained in current study, a better motivated learning can be achieved if following factors are considered (Figure below)

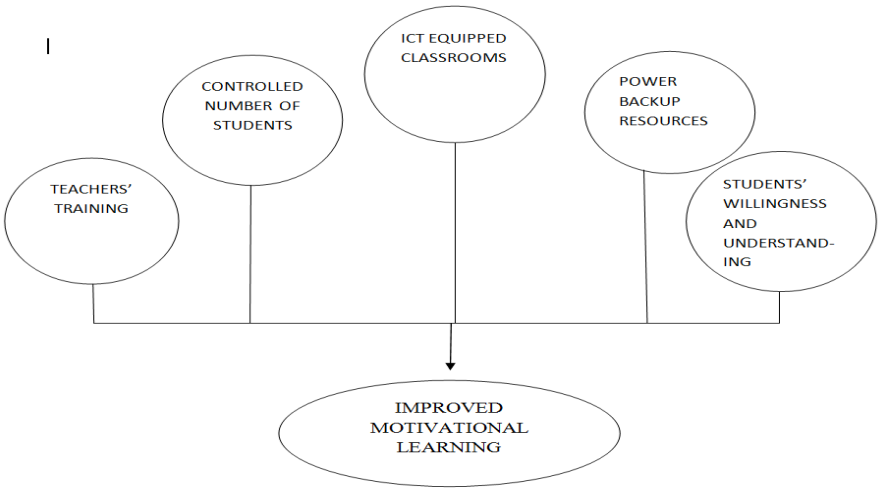

Figure 7

ICT in an ESL classroom motivates learners in a very positive manner. In Lahore, being the capital city of Punjab, the overall condition is better than other small cities of Punjab. Even here in Lahore, a long effort is required to carry out the successful application of CALL. Government of Pakistan must understand the dire need of increasing the overall budget for education. Since Ministry of Education and HEC are realizing the importance of ICT equipped classroom, a practical step is a necessity. Smart budgeting is the only solution where one can utilize local resources with integration of expensive online tools and websites. A proper training for the teachers and a positive encouragement to the students will do wonders.

Implications

Looking at all the results and previous studies, there is no doubt left to the fact that ICT integration in the ESL classrooms is a need and a requirement. All over the world, different universities and institutes are using ICT based courses for better learning and to ensure secure and successful implementation of these tools. As predicted by many researchers (Jonnasen, 1999) long time ago that in the future all traditional methods of teaching will become obsolete or will be reduced and if provided with rightful tools and opportunities, students will show satisfaction and improvement towards English Language Learning. CALL does not depend on which software is used rather depends on how the software is put to use by teachers and students (Warshauer, M., 1996). In addition lack of awareness, motivation and training on part of teachers results in under use of the provided resources.

Provision of fully equipped computer lab for language learning is costly and this is possible in private institutes because students can pay for the expenditures as one of the recent project of Beaconhouse; Concordia College, where to have a Tablet or an I-pad is a must for all the students. But, this is very difficult in the government sector where our government is not ready to spend money. Government shall allocate more budget to enhance quality of education .

A positive encouragement should be provided to the students to use technology and making them feel that they are more independent, have more control over their own learning and have high expectations. This autonomy will add more responsibility in learners. Passey(2004) also suggested encouraging students to become responsible autonomous learners to ensure success.

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Learning in Mathematics: Difficulties and Perceptions of Students

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Abstract

Many students find their studies in mathematics to be difficult and unrewarding. There is a tendency for students to opt out of studying mathematics as soon as possible. However, mathematics is usually seen to be important and holds a central place in the curricula in most countries. Mathematical ideas find application in numerous areas of life and in many careers. Thus, negative attitudes among students may have important ramifications for career choices and contributions in wider society. This study considered a sample of students (N = 647) from Punjab, Pakistan and collated their perceptions in relation to their learning in mathematic. The tools of data collection of this study were questionnaire. The findings indicate that students show positive attitude and grasp of mathematics content at grade 9th and 10th in mathematics. This was noticed that there were differences in attitude in what is required by the students and what is occurred in classroom where the learners are taught Mathematics. This study suggests the solutions about the competencies of students to work through mathematical difficulties.

Keywords: Learning in Mathematics, Difficulties, Perceptions, Field Dependency

Introduction

In looking at mathematics education, Brown et al. (2008) noted the widespread opinion among learners that mathematics is difficult, with students opting out whenever possible. By contrast in the neighboring country (Scotland), mathematics is a highly popular subject at all levels in school and university (Scottish Qualifications Authority, undated). This illustrates that, while mathematics is seen as difficult and unattractive in some countries, this observation does not apply in all. Sadly, there is a lack of research that explores learning in mathematics to see whether the factors underpinning the differences can be observed.

One of the problems in mathematics arises from its very nature. When learning mathematics, one goal is that students can conduct procedures in order to obtain correct answers. In seeking to achieve this goal, the students are encouraged to practice the

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procedures. Thus, the procedures are memorized and then automated in the minds of learners (Alenezi, 2008). While this can generate confidence, it often ignores an emphasis that students should understand what they are doing and why they are doing it. In this way, mathematics can be reduced to a process of practicing procedures until they are memorized, with little opportunity to understand what the procedures mean or how they might be applied wider life. In an interesting study, using factor analysis, Almadani et al. (2012) confirmed that examination successes in mathematics depended on recall skills, this broad picture applying to all school subjects. While facts may be memorized in some subject areas, in mathematics it was the procedures that were being memorized.

By its very nature, mathematics makes high conceptual demands on students. It involves procedures that may appear to be abstract and unrelated to life. It has been shown again and again that this places high demands on the limited working memory capacity in learners (Reid, 2009). Working memory is part of brain that helps learners in thinking, comprehension and problem solving skills. It has limited capacity for individuals and help to control comprehension.

This study also seeks to explore the extent of field dependency in learning in mathematics in high school students. Witkin and Goodenough (1981) described that field dependent is a person that cannot detach an item from its context. Field-Dependent individuals can unsatisfactorily separate an item from its background and willingly accept the dominating field. Field-Independent individuals can easily 'break up' an systematized perceptual field and separate willingly an item from its context. Very often, experienced teachers of mathematics hear learners say that, when faced with a mathematics problem they state they are uncertain where to start. This is a classic sign of information overload related to working memory limitations and that is where an understanding of the learner characteristic known as field dependency is central. Field dependency is the extent to which a person can focus on what is essential for a task in hand and instead of; ignoring what is peripheral for that task (Tinajero & Paramo, 1998). This has been considered in detail in the study of mathematics and this learner characteristic is very important in being able to undertake mathematical problems of the sort used in schools (Onwumere & Reid, 2009).

Mathematics is an integral part of the curriculum in almost all the countries of the world. In Pakistan, mathematics is considered a key subject for many fields. Khan (2012) noted that mathematics is not usually a popular subject and is a subject where students face many problems, with many opting out as they are allowed. Ali (2011) considers that, in Pakistan, it is poorly taught. However, teachers can only teach what is mandated for them. Very often, teachers are forced to follow the ways prescribed by textbooks. Procedures are memorized, practiced and then tested in formal examinations, credit being given for the correct conduct of procedures leading to correct answers

(Mohammad, 2002; Amirali & Halai, 2010). One study conducted in Pakistan has shown very clearly that a rigorous curriculum designed by school teachers was much more successful than the curriculum imposed from outside and designed by those outside the classroom (Ali & Reid, 2012). Thus, part of the problem in mathematics education may well be in an inappropriate curriculum.

In Pakistan, the curriculum for secondary grades is arranged under five broad themes and goals: (1) Numbers and Operations, (2) Measurements and geometry, (3) Algebra (4), Information handling, (5) Logical thinking and reasoning. However, if the examinations give the rewards to candidates for the correct conduct of taught procedures, then practicing procedures will become the focus for both teachers and learners. Many studies have considered areas of difficulty in mathematics. For example, Barmby and Harries (2007) investigated the significance of *representations* in understanding of multiplication. Harrie and Patrick (2006) carried out investigation on the array representation in learning multiplication calculations. They used an innovative approach for recording learners work on computer. Matthews and Pepper (2005) examined that the main reasons for giving up mathematics include lack of satisfaction coupled with boredom along with perceived irrelevance. Nardi and Steward (2003) argue that, at age of 12-15, enjoyment is an important feature for learners when seeking understanding.

In a wider sense, research shows consistently that learners naturally want to make sense of what they are being taught. This observation stems right back to the work of Piaget (Wadsworth, 1979) and was very evident in the study of Skryabina when she looked at what attracted learners into studying physics (Reid & Skryabina, 2000). The principle led to the idea of the applications-led curriculum where the themes being studied were determined by an analysis of the needs of the learners in the context of their age, culture and lifestyle (Reid, 2000). Alenezi (2008) considered the place of applications in the teaching and learning of mathematics and noted that this presented very specific difficulties in that the incited capacity of working memory could not cope with the mastering of a mathematical procedure, understanding what that procedures meant and seeing how it could be applied?

In considering any mathematical task, the learner has to cope with the procedure to be followed and any mathematical representation being used. The working memory may be able to cope with this but has little or no capacity left to consider any understanding of the concepts underpinning the procedure or situations where the procedure might be applied. The evidence shows clearly that difficulties in mathematics can largely be explained in terms of the limitations of working memory capacity. In this context, Alenezi (2008) observed that the best way forward is to concentrate on practicing the procedures until these are automated. Automated procedures take up very little working memory space, leaving capacity for the learner to

consider understanding and applications. However, if the examination procedures reward the correct conduct of procedures and the curriculum is overloaded, there is no time or motive for the hard-pressed teacher to consider either understanding or applications, leaving the learner dissatisfied.

Statement of the Problem

While mathematics is logical in nature, it is also somewhat abstract and that, while it applies widely in life, it is difficult to make these applications real and tangible to young learners. The present study was regarding "Attitude in Learning Mathematics: High School Students' Perceptions, Difficulties and Field Dependency in their Mathematics studies". Objectives of the study were to explore:

1. The high school students' perceptions and attitudes towards mathematics.
2. The challenges and difficulties related to mathematics performance.
3. The relationship between mathematics achievements and age with the field dependency.

Research Questions

This study targeted to answer following questions

1. What are the high school students' perceptions towards mathematics learning and experiences in the classroom?
2. What are the difficulties the students encounter in their mathematics experiences?
3. What is the relationship between mathematics achievements and age with the field dependency of students?

Significance of the Study

The study anticipates shedding light on the solution of the conceptual mathematics difficulties students usually face in secondary classrooms in Pakistan. This study will help students to gain command over subject content at secondary level in mathematics. There seems to be a huge difference between; what is required by the students and what happens in the classroom where students learn Mathematics? This study may recommend about the in competencies of students to work through mathematical difficulties by majority of students in secondary mathematics. This study also anticipates exploring the reasons of the lack of critical thinking and problem solving in Pakistani students and search out; why students fail to apply their knowledge of mathematics to the novel situations.

Research Methods and Sample

A quantitative investigation using a questionnaire of 45 items was made to examine high school students' attitude and difficulties in mathematics learning and experiences in the classroom. The questionnaire was developed by the researcher by

look at the themes from the literature to examine high school students' attitude and difficulties in mathematics learning and experiences in the classroom. Internal consistency of 45 items was measured by Cronbach's Alpha statistic that was 0.94. Moreover, Johnston Figure test (1976) Field dependency (a standardized test) was used to explore the level of field dependency of students. Six hundred and forty seven students from science group, aged approximately 14-16 were selected from 4 districts in Punjab, Pakistan. The sample contained; 43% male and 57% female; 65% urban and 35% rural; 35% public and 65% private school; 58% 9th class and 42% 10th class students. Data was collected during school hours and analyzed through percentage and chi-square test.

Findings of the Study

The overall picture gained by considering the response data is now presented. The responses regarding perceptions, attitudes, and difficulties are presented in the form of percentage.

Perceptions of Students in Mathematics Learning

Table 1 from the first section of the questionnaire explore how do the students perceive about their learning in mathematics?

Table 1

Perceptions of students in mathematics learning

Statements	*SA*	*A*	*N*	*DA*	*SDA*
I entirely comprehend my lessons.	44	46	6	3	1
I like teaching method of my teachers	53	36	5	4	2
I truly comprehend the procedures in class.	33	48	11	5	3
I do not like doing too much class work daily.	28	28	15	17	12
I dislike home task because I can't do it independently.	19	18	15	24	24
There is sufficient revision at school to help me comprehend well.	37	41	7	10	5
I think tuition is necessary to get good marks in mathematics.	41	27	9	14	9
I tend to panic near the exam.	16	30	19	19	16
I find it problematic to revise the entire year syllabus in the annual examinations.	17	34	11	25	13
I do not like short questions because I cannot express all that I know.	10	16	11	35	28

I like multiple choice questions in mathematics exam.	53	28	6	7	6
I *realize* that the allowable time for mathematics paper is insufficient.	30	31	11	18	10
If I have problem in understanding something new, I seek help from my teacher.	46	37	6	7	4
If I have problem in understanding something new, I seek help from my tutor.	35	31	10	17	7
When the mathematics marks of student improve, it is due to his own hard work.	51	28	9	6	6
I feel difficulty in learning a topic because I did not understand previous ideas.	17	32	16	25	10
Teacher question in class helps my understanding.	54	34	4	4	4
Only those units of textbook are taught that are important to pass the examination.	23	20	10	23	24

From Table 1, many positive features are evident but, in most cases, significant minorities do not share the general views. This is parallel to the findings of Alhmali (2007) where he found marked polarization of views related to mathematics in his study in Libya. Overall, the majority of participants were agreed that they understand their mathematics lessons. They are satisfied with teaching methods used for teaching mathematics and understand the techniques of solving math questions. The data also shows that the majority of participants were agreed that they like the multiple-choice questions in mathematics tests. However, there are areas where students express uneasiness. Inevitably, students do not wish to work too hard and tend to become anxious as examinations approach while they do not enjoy revising in mathematics tests.

Attitude of Students in Mathematics

Table 2 from the 2nd section of the questionnaire presents what is the students' attitude towards their learning in mathematics?

Table 2
Attitude of students in mathematics

Statements	*High*	*Medium*	*Low*
I like Mathematics	43	37	20
I find mathematics beneficial in my daily life	54	31	15
I find mathematics an interesting subject	62	26	12
I wish to study mathematics because I like it	65	22	13
I feel mathematics is easy to understand	61	28	11
Knowing mathematics will help me in my career	63	26	11
Mathematics allows me to create ideas	49	30	21
Understanding mathematics is important to me	64	25	11
Mathematics rules can never be proved wrong	64	25	11

On the whole, it is evident from Table 2 that learners feel confident regarding mathematics learning. The majority of the participants in this study expressed positive views regarding mathematics with most expressing that they feel happy to learn mathematics. Their optimism was slightly over-confident when they consider that mathematics rules can never be proved wrong. Using the method pioneered by Johnstone et al. (1971) and employed by many (Ali & Reid, 2013), students were asked to rate the topics studied in the following way:

Easy	I understand the topic first time
Moderate	I did not understand it first time
Difficult	I have never have understood the topic
Not taught	Topic not studied

Students Difficulties in Learning in Mathematics

Table 3 presents the answer of questions exploring what are the students difficulties in learning of mathematics. The topics about difficulties in mathematics are given in Table 3 and 4.

Table 3
Grade 9th students difficulties in learning in mathematics

Grade 9, N = 375	*Easy*	*Moderate*	*Difficult*	*Not Taught*
Matrices and determinants	50	20	20	10
Real and complex numbers	50	30	10	10
Logarithms	32	30	28	10
Algebraic expressions and algebraic formulas	40	35	15	10
Factorization	50	30	10	10
Algebraic manipulation	40	30	20	10
Linear equations and inequalities	40	30	20	10
Linear graph and its applications	40	30	20	10
Introduction to coordinate geometry	40	25	25	10
Congruent triangles	40	30	20	10
Parallelograms and triangles	35	30	25	10
Line bisectors and angle bisectors	45	35	10	10
Sides and angles of a triangle	50	20	20	10
Average score	42	29	19	10

Table 4
Grade 10th students difficulties in learning mathematics

Grade 10, N = 272	*Easy*	*Moderate*	*Difficult*	*Not Taught*
Quadratic equations	45	30	20	5
Theory of quadratic equations	50	30	10	10
Variations	45	35	15	5
Partial equations	50	35	10	5
Sets and functions	45	40	10	5
Basic statistics	55	15	20	10
Trigonometry	45	30	10	15
Projection of a side of a triangle	45	35	15	5
Chords of a circle	50	20	20	10
Tangent to a circle	45	25	20	10
Chords and arcs	70	20	5	5

Angle in a segment of a circle	60	20	10	10
Practical geometry	55	20	13	12
Average score	51	27	14	8

From the tables above, the student responses appear to find most topics are easy and little difficult. But a logarithm is most difficult for students. In addition, the responses showed that, introduction to coordinate geometry and Parallelograms and triangles are difficult for students. This is similar to the findings of Ali and Reid (2013). Compared to the 9th class, the proportions selecting '*difficult*' are much higher. This pattern is very similar to that obtained by Ali and Reid (2012).

By evaluating the results applying chi-square statistic, data of male and female students was compared. Results are given in Table 5. Data exhibits that majority of participants were agreed that they understand their mathematics lessons. They also expressed that they do not like to do homework because they do not have enough ability to do it on their own. The outcome here reflects the fact that there are limited opportunities to develop increased field independence in the educational culture in Pakistan. In the overall data, two groups appeared to show higher levels of confidence in mathematics learning: boys and those for urban schools. This was checked using chi-square as a contingency test and it was found that the differences were often significant.

Table 5
Gender differences in their attitude to school mathematics

Statements	Gender	SD	D	N	A	SA	χ^2	df	p
I understand my lessons completely	Female	0	1	15	129	131	7.3	4	$p < 0.05$
	Male	9	15	20	171	156			
I like the way my teacher explains the methods	Female	5	2	11	88	170	18.3	3	$p < 0.001$
	Male	9	21	21	146	174			
I actually understand the procedures in class	Female	2	4	26	146	97	16.6	4	$p < 0.01$
	Male	17	29	46	166	114			
I think tuition is necessary to get good marks in mathematics	Female	36	55	27	68	90	28.5	4	$p < 0.001$
	Male	21	38	33	109	170			
I tend to panic near the exam	Female	24	52	51	95	53	21.0	4	$p < 0.001$
	Male	78	72	72	98	53			
I think that the allowed time limit is very short in	Female	29	37	45	74	89	19.9	4	$p < 0.001$
	Male	34	84	29	124	102			
If I have a problem in understanding something new, I seek help from my teacher	Female	6	8	16	102	144	19.0	3	$p < 0.001$
	Male	20	36	25	137	153			
I feel difficulty in learning a topic because I did not understand previous ideas	Female	32	75	57	75	37	14.0	4	$p < 0.01$
	Male	36	86	47	130	72			
Teacher question in class helps my understanding	Female	4	7	4	96	165	24.1	2	$p < 0.001$
	Male	24	21	23	121	182			
Only those units of textbook are taught that are important to	Female	91	51	32	44	58	30.3	4	$p < 0.001$
	Male	61	99	31	88	92			
Mathematics rules can never be proved wrong	Female	18	24	37	84	111	19.1	4	$p < 0.001$
	Male	43	55	45	75	155			

In several of the comparisons, the differences between males and females reflect the generally higher male confidence in relation to studies. Thus, the males tend to be more confident when it comes to feeling that they understand and in seeking help.

Table 6
Grade differences in their attitude to the school mathematics learning

Statements	Class	SD	D	N	A	SA	χ^2	df	p
I hate homework because I cannot do it on my own	9th	75	73	64	78	87	31.3	4	p < 0.001
	10th	80	84	35	41	30			
I think tuition is necessary to get good marks in mathematics	9th	24	37	20	123	173	52.1	4	p < 0.001
	10th	33	56	40	54	87			
I do not like short questions because I cannot express all that I know	9th	87	133	44	76	37	21.1	4	p < 0.001
	10th	94	101	24	25	26			
I think that the allowed time limit is very short in mathematics paper	9th	37	83	39	126	91	20.6	4	p < 0.001
	10th	26	39	35	72	100			
I feel difficulty in learning a topic because I did not understand previous ideas	9th	36	86	53	144	58	17.7	4	p < 0.01
	10th	32	75	51	62	50			
Teacher question in class helps my understanding	9th	25	19	13	138	182	11.1	2	p < 0.01
	10th	3	9	14	79	165			
Only those units of textbook are taught that are important to pass the examination	9th	95	98	23	70	91	18.3	4	p < 0.01
	10th	57	52	40	62	59			
I like mathematics	9th	46	35	54	154	88	41.8	4	p < 0.001
	10th	19	23	18	85	125			
I find mathematics an interesting subject	9th	58	63	49	96	111	22.1	4	p < 0.001
	10th	26	24	27	74	119			
I want to learn mathematics because I enjoy it	9th	67	60	49	76	125	15.4	4	p < 0.01
	10th	29	28	32	66	115			
I feel mathematics is easy to understand	9th	62	68	35	100	112	17.4	4	p < 0.01
	10th	27	26	29	84	104			

The data shows that as compared to the 9th class, the proportions selecting "*demanding*" are much higher. The chi square analysis helps in exploring the difference between opinions of male and female students. Also the results show that majority of students from urban areas have positive perceptions. The outcome here may well reflect the fact that there are limited opportunities to develop increased field independence in the educational culture in Pakistan.

Table 7
Area of school differences in the school mathematics learning

Items	Area	SD	D	N	A	SA	χ^2	df	p
I understand my lessons completely	Urban	8	14	27	207	162	18.5	2	p < 0.001
	Rural	1	2	8	93	125			
I do not like short questions because I cannot express all that I	Urban	130	159	45	47	37	20.7	4	p < 0.001
	Rural	51	75	23	54	26			
Teacher question in class helps my understanding	Urban	21	17	24	153	203	12.7	2	p < 0.01
	Rural	7	11	3	64	144			

Chi square results of mathematics learning regarding area difference show that majority of students from urban areas have positive perceptions. The majority of students from urban areas expressed that they understand their lessons of mathematics completely.

Table 8
School type differences in the school mathematics

Statements	School	SD	D	N	A	SA	χ^2	df	p
I do not like doing too much class work daily	Public	37	60	16	69	42	47.6	4	p < 0.001
	Private	40	52	78	115	138			
I think that the allowed time limit is very short in mathematics paper	Public	12	45	21	95	51	22.9	3	p < 0.001
	Private	51	73	53	106	140			
When the mathematics marks of student improve, it is due to his own hard work	Public	16	14	18	87	89	85.4	3	p < 0.001
	Private	26	27	39	97	234			
Only those units of textbook are taught that are important to pass the examination	Public	24	64	13	72	51	56.7	4	p < 0.001
	Private	128	86	50	60	99			
I like mathematics	Public	13	10	35	93	73	21.2	4	p < 0.001
	Private	52	46	37	146	142			
I find mathematics useful in my daily life	Public	9	10	32	86	87	16.5	3	p < 0.001
	Private	46	34	66	115	162			
I find mathematics an interesting subject	Public	24	23	38	68	71	15.5	4	p < 0.001
	Private	60	64	38	102	159			

The table 8 showed that the Public and private schools draw very different student populations and, therefore, large differences are to be expected. The proportion of girls exceeded that of boys, mainly because of the current patterns in education at the moment. In one other study, there was a marked development of independency with age over the range from 12-17 (Onwumere & Reid, 2014). Indeed, there is considerable circumstantial evidence that the extent of field independence can grow with age but this seems to depend of experiences and has cultural implications. The outcome reflects the fact that there are the limited opportunities to develop increased field independence in the educational culture in Pakistan. When the results for the measured field dependency were correlated with mathematics marks, significant correlation values were obtained. This is in accordance with the literature. The positive correlation values (0.3 at 0.05 level of significance) between field dependency and age of students show that field dependency makes an effect on learners' performance as well as achievement in relation to age. The students who are field independent perform better in mathematics than the others who are field dependent.

Discussions

This study was intended to explore students' perceptions of the mathematic learning and difficulties. The finding shows that the students belonging to the private sector and urban areas differ in their views as compared to the public schools and rural areas. This is the pattern of education system Pakistan, especially in the public schools. The students in the public schools of Pakistan are generally belonging to the middle or the lower class of the society, with lesser incomes. They do not have several modern facilities and they have to learn with old and traditional limited resources. In Pakistani schools, there is a recommended textbook of mathematics for all classes. The examination is totally based on this prescribed textbook. In the current teaching methodology, much of the focus is given on just to solve these exercises instead of instilling in the pupils a perfect knowledge of the basic concepts of mathematics. Thus, at present the teaching practices of the subject mathematics make students the rote learners of textbooks.

This study shows that the majority expressed positive views regarding mathematics; with most expressing that they feel happy to learn mathematics. The students well perceived their learning in mathematics. Students generally find mathematics a boring and difficult course and this finding is little contrasting to (Brown et al, 2008). The majority of the students showed that they seem a little importance of using student centered approaches mathematics curriculum as curriculum do not stress to solve problems in classroom. Simply, the students are not encouraged and rewarded in their mathematics performance. The deficiency of programs of development and resources causes problems to the students as well as teachers (Memon, 2007; Halai, 1998). Particularly from the rural areas schools, the students pointed out the difficulties

in their mathematics learning experiences because of inexperienced staff and insufficient resources (Memon, 2007; Anderson et al., 2005). Overall correlation of mathematics marks (standardized) and extent of field dependency is moderate. Likewise, Onwumere (2009) showed that extent of field dependency was highly correlated with mathematics performance for each age group. Moreover, these results were consistent with the findings of Al-Enezi (2006) and (Onwumere, 2009). Thus, the standardized mathematics examination scores reflect that there is a general ability in students in mathematics, and then this ability correlates with the measured extent of field dependency.

Conclusions and Recommendations

It is found from the study that the students are enthusiastic in their learning in mathematics. They found mathematics interesting and valuable. Although very few found studying mathematics boring and tough. The students of the 9^{th} and 10^{th} class in this study were of the view that mathematics is an interesting, useful and analytical power generating subject. The Figure 2was generated on the basis of Findings, the key problems and recommendations from the study which were detailed below the figure. .

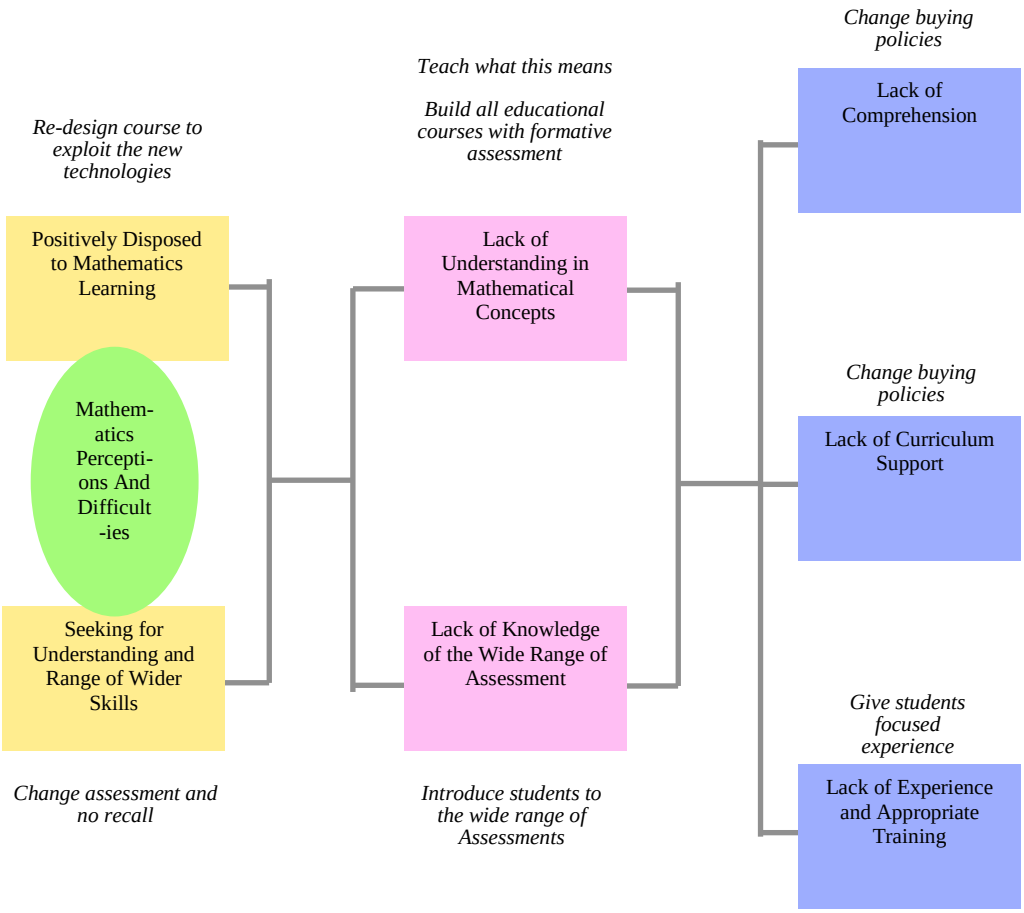

Figure 1. *The key problems and recommendations from the study*

In the figure above, the boxes and circles show the findings and key problems and outer text shows the recommendations from the study. The above figure 2summarizes the key findings as there were some problems identified by the students, particularly, difficult with large classes, demanding in time in preparing lessons. Furthermore, they perceived that their learning in mathematics is not matched properly with curriculum that gives more focus recalling skills and relies more on book and the current assessment system is over-loaded and its focus on just more and more formal examinations. Moreover, the correlation values between field dependency and age of students show that field dependency makes an effect on learners' performance as well as achievement in relation to age. Furthermore, the above diagram shows that the important implications for understanding of the realities that exist in secondary

mathematics classrooms in Pakistan. This is recommended from this study that the teachers should be supported and given the time and resources to develop better ways for the future. Moreover, there should be a broader opportunity to develop increased field independence in the educational culture in Pakistan.

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Comparison of Primary School Boys and Girls on Number Conservation Ability

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Abstract

The purpose of this empirical study was to observe the ability of primary school boys and girls to test on the Piaget's task of number conservation. The current study was based on two major objectives: 1) To explore number conservation ability among primary school boys and girls; 2) To compare primary school boys and girls on number conservation ability. The population of this study comprised all public (boys & girls) and private (boys & girls) primary schools of Khyber Pakhtunkhwa. A total of 480 students of public and private primary schools' (boys and girls) were chosen as a sample of the study. Since it was an empirical study so, empirical research design was used. Observation sheets were used as a data collection tool. Data were analyzed through percentage and t-test. It was established that boys and girls of primary school of age group 3 to 5 were non- conservers of number. It was concluded that primary school boys and girls (3 to 5 years old) were found to be same on number conservation ability. However primary school girls (4 years old) performed better than boys at the same age level. It was also provided by the data that boys and girls of primary schools were number conservers at the same age level that is 6 years old, that is the number conservation age was found to be the same both for boys and girls. It was concluded that gender have no effect (6 to 8 years) on the number conservation ability of primary schools children. It is recommended that school going age is to be form age 6.

Keywords: Piaget, cognitive development, conservation of number, primary level.

Introduction

For a country to be developed morally, culturally, intellectually, politically, and socio-economically we need education as it is the basic key for any country to compete in the world (Awan, 2003). Logical/cognitive improvement is the learning of how intellect is able to take data/information from the nearby and what a person do with this

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data/information. It concerns how we preserve and able to get back our memories (Khan, 2008).

Education is the back bone for a country to become advanced scientifically and technologically. The knowledge/information about the customs and traditions of a society, state, country or world is passed on from one generation to the other, is possible only through education. Through education not a country can become prosperous socially, morally and economically, but it is also a source to learn how to become active and effective citizen. There is a strong and resilient link between education and socio-economic growth of a country. Through education we can help and guide learners to develop social awareness, charity, endurance, self-regard, self-satisfaction, and cultural spirit. To overcome on issues such as, unemployment, and economic decline education can do the job for us. Human resource development and skillful workers are fruits of education, which give us more products and can be a source for the economic development of a country (Ozturk, 2001).

The progress and development of the countries of the world is related to the type of education, given to their people. The civilization and discipline of a country is directly proportional to the educated societies if the societies are educated there will be improvement and development in the country. As compared to un-educated societies, an educated society can play a pivotal role in the social development of a nation. If we want to develop our country we need strong footings of education system. To achieve sustainable development in economics we need to invest much in education. Only education can play a role in securing progress socially and economically (Ozturk, 2001). Islam gives much importance to education as it is obligatory on each individual to obtain understanding from early age to the end. We can understand how much emphasis is given on education by the first revelation on the Prophet (S.A.W) was "Read in the name of Allah, Who created you". To recognize and determine our day to day societal problems we need proper education (Ahmad, 2017).

There are six tiers of education in Pakistan: Early Childhood Education (age group of 3 to 5), primary level education which comprised grades I-V, high school education (grades IX-X) also called secondary education, higher secondary school education or intermediate education comprising grades XI-XII, and tertiary education which is also called higher education (grade XIII and onwards) provided in colleges and universities (Rasool, 2007).

Primary education is considered to be the basic right of each individual. In Pakistan primary education encompasses Nursery/Prep education and class I-V. The skills of 3R's, (read, write, and arithmetic) are the major objectives of primary education. Each and every individual either boy or girl have to complete their primary education. From their early childhood boys and girls should be prepared to compete with the surrounding world (Rasool, 2007).

This is universally established fact that "Teachers are better than an educational system" (Pakistan, 1959). To develop the personality of learners for the nation building is the sole role of a teacher. So a teacher must be competent in the subject matter he teaches, as well as he must aware of the developmental aspects of each learner. Physical, social, emotional, moral and the cognitive development are the main areas of individual development. The role cognitive development cannot be ignored in students' learning process. This is why more emphasis is given on cognitive development of learner as compare to other aspects in educational field (Ahmad, Tabassum, & Farooq, 2017).

Piaget, for the first time proposed the four different stages of cognitive development in children (Mooney, 2000). Sensorimotor stage is the first phase of his theory, starts from birth and last up to 2 years. The child can understand and comprehend their world by using his senses. The second stage which is named as pre-operational phase starts from age 2 and last up to 6/7 years. Development of language and mental images are the main causes to know about the world. The third stage of cognitive development named as concrete operational stage, starts from age 6/7 and last up to 11 years. The main characteristic of this phase is the logical thinking of a child. Piaget put the children of age 11/12 up to 19 in formal operational stage. In this phase children can reason scientifically and hypothetically (Ahmad, Tabassum, & Farooq, 2017).

According to Piaget as the individual goes to next phase changes occur in perception of an individual. He concludes that an individual is always in-search of knowledge to develop him mentally (Lutz, 2004). The development of an individual occurs in four phases. The mental development is directly related to four factors (maturity, experience, equilibrium and social environment). Maturity is dependent upon learning and is an essential perception, which gives the idea about a child that at which stage he can perform which task, we can categorize it in a series as; development, babyhood, cradle, pre-adulthood and youth. An individual interacts with entities and acquires information about the comparisons, contrasting, discriminating, and transferring and hence he develops the perceptions. If the visual spatial shapes deceive him, then he tries to overcome this deficit by thinking more logically and systematically (Safdar, 2007).

Cognition is the ability of higher mental processes through which a child can understand his world, compute information get from his surroundings, makes conclusions on the basis of collected information and exchange his understanding to others. Just like a scientist children create their own knowledge (Rahman, 2011). According to Piaget the logical thinking is the characteristic of concrete operational stage, however they lake the hypothetical thinking and reasoning at this phase. Important processes during this stage are:

- **De-centering**: The ability of a child to think about the multiple aspects of any task assign to him to resolve it.
- **Reversibility**: This is the ability of a child that things can be reversed, which is 2 +3 = 3 +2.
- **Conservation**: Through this ability a child can make a sense that quantity of anything remains the same despite changes in their physical shape.
- **Seriation**: Ability to organize objects with respect to its magnitude.
- **Classification**: The capability of a child to arrange objects with respect to size/appearance in different categories (Seifert, 2009).

At concrete operational stage, individuals can carry out cognitive events involving common sense such as conservation; which is the basic characteristic of this period. Conservation means the ability of a youngster that worth/amount and physical changes both are unrelated (Ojose, 2008).

Conservation of Number

Piaget's number conservation ability task is more famous and widely exercised, in this testing two indistinguishable rows of objects that is, buttons or coins are shown to a person, and make inquiries to declare that either both of rows have the same quantity of items or not, and young children generally state agreed. After that any of the row is extend or packed in front of an individual and is then inquired if both rows are same or one row has more objects or not, those persons, whose age is below 6 to 7 years will reply both rows are different by justifying their answer as one has more than other row; while older children (up to 6 or 7 years) typically answer yes and justify their response appropriately (Salkind, 2008).

In a study conducted by (Agger, 2007), it was found that 3 and 5 years old children do not have the ability to conserve number. In another study conducted by (Price, 2004), he was found that (3:5 to 4:11 years) old pre-school English children when are asked alternative questions they may conserve the number. A study on a 4 years old child conducted by (Muller, 2005) showed that he (4 years child) does not have the number conservation ability. In another study conducted on 5 and 8 years old children by (Miller, 1976), concluded that 5 years old children are lacking number conservation ability while 8 years old children have this ability to conserve number. The studies conducted by (Neys, 2014) and (Seifert, 2009) showed that children of age 6 or 7 can conserve number.

By studying the above mentioned research studies there is a contradiction in the attainment age of number conservation ability. In Pakistan, little work on the number conservation ability has been done (Shabab, 1995), so the researcher studied this topic to see whether the Khyber Pakhtunkhwa (Pakistan) children achieve this ability at the age of 3 to 8 years.

Statement of the Problem

The study was aimed at comparison of primary school boys and girls on Piaget's number conservation task.

Objectives of the Study

Following were the objectives of the study:

1. To explore number conservation ability among primary school boys and girls.
2. To compare primary school boys and girls on number conservation ability.

Hypotheses of the Study

Following were the hypotheses:

- H_o1: Primary school boys and girls (age 3 to 8) are not number conservers
- H_o2: Boys and girls of age group 3 to 8 have no difference on number conservation task.

Significance of the Study

The study is equally significant for all primary level students (boys and girls) and teachers as well as for researchers and curriculum developers.

Methodology

Population

The population of the study was all the 4,191,748 (including public and private) primary school children of Khyber Pakhtunkhwa (Pakhtoonkhwa, Annual Statistical Report of Govt: Schools, 2014).

Sample

By using convenient sampling method, (researcher uses convenience sampling not just because it is easy to use, but because it also has other research advantages) (Teddlie, 2007), eight schools were selected (that is rural, urban, public and private) schools' students may include in this task. Sixty students were randomly selected from each school. The student's numbers (roll number 1-40, or according to the strength of the students) were written on separate slips of paper, and placed it in a plastic box. The box was shacked and drew out a slip of paper and continued the process until 10 slips (for each class/ age group 3 to 8 at each school) of paper had been picked (Ary, 2010). A total sample of 480 boys and girls were tested on number conservation task. According to (Gay, 2009) if the population size is in thousands or in millions, then a sample size of 400 will be adequate. The names of selected schools are:

Sampled Schools (Urban Government) in District Swabi

- Government Primary School Mathani Changan Tordher
- Government Girls Primary School Saifur Banda Tordher

Sampled Schools (Urban Private) in District Swabi

- The Iqra Public School and College Tordher (for Boys)
- The Iqra Public School and College Tordher (for Gilrs)

Sampled Schools (Rural Government) in District Swabi

- Government Primary School No.1 Jalsai
- Government Girls Primary School No. 4 Jalsai

Sampled Schools (Urban Private) in District Swabi

- Star Public School Jalsai (for Boys)
- Star Public School Jalsai (for Girls)

Delimitation of the Study

The study was delimited:

- To the primary children (boys and girls) of age group 3 to 8
- To one district (Swabi) of Khyber Pakhtunkhwa only

Research Instrument

Red colored plastic buttons (twenty in numbers) were used for the number conservation task (Ahmad A. , 2017)

Research Design

According to the nature of the study the following empirical research design was used.

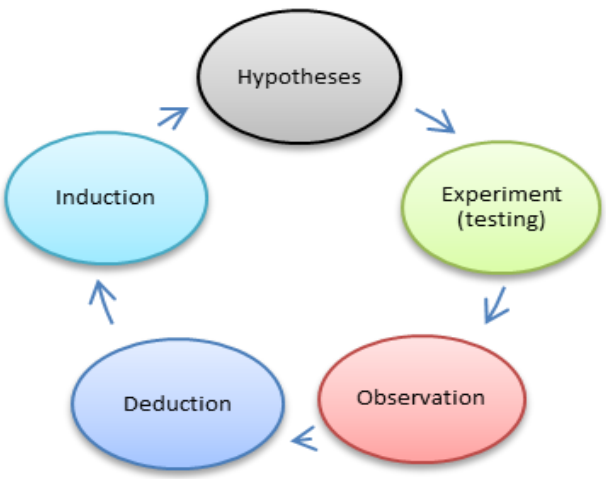

Figure 1. *Research design*

Since this study was conducted to test the number conservation task on primary school boys and girls in Khyber Pakhtunkhwa (Pakistan) context, so the study was based on the following questions:

- **Piaget claims:** Children underneath 6 to 7 years do not have the ability of conservation of number (Berk, 2005); (Crawford, 2008); (Muller, 2005); (Neys, 2014).
- **Research question No: 1.** Do Pakistani children keep the same characteristic?
- **Piaget claims**: Children older than 6 to 7 years are conservers of number (Arnold, 2006); (Haroon, 2005); (Richardson, 2006).
- **Research question No: 2**. Are Pakistani children also number conservers, who are older than 6 to 7 years?

Procedure of the Study

The tasks which were based on Piaget's task of conservation of number were conducted in the following way:

Task 1

The subject children were presented two rows of equal length containing the same number of buttons (placed on a table, as shown below). The subject children were asked. Whether the two rows are identical? (Ahmad, Tabassum, & Farooq, 2017). If the answer is 'Yes' or 'No', then why/how much? (Ahmad, Tabassum, & Farooq, 2017).

Task 2

One of the rows was spread apart so that one is longer than the other (as shown below) and the subject children were asked. Now, whether the two rows are identical? (Ahmad, Tabassum, & Farooq, 2017). If the answer is 'Yes' or 'No', then why/how much now (Ahmad, Tabassum, & Farooq, 2017).

The activity was conducted in a quiet room and the subject children were called upon one by one.

Scoring Data

The responses gain from the sample students were noted on the following observation sheet (sample observation sheet is shown below). There were two tasks which have two major questions and each question have three options as yes, no and why/how much. Subject children when presented the rows and were asked if both rows

are identical if child answer is yes one mark was assigned (otherwise marked as 0), then child was asked why/how much and he/she reply that both rows are same in length or same number of items one more mark was added to their score (otherwise marked as 0). In second task when one row is spread apart and child was asked if both rows are same, if answer is yes one mark was awarded (otherwise marked as 0), then asked why/ how much and if child answer that length is different but amount is same was awarded one mark (otherwise marked as 0). Hence a child when scored 4 were declared as passed on number conservation task (otherwise failed). The number of children in each category, that is, at each age level was converted into percentages and the results were presented in the form of tables (Ahmad, Tabassum, & Farooq, 2017). Following observation sheet was used for scoring the data. (Sample observation sheet)

Table 1

Sample observation sheet

S. No	Name	Age in Months	Question: 1			Question: 2			Score
			Yes	No	Why/ How much	Yes	No	Why/How much	
1	ABC	72	1	-	1	1	-	1	4 (Conserver)
2	DEF	60	1	-	1	1	-	0	3 (Non-conserver)
3	GHI	50	1	-	1	-	0	0	2 (Non-conserver)
4	JKL	48	1	-	0	-	0	0	1 (Non-conserver)
5	MNO	40	-	0	0	-	0	0	0 (Non-conserver)

Collection of Data

The observation sheets (data collection tool) were used in order to collect data from the sample students.

Analysis of Data

The data collected on observation sheets were analyzed by using statistical tools such as percentage and t-test. To determine the age of attainment of number conservancy of boys and girls 50 percent criteria was used (Ahmad, Tabassum, & Farooq, 2017).

Results

In table 1 the percentage values (0, 0), (0, 15), and (27.5, 30) of 3 to 5 years old boys and girls clearly indicates that these values are less than 50%, which indicates that boys and girls of this age were not able to conserve number. Similarly the percentage values (55, 57.5), (75, 77.5), and (82.5, 87.5) clearly shows the ability of number conservation of 6 to 8 years old boys and girls. It is also shown in the table that the ratio of number conservers increased with growing age of the children.

In table 2 the t values (0, 0.223, 0.245 0.260 and 0.621) of 3 to 8 years old boys and girls of primary schools clearly indicates that they are non-significant at $\alpha = 0.05$. So the hypothesis that: Boys and girls of age group 3 to 8 have no difference on number conservation task was retained (accepted). However the t-value (2.631) of 4 years boys and girls shows significance of difference at $\alpha = 0.05$.

$H_0$1: Primary school boys and girls (age 3 to 8) are not number conservers.

Table 1

Frequency and percentage of 3 to 8 years old primary school boys and girls

Group	N	Age	Conservers	Percentage	Status (Criteria = 50%)
Boys	40	3 years	0	0	Non-Conservers
Girls	40		0	0	
Boys	40	4 years	0	0	Non-Conservers
Girls	40		6	15	
Boys	40	5 years	11	27.5	Non-Conservers
Girls	40		12	30	
Boys	40	6 years	22	55	Conservers
Girls	40		23	57.5	
Boys	40	7 years	30	75	Conservers
Girls	40		31	77.5	
Boys	40	8 years	33	82.5	Conservers
Girls	40		35	87.5	

H_o2: Boys and girls of age group 3 to 8 have no difference on number conservation task.

Table 2

Frequency and t-values of 3 to 8 years old primary school boys and girls

Group	N	Age	Conservers	*df*	t- value	*d*	Effect size Strength
Boys	80	3 years	0	78	0*	----	----
Girls			0				
Boys	80	4 years	0	78	2.631**	0.83	Large
Girls			6				
Boys	80	5 years	11	78	0.245*	----	----
Girls			12				
Boys	80	6 years	22	78	0.223*	----	----
Girls			23				
Boys	80	7 years	30	78	0.260*	----	----
Girls			31				
Boys	80	8 years	33	78	0.621*	----	----
Girls			35				

*Non-Significant, **Significant, Table Value = 2.000

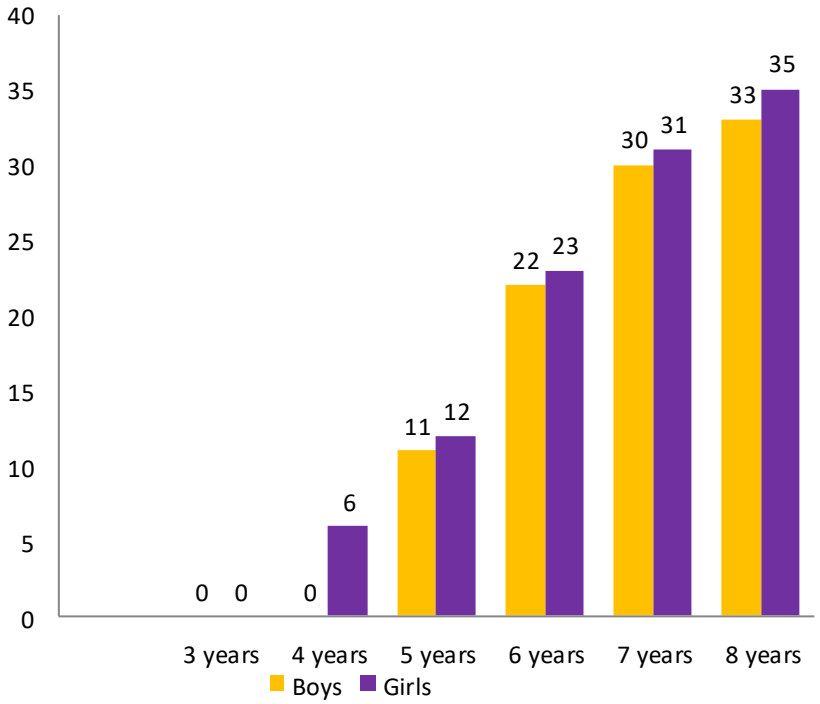

Figure 2. *Frequency of 3 to 8 years old number conservers belong to primary schools' boys and girls.*

Discussion

The purpose of current study was to measure and compare the performance of boys and girls of primary school (3 to 8 years) on Piaget's number conservation task. The study reveals that 3 to 5 years old boys and girls were failed on Piaget's number conservation task. This result is supported by the studies of (Agger, 2007), and (Muller, 2005) they concluded in their studies that children of age group 3 to 5 do not have number conservation ability. The studies of (Neys, 2014) and (Miller, 1976) are also in the support of these findings. Hence the Piaget's claim that children underneath 6 to 7 years do not have the ability of conservation of number is proved. The only research which is in contradiction to these findings is the study conducted by (Price, 2004), he was found that (3 years: 5 months to 4 years: 11 months) old pre-school English children when are asked alternative questions they may conserve the number (Ahmad, Tabassum, & Farooq, 2017).

Boys and girls (6 to 8 years) of primary school were passed on Piaget's number conservation task. The supporting researches to these findings were conducted by (Seifert, 2009); and (Neys, 2014). They concluded in their researches that children of age 6 or 7 can conserve number. Hence the second claim of Piaget's that children older than 6 to 7 years are conservers of number are proved (Ahmad, Tabassum, & Farooq, 2017).

It was provided by the data that boys and girls of primary schools were number conservers at the same age level that is 6 year old. It means that gender have no effect (6 to 8 years) on the number conservation ability of primary schools children. However primary school girls performed better than boys at the same age level (4 years old) (Ahmad, Tabassum, & Farooq, 2017).

Conclusion

The major conclusions drawn were as under:

Boys and girls (3 to 5 years) of primary schools were found unable to pass the number conservation task. Hence they were declared as non-conservers of number. It shows that there was no difference of 3 to 5 years old boys and girls of primary schools on Piaget's number conservation task. However primary school girls (4 years old) performed better than boys at the same age level.

It was provided by the data that boys and girls of primary schools were number conservers at the same age level that is 6 years old, that is the number conservation age was found to be the same both for boys and girls. It means that gender have no effect (6 to 8 years) on the number conservation ability of primary schools children. It was recognized that 6 to 8 years old primary school boys and girls were passed the Piaget's number conservation task and were declared as number conservers. It also shows that there was no difference in the performance of boys and girls on Piaget's number conservation task.

Recommendations

The recommendations made were as under:

Since boys and girls (3 to 5 years) of primary schools were found unable to pass the number conservation task; while 6 to 8 years old primary school boys and girls were passed the Piaget's number conservation task and were declared as number conservers, so the researcher recommends school going age is to be form age 6, Federal and provincial educational agencies may look into the matter. The data that primary school girls (age group 4) was found to be better than boys so further research may be conducted to find out the reasons behind this. Same kind of research may be carried out for street children (out of school children). It is further suggested for future researchers that this type of research be conducted for other Piaget's conservation tasks such as conservation of length, liquid, volume and weight.

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Error Analysis of English Language Speakers in the Use of Articles in Pakistan

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Mamuna Ghani[**]
Asif Khan[***]

Abstract

The present study was conducted to investigate the errors of students in the use of English articles (a, an, the, and zero articles). The sample of the study comprised of 60 graduate students selected through simple random sampling method. The instrument used as data collection tool was the essays written by students of BS in the subject of Communication Skills. The essays written by the participants were collected and the errors committed by the students in the articles were identified and analyzed in frequencies. The main finding of the study was; learners' whose mother tongue is Urdu (Urdu does not have any article system) commit more errors as compared to those whose L1 has articles system. Students faced more difficulties in learning indefinite articles and omit it in their writings. Based on these finding some pedagogical implications were proposed, which might assist ESL/EFL teachers with some practicable suggestions and teaching strategies.

Keywords: Error, Articles, Learning difficulties.

Introduction

It is obvious that learning English Articles is difficult for non-native learners especially for those who do not have articles in their first language (Batainech, 2005). L2 learners, who grew up in a country whose language has no equivalent to English articles, may find it hard to understand an article system that is characterized by novel and abstract use. According to Celce-Mercia and Larsen-Freeman (1999) the article system is mostly troublesome to teachers of English. As a result, some English Teachers do not want to devote classroom time to teaching article usage. English teachers prefer to spend more time tacking other aspects of grammar and areas perceived to be more communicatively important (Chuang, 2005).

Master (as cited in Bataineb: 2005, p-2) notes that there are three reasons for L2 learners have difficulty comprehending the small particles a, an, and the system; (a) since articles are most frequently used in the language, it is usually difficult for the learners to maintain the rules especially when dealing with an extended text. (b) These

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words are usually not stressed which makes it somehow difficult for the non-native speaker to acquire them. (c) Learner especially the beginners look for one to one correspondence between words and their functions but in case of articles one word performs multiple functions.

Research Objectives

1. To find out types of errors of articles made by graduate level students.
2. To know the frequency of errors of articles made by the graduate level students while learning the English language.

Research Questions

1. What is the frequency of errors of articles made by the graduate level students while learning English language?
2. What types of errors of articles are made by graduate level students?

Literature Review

The article system in the English language is very complex and it is especially difficult for non-native the English speakers to master. That is why most of the students even after learning the English language make errors of articles. Before proceeding towards details about errors, we must distinguish between errors and mistakes. According to Brown (2000), a "mistake" refers to a performance error where a learner knows the system but fails to make use of it correctly. On the other hand an error is a divergence from the standard form used by native speakers and it reflects the lack of competence of the learner. After this error recognition procedure takes place the process of describing it.

Types of Errors

The errors can be divided as under:

Errors of Area

As the name suggests, it means errors belonging to the specific area in the use of language. Errors of the area are further categorized into phonological errors, lexical errors, grammatical errors, and semantic errors. Phonological errors are the errors of pronunciation. For example, if a learner's pronounces the "r" sound in the word "girl", it's a phonological error. According to Chandler in 2003 Lexical errors are the errors made in the use of words. For instance, if a learner says "air-conditioned room" in place of "air-condition room" this is a lexical error. It's a use of wrong lexical items. Semantic errors are the errors made by the learner due to vagueness of meaning. For instance, if a learner says "She is like ice-cream." Here meaning is not clear.

Errors of Form

These errors are further divided into the errors of addition, errors of omission, errors of selection, and errors of order. The error of addition is the one made by making

the addition of unnecessary items. For instance if a learner says, "I am living in Pakistan from a one year." The error of omission is the opposite of the errors of addition. They are made due to the omission of an item. For instance if a learner says, "this is my sister home."(Apostrophe is missing). Errors of selection of the ones made due to an erroneous selection from the existing options. For instance, if a learner says, "yesterday I go for shopping" (Improper selection of tense). The error of order as the name suggests is made due to the inaccurate arrangement of words. For example, if a learner says, "How I will go to office?"(Incorrect order).

Error Analysis

Error analysis has been defined (Brown, 1980) as a process of observing analyzing and classifying the deviation from the rules of L2 and then revealing the systems with which learners operate. The qualitative research and the process and methodology of error analysis are similar in nature. The analysis of data in this process is actually the analysis of raw data, which in our case are the papers of the students. At the first stage the words phrases and concepts which reveal mother tongue influence are highlighted and marked. This process is called "open Coding". In other words these words are phrases are broken into their smaller or discrete parts and they are observed minutely to make a comparison for the sake of finding similarities and differences (Strauss & Corbin, 1998). The words, letters or acronyms used to refer to the concepts are discovered, e.g. MTI (mother tongue interference) and can be called as code words (Merrian et al., 2002).This study is going to discuss Article errors only as it is one of the most occurring error in ESL.

Article Usage

There are three English articles; a, an, and the (Keene & Adams, 2002). Catford et al. (1974) identify one more article, that is, 0 article (zero articles). Although there are only three of them, articles account for almost ten percent in terms of word frequency in the most text (Yule, 1998).

Different Studies on the Learning of English Article

English article system is real problems for many learners of English as a foreign language regardless of their proficiency level. Gleason's (2002) examines then on generic uses of the English articles that are: the cultural situational, structural and textual. Barret and Chen (2010) study Taiwanese graduate students to study their handling of English articles in writing using corpus based data. Aldeni (2008) approaches his study differently. He focuses on the psychological aspect of learning the second language. He studies the role of avoidance strategy and its impact on the use of English articles and the learners' awareness of the use of articles.

Problems with the Article Usage

It is obvious that learning English Articles is difficult for non-native learners especially for those who do not have articles in their first language (Batainech, 2005). L2 learners, who grew up in a country whose language has no equivalent to English articles, may find it hard to understand an article system that is characterized by novelty and abstractness. According to Celce-Mercia and Larsen-Freeman (1999) the article system is mostly troublesome to teachers of English there for the English teachers give more of the class time to the other more areas of grammar which are commonly thought to be of more communicatively important then the article usage (Chuang, 2005).

Master (as cited in Bataineb, 2005, p-2) notes that there are three reasons for L2 learners have difficulty comprehending the small particles a, an, and the system; (a) since articles are most frequently used in the language, it is usually difficult for the learners to maintain the rules especially when dealing with an extended text. (b) These words are usually not stressed which makes it somehow difficult for the non-native speaker to acquire them. (c) Learner especially the beginner's wants one to one correspondence between words and their functions but in case of articles one word performs multiple functions.

In addition to the complex rules and exceptions of usage, Norris (1992) stated that Japanese students of English are burdened with the fact that there is no grammatical equivalent to an article in their own native language. In a study of structural errors found in 632 English compositions written by Japanese students in American high schools and junior colleges, Kimizuka (as cited iii Norris, 1992) found more mistakes in article usage than in any other structural categories and explained this phenomenon as follows:

There exists no part of speech in the Japanese language that corresponds to the article system in the English language. As a result, Japanese learners of English face problems mastering articles and make frequent mistakes. They not only have to learn the rules in order to acquire the use of articles but have to practice them by the drill.

Mizuno (as cited in Huong, 2005) identified five types of these errors in article usage in the speech of Japanese EFL learners. They are "1 juxtaposition of articles and other determiners, 2 inversions of the order of articles and succeeding adjectives, 3 omissions of articles under the extension, 4 use of articles instead of zero, and 5 substitutions i.e. the indefinite article is used instead of the definite article and verse versa" (p,93)

Next, Avery and Radisc (2007) and Bataineh (2005) indicated that if an L2 learners native language has sonic type of determiner system, they probably face a problem of "mismatch" between the two systems on definitions, and on functions of determiners such as definiteness specificity, or concepts of countable and uncountable

nouns. The speakers understanding about parts of speech may also cause article errors. Trenkic (2008) discovered that some L2 learners make errors in article usage because they misinterpret articles as adjectives instead of determiners. As such, they do not use an article seeing that the definiteness of the noun in question is contextually clear. Thus, Trenkic's study notes that rule-oriented students may not be successful; and that students should absorb the understanding about the articles naturally, not by role.

Huong (2005) points out the since English articles have high frequency use in written works, their presence in a given discourse must be something meaningful. Huong states, "One function that the articles contribute to discourse is to create cohesion for stretches or language" (p, 5). This function is usually found in the definite article "the." Huong goes on explaining how articles "stretch" a particular discourse, using the sentence below.

Ninke lost a valuable watch yesterday and Bill is wearing the valuable watch this morning. In this sentence, time noun phrase "the valuable watch" refers back to the noun phrase 'a valuable watch" via the article "the". In this context, the definite article "the "refers to something that has been previously mentioned. Therefore, the reader can assume that bill is probably the one who took the watch or who found it but did not return it to its owner.

Another study was by Bataineh (2005), who enumerated errors in writing samples by some students in a university in Jordan. He discovered such problems as deletion of an indefinite article, use of an indefinite article which marked and unmarked plurals (hypercorrection), use of an indefinite article with uncountable nuns, probably due to structural similarities, and use of an indefinite article with adjectives (overgeneralization).

Methodology

The method used in this research was mixed method of quantitative and qualitative. The quantitative method is used in order to know the frequency and percentage of the errors made by the students and qualitative method is used so that the factors involved in the errors may be investigated. Mixed method research gives more freedom to the research as description and narration along with numerical facts and figures due to which the research becomes more communicative.

Population and Sample

The population of this study is all the BS level students of semester fall 2014 in the Abdul Wali Khan University Mardan. The Department of Management Sciences was chosen for the selection of a sample of 60 students' simple random sampling.

Instrumentation

Written Essays and students' comments were selected for data collection. The selected sample was asked to write a well-organized essay on any topic of their choice. Students were asked to write approximately 250 to 300 words in one hour. The essays taken from the students were checked by the researcher and the errors were highlighted and corrected. Later, the participants were asked to look at their errors and their correction provided by the researcher and then comment on them. They were also asked different questions about the causes of these errors. The student's comments constituted the second source of the data collected. Fifteen different (semi structured) interview questions were set by the researcher to explore the reason behind the students' wrong use of English articles. These questions were based on Norrish (as cited in Hasyim, 2002) and Richards (as cited in Sanal, 2008) regarding the causes of errors. The purpose of these questions was to determine the background knowledge of English article usage.

Finding and Interpretation

The analysis of written essays was derived for 19 article error categories which were adapted from Richards (1971) and Chakorn (2005).These categories were used by the researcher to investigate errors in the participants' compositions. The 19 article error categories consisted of two kinds of errors; omissions and substitution of articles. The data collected will achieve the objectives of the research; one to know the types of errors the English language learners make, two to find out the frequency of the errors. The written essays and student's comments were selected as tool for gathering the required data to attain the above mentioned objectives. The data was collected in form of descriptive errors that the students have made in their essays and also their frequency and percentage were find out. Which points out to the fact that students mostly make different types of mistakes but three of them mention in table 02 are the most frequently make errors by the English language learners.

Table 1

Categories of Article Errors Found in the Essays of the Students

S.NO	Categories	Frequency of errors	Percentage
1	The omission of ”the” before unique noun	18	4.8%
2	The omission of “the” before nouns defined by adjectives of nationality.	6	1.6%
3	The omission of “the “before nouns made particular in context.	115	30.6%
4	The omission of “the” before a noun modified by participle.	1	0.3%
5	The omission of “the” before superlative	0	0%
6	The omission of “the” before a noun modified by an of phrase.	32	8.5%
7	The omission of “a” before nouns	23	6.1%
8	The omission of “a” before singular nouns defined by adjectives	45	12%
9	“the” used instead of 0 article before proper names	5	1.3%
10	“the” used instead of 0 article before abstract nouns	22	5.8%
11	“the” used instead of 0 article before nouns behaving like abstract nouns	4	1.1%
12	“the” used instead of 0 article before plural nouns	42	11.2%
13	“the” instead of “a”	20	5.3%
14	“a” used instead of “the” before unique nouns	2	0.5%
15	“a” instead of 0 article before a plural noun	7	1.9%
16	“a” instead of 0 article before uncountable nouns	3	0.8%
17	“a” instead of 0 article before adjective	6	1.6%
18	“a” instead of “the”	10	2.6%
19	Possessive determiners instead of “the”	15	4%

Table 1 shows two kinds of errors; omissions of articles (categories1-8) and substitutions of articles (categories 9-19). The findings indicate that the omission of articles were the most frequent errors. The students omitted “the” before nouns made particular in context most frequently. 115 errors were identified, comprising 30.6% of

all errors. and omission of "a" befor3e singular nouns defined by adjectives was in the second place in terms of frequency with 12%.

The error of Omission of "the|" before superlative was made by none of the students followed by Omission of "the" before a noun error which was made only by 1 participant having 01 frequency. In the error substitute section of the data the most common error found was "the" being used instead of 0 article before plural nouns with the frequency of 42 followed by "the" used instead of 0 article before an abstract noun with 22 frequency (5.8%). Substitution of article error is the least committed error by the participants with error of "a" used instead of "the" before unique nouns having a frequency of 2 only (0.5%) and "a" instead of 0 article before uncountable nouns with frequency of 3 (0.8%) only.

Table 2

Top three Most Frequent Article Errors

S.NO	Categories	Frequency of errors	Percentage
1	The omission of "the" before nouns made particular in context	115	30.6%
2	The omission of "a" before singular noun defined by adjectives	45	12%
3	"the" used instead of 0 article before plural nouns	42	11.2%

Table 2 shows that the most frequent article errors with the highest percentage in the participants' essays were omissions of "the" before nouns made particular in context (30.6%), omissions of "a" before nouns defined by adjectives (12%) and use of "the" instead of 0 before plural nouns(11.2%).

Discussions and Conclusion

Articles in English mostly are made up of one to three letters and are so small that they are commonly considered as the atom of grammar. In order to give meaning to an article it has to be a part of a phrase, used before or after another word .According to the research of Sttayatham and Honssa (2007), Chalongwong et al. (2004), Banlomchon (2005) and Boonyavanch (2002) articles error is one of the most common problem in language learning. Articles carry no lexical definition by themselves, though because of their unique function in grammar they actually give the meaning to the sentence by specifying the reference of the noun, that is why they are so importance and occur so frequently in grammar. That is the reason one should be careful while using them. Baranieh (2005) says that it's very difficult to master the use of article in English especially for those learners'' who have not article in their first language. The detailed analysis of the data proves that Pakistanis' ESL speakers do not understand English

articles completely so they make frequent errors in the usage. Articles are considered to be the hardest part of grammar to be learnt by students in Pakistan.

It was revealed from the findings of the study that students experienced mother tongue interference while using articles. The most often ranked error was the omission of "the" before nouns made particular in context. This kind of error is caused by L1 interference; Richards and Schmidt (2002) classified errors of omission of "the" before nouns as inter-lingual errors. The top three most frequent article errors found in the compositions of the students were omissions of the articles. Furthermore, the data supports the facts proposed by Pongpairoj (2007) who says that omission of an article before a noun is the biggest problem of Pakistani students because their native language does not have articles.

Factors Responsible for these Errors

The following are the reasons responsible for the inaccurate use of English article:

A. knowledge of English article usage
B. mother tongue interference
C. carelessness of the students
D. the difficulties regarding English articles
E. teacher-induction of such error

How Can the Situation be Improved

Errors are a natural result of the learning process, which eventually has a direct impact on the improvement of language teaching material and methods, in remedial teaching as well as in ordinary teaching (Corder, 1981). A deep analysis of errors can lead to students understanding and remedies to the situation. Some causes and remedies are given below:

Focus on Mother Tongue Interference

This is one of the causes of error that is hard to overcome. The teacher should focus primarily on mother tongue interference. Since the Urdu language does not have articles, its difficult for students to understand their function. Teachers should dedicate more time and energy to the use of articles.

Consultation of Grammar Books

Using the article "the" was problematic for all students in the study. Most of the students used the article "the" intuitively without consulting any grammar text book. These students are not provided with proper guideline about the use of articles if they are given guidance about what errors most of them make in their essays and are provide handouts on the usage of "the" which contain clear explanation, their errors can be reduced. Krashen (as cited in Zainuddin et al., 2002) claims that students learn second

language when they are given proper input of the language and when their filters allow them to have the input.

Importance of Teachers

In light of the feedback from the students, teachers can design teaching materials and techniques in order to improve students' understanding of the rules of articles and apply it both inside and outside the classroom (Spratt et al., 2005)

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Comparison between Perception and Use of Alternative Assessment Techniques in Teaching of English at Secondary Level

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Abstract

The quantitative, survey type study was aimed to explore the difference between the perception towards alternative assessment and practical application of alternative assessment techniques by the secondary school teachers of English subject in tehsil Gujrat. There were total of 146 teachers teaching English subject in the tehsil. It comprised both rural and urban schools, so the researchers selected 21 teachers from 74 rural teachers and 19 urban teachers from 72, using stratified random sampling technique. For survey a tool comprising three sections was adapted. The first section was about demographic and instructions and purpose of survey. The second section contained 21 statements to be rated on five point Likert scale for the measurement of perception about alternative assessment, whereas thirst section comprised 17 statements to measure the use of alternative assessment techniques. The researchers made personal visits to ensure the 100% response rate. Frequency, percentages and t-statistics were employed to analyze the data. It was found that the secondary school teachers had a high perception towards alternative assessment but use of these technique is not at the level of perception. Indicating the gap between the perception and use of alternative assessment techniques by the secondary school teachers while teaching English in tehsil Gujrat. The researchers recommend in-service training of the Secondary School Teachers of English subject for the use of alternate assessment during teaching learning process. The exposure to alternate assessment maybe helpful in developing constructive and encouraging attitude towards assessment methods in the classroom.

Keywords: Alternative Assessment, Implementation, Traditional Assessment, Assessment Type, Learning Outcomes, Secondary School Teachers

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Introduction

An important component of the learning process is classroom assessment. Instructors spend a large part of their instructional time in assessment activities. So it is obvious that there is a deep and active relationship between teaching learning and assessment system. Both are interrelated and strengthening each other (Popham, 2005). By conducting authentic and relevant assessment teaching learning process improves a lot. Assessment endorses instruction (Torrance, 1995). There is strong relationship between teaching strategies and assessment techniques employed during the teaching learning process. So from this viewpoint it is perceived that assessment is a rudimentary factor in teaching learning practice and procedures and without true evaluation may not be possible.

According to Cotton (2005), classroom assessment is such a mechanism that can be utilized to indicate attainment level or mental caliber of a learner. Herman (2001) likewise gave the similar view that assessment is a continuous process and through this approach learners' information and understanding can be perceived and detected. Herman (1991) stated that it is a practice which is being used to know the current knowledge and proficiency level of learners.

All the activities executed by teachers and by the pupils provide feedback for effective teaching and to adjust learning according to that feedback (Black & William, 1998). From the above discussion it may be concluded that assessment play an indispensable role in maintaining the learning process active.

Cresswell (2001) stated that, old and traditional sorts of assessment activities are not suitable for assessing the expressive and communicative skills. The traditional usual tests just evaluate the students' caliber of identifying the exact and correct answer. They do not focus on critical thinking and creativity. So with the passage of time it became clear that new teaching methods are the dire need of the age, in order to incorporate novel viewpoints. Therefore assessment approaches should be adjusted accordingly. According to Brown (2004) traditional assessment cannot prepare students critical thinking and creativity.

Theories Underlying Assessment Practices

With the passage of time, due to the findings of different research studies and new demands of the modern age in the area of information, there is a need that assessment methods should also be changed. Modern psychology has exposed advanced and new facts of the working of the mind; According to the new demands of the learners the teacher are trying their best to device innovative and novel methods, techniques and styles of teaching (Shlayer, 2000). The most famous and distinguished schools of thought differ in the philosophy for the use of assessment techniques are as under:

1. Behaviorism. This theory is formed on manifest adaptation and alteration in behavior. Behaviorism focuses on an innovative behavioral system, recurring repeatedly and frequently unless it converts into a predictable routine. The behaviorist

movement remained dominant in the early part of the 20th century. Ivan Pavlov and John B. Watson (1878-1958) and Skinner were the Behaviorism's unsurpassed and well known philosophers. Ivan Pavlov discovered classical conditioning; John B. Watson rejected contemplative approaches and tried to restrict psychology to experimental psychology whereas Skinner desired to offer ethical basis to behaviorism (Shepard, 2000).

2. Cognitivism. In 1950's the American Psychology manifested itself in Cognitivism. One of the chief supporters of cognitive psychology was Jean Piaget. In this period behaviorist theory was considered narrow as it restricted the person's capability to just facts gaining. In the 1960s, the theory of cognitivism became very popular. This theory recommends that learning is not a simple process but it involves more complex procedures. Simple rote memorization cannot accomplish the requirement of real and accurate learning process. Conventional methods of assessment true/false, MCQs and matching columns cannot achieve the aim of actual assessment. Theory of cognitivism advocates that learning is a forceful and dynamic process of mind construction (Stecher, 2010) which cannot be performed in sluggish and inactive mental state of mind. That's why teaching learning process require assessment methods that should be more activity based and develop learner's problem solving and reasoning skill. So in this way alternative assessment is more appropriate to learning as it needs students to incorporate and create.

3. Constructivism. In last decade of 20th century, a new theory constructivism was developed. Constructivism is student centered. All the educational activities revolve around the learner. This theory is a reaction against behaviorism and cognitivism. Students do not acquire knowledge by passive rote memorization and by captivating facts. Learners are the vigorous and energetic participants in learning process. They frame their own concept and understanding, develop their own perception and draw their own inferences, and construct their own intellectual notions (Perkins, 1992).

Traditional Assessment

Teachers normally use written test comprising MCQs or short answers questions based on memorization is named as traditional assessment. It is a learners' cognition test. Generally Multiple Choice Questions, True/False Questions, completion test and matching columns are included in traditional kinds of assessment. The basic purpose of this assessment is to recall or recognize facts. Construction or creativity is alien to traditional assessment. It is commonly conducted in a measured and calculated manner.

Alternative Assessment

The expression alternative assessment can be normally called, an assessment method which is alternate to customary traditional written tests. In alternative assessment

students display the capability and understanding. This capability cannot be measured by using MCQs, T/F or matching. Open ended questions indicate learners' reasoning ability and critical thinking power (Worthen, 2003). In alternative assessment various approaches are being used to find out learner's knowledge and understanding to exhibit what they can implement.

1. Observation
2. Portfolios
3. Peer Assessment
4. Anecdotal Records
5. Audio and Video Recordings
6. Checklists, Rating Scales and Rubrics
7. Diaries, Journals and Writing Folders
8. Self-Evaluation
9. Presentation /Demonstration
10. Open Writing

Move from Traditional Assessment to Alternative Assessment

Educationists think that shift from customary and conventional assessment to alternative assessment is because of changes that are occurring in the work. In the past, institutions prepared learners for industrial and mechanical determinations that were considered the pillar of the economic system. Institutions concentrated on necessary proficiency, knowledge and rudimentary understanding (Wallen, 2006). In the past traditional paper and pencil tests appropriately calculated the information based knowledge. Now the trend has been changed; as the move from industrial to an information-based economy, the different and fresh place of work require workers to use high-level of skills and knowledge to solve multisided and multidimensional issues (Rogers, 1991) and for achieving all these objectives, alternative assessment may prove fruitful, because alternative assessments focus on evolving imaginative and creative skills. These disregard rote memorization and factual understanding and learning. These assist students to prepare them for the manifold jobs which may prove very useful for them in the forthcoming economy.

The different innovative theories in learning and education have focused on to put more emphasis on achievement of practical and useful knowledge, rather than just getting the pieces of data. The shift from traditional paper pencil test to alternative assessments may be termed performance assessment (Pollock, 2001).

In Pakistan as in many other developing countries, the assessment practices of public secondary schools are predominantly rooted in summative processes based on traditional paper pencil test. Little, if any, attention is given to alternative assessment approaches. Analyses of different research studies revealed that alternative assessment techniques are considered as all-inclusive and wide ranging assessment tools that broadened

their variety of assessment approaches and scheme, stimulated collective and cooperative learning, indorsed and encouraged rational powers of learners and established learners' keen interests in English language (Shahid, 2002). Although teachers faced many problems such as greater load, overloaded classes, a lot of syllabus, learners' negativity and more than that annual board system. Instructors want to change away the inflexible, rigid testing to a flexible assessment system (Rahmani, 2012). According to Siddiqui (2010) solution to the problem is that professional development programmes for the teachers should be launched on a large scale in order to introduce alternative assessment techniques as a complementary assessment system rather than short term, small scale trainings.

Research Design

Quantitative research approach was employed to address the major objective of the study. The major focus was to explain the level of gap between perception and use of alternative techniques while teaching subject of English. In quantitative approach, survey was the appropriate design used by the researchers, survey questionnaire used for this study was adapted from Shehzadi (2017) measuring perception and use towards alternative assessment. English teachers of Teshil Gujrat of Punjab province at secondary level were the population of the study. There were total of 146 secondary school teachers teaching English as subject. Both rural and urban schools were included in the population of the study. Therefore, using stratified random sampling technique, 21 rural teachers out of 74 and 19 urban teachers out of 72 constituted sample for this research. Objectives of the study were further articulated into three hypotheses.

- **H_{o1}**: There is no difference between the perception towards alternative assessment and use of alternative assessment among secondary school English teachers of tehsil Gujrat.
- **H_{o2}:** There is no difference between perception towards alternative assessment of teachers in English subject across locality in tehsil Gujrat.
- **H_{o3}:** There is no difference between the use of alternative assessment by secondary school teachers in English subject across locality in tehsil Gujrat.

Quantitative techniques were adopted for the study. A questionnaire consisted of two parts; one part for the perception and other for the use of alternative assessment techniques was adapted from Shehzadi (2017) study.

Development of Instrument

The researchers adapted a questionnaire from Shehzadi (2017) study after reviewing the similar tools for the measurement of perception and use of alternative assessment. The questionnaire was based upon five point Likert scale, for perception component and Always = 5, Usually = 4, Sometimes = 3, Rarely = 2 and Never = 1 for measuring the use of alternative assessment. The tool was consisted of three parts: first meant for demographic information, second comprising 21 statements measuring

perception towards alternative assessment and last section comprised 17 statements to investigate the level of use of alternative assessment.

Method of Data Collection

As the data were collected from the public sector teachers of secondary schools, so permission from higher authority and the heads of the respective schools were obtained before administration of the questionnaire. Researchers had made personal visits to the questionnaire filled. It helped to further explain the tool where it was necessary. Personal visits were beneficial for the study in a sense to avoid ambiguity, ensure 100% response rate and timely filling of the questionnaires.

Results

Data collected from secondary school teachers was of quantitative in nature. Frequencies and percentages were calculated to find out the opinions of the SSTs and then t-test was employed to find out the level of difference between rural and urban SSTs.

Table.2

Secondary School Teachers' Perception of Alternative Assessment techniques

Sr	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	To me portfolio encourages learners to be involved in self assessment of learning.	21	19	-	-	-
2	I perceive portfolios are systematic and purposeful developed documents to assess learning over time.	17	23	-	-	-
3	Portfolios are important assessment tools to investigate depth of students' knowledge in English teaching.	16	22	2	-	-
4	To me pattern of students leaning may be explored by developing portfolio of students work over the period of time.	11	22	7	-	-
5	I consider observation as a potential tool to provide feedback and optimise performance of the learners.	21	19	-	-	-
6	I consider self-evaluation as an essential element for productive learning.	18	21		1	-
7	Students are usually more motivated while performing their own work.	12	25	3	-	-
8	To me self assessment of learning help to strengthen the student teacher interaction.	15	22	3	-	-

9	Self assessment is helpful in identification of own strengths and weaknesses in learning.	15	18	7	-	-
10	To me focused group interview produces insights for developing strategies for better achievement.	15	23	2	-	-
11	Peer assessment is useful in making the learners active participants of learning process.	12	25	3	-	-
12	In my point of view peer assessment work as active technique in assessment of students learning.	17	22	1	-	-
13	I am of the opinion that teachers should prepare checklist to track the learning progress.	14	21	4	1	-
14	To me assessment work as motivational technique and help learners to be active participants.	16	20	3	1	-
15	Journals have long been in exercise to assess a learner's perception of a subject on a theme.	18	22	-	-	-
16	To me open ended questions may be utilised to provide chances to learners for elicitation of their understanding.	13	24	2	1	-
17	Open ended questions provide learners more opportunities for appropriate engagement to learning activities.	19	21	-	-	-
18	I feel that demonstration requires students to display knowledge and skill that may not be judged by MCQs or T/F test.	18	19	2	1	-
19	Teachers may use interviews to collect a lot of information about different aspects of students learning.	18	22	0	-	-
20	I use anecdotal record for specific observations of individual student behaviours.	17	20	3	-	-
21	Teachers may use anecdotal record to get in depth understanding of the learning process of the individuals.	19	17	4	-	-
	Overall Sum	342	447	46	5	0
	Percentage	40%	53%	5%	2%	0%

Table 2 presents the variation in the percentages of alternative assessment techniques. 40% SSTs were strongly agreed indicating their positive perception towards alternate assessment techniques and 53% agreed whereas just 5% responded uncertain and just 02% SSTs were disagreed and 0% strongly disagreed. To comprehend the position more precisely, graphical presentation of the percentages may be very help.

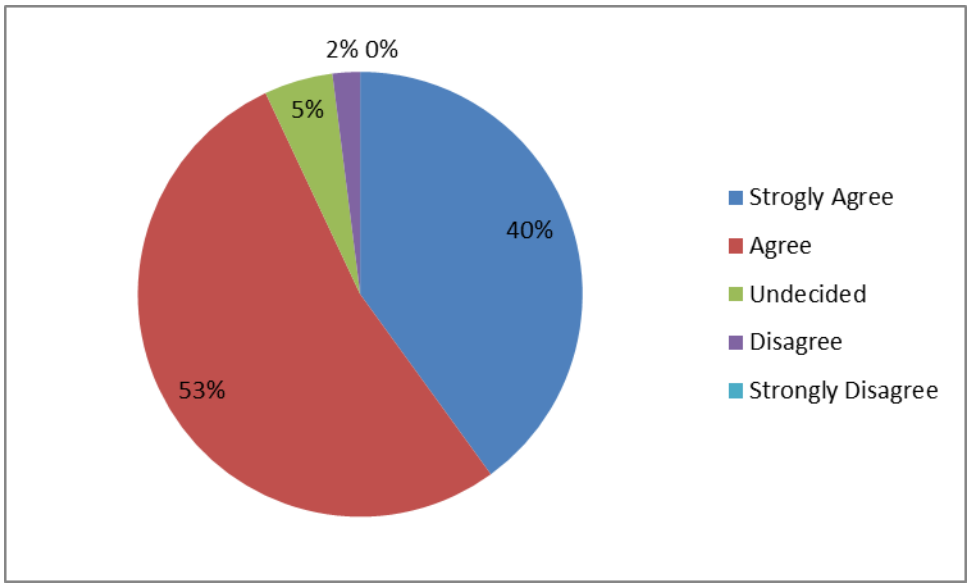

Figure 1. *Perception in percentages*

This figure presents the overall percentages of the perception of alternative assessment techniques. Overall 83% teachers were agreed and just 5% teachers remained undecided, just 2% teachers disagreed. It shows that SSTs have a high level of comprehension of alternative assessment techniques.

Table 3

Utilization of alternate assessment by SSTs in English

Sr	Statements	Always	Usually	Sometimes	Rarely	Never
1	I use portfolio in assessing student's learning of English language.	11	24	5	-	-
2	I interpret portfolios data for investigating the depth of the English knowledge in students.	15	20	5	-	-
3	I employ observation as classroom assessment tool for evaluating student's progress in English language.	11	26	3	-	-
4	I utilize self-assessment in involving the learner directly in the learning process.	12	24	3	1	-
5	I conduct focused groups for acquiring information on highly personal or socially sensitive topics of English.	8	25	7		-

6	I assign the students work to other students for assessment.	18	15	7	-	-
7	I use check list in English language to determine whether students have mastered the desired outcome.	10	23	7	-	-
8	I administer check list to determine whether students have mastered the desired outcome.	11	28	0	1	-
9	I ask students to write journals as classroom assessment tool for evaluating learning progress.	13	21	6	-	-
10	I utilize classroom projects to improve understanding of the student's ability.	16	18	5	1	-
11	Open writing helps me for assessing learner's manifestation of his own potential and approach.	7	23	7	3	-
12	Open ended answers (produced by the students) for getting additional information from the students are helpful to me.	10	22	7	1	-
13	I conduct demonstrations as alternative assessment technique to reflect everyday situations within realistic and meaningful contexts.	10	25	3	2	-
14	I conduct one on one interview to reveal students' critical thinking.	10	22	6	2	-
15	I operate anecdotal records to get useful insights into the students learning.	14	21	5		-
16	Anecdotal notes are used by me to record specific observations of individual student's behaviour.	10	22	8		-
17	I can maintain anecdotal records easily.	8	24	8		-
	Total Frequencies	194	383	92	11	
	Percentage	28%	57%	13%	2%	0%

Table 3 shows the various levels of percentages of the use of secondary school teachers' alternative assessment techniques. 28% SSTs claimed that they always use alternative assessment techniques, 57% SSTs were of the view that they usually use these techniques in their class.13% SSTs use these sometimes and 2% teachers claimed that they rarely have utilized these techniques in their classes. In Figure 2 Graphical presentation of the percentages of use of alternative assessment techniques are shown.

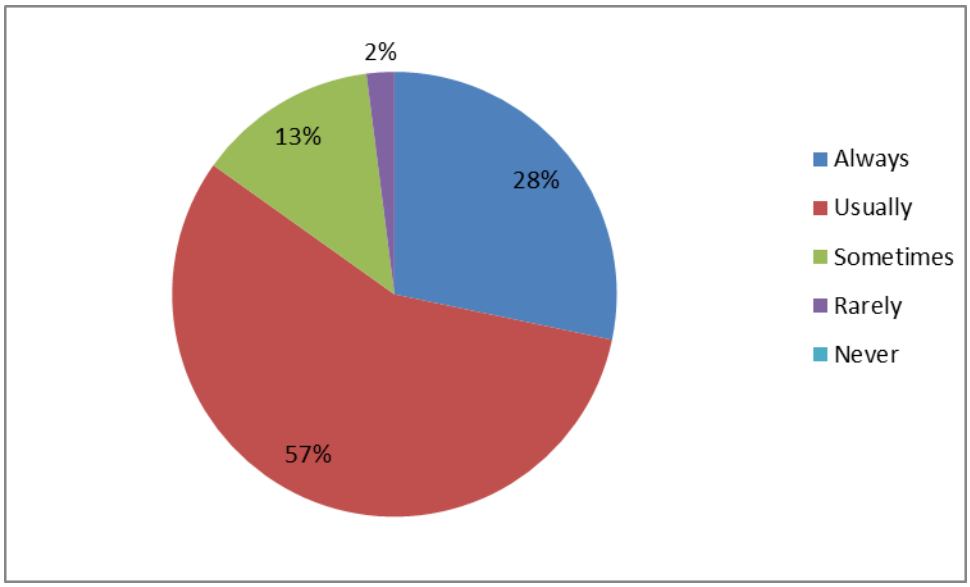

Figure 2. *Graphical presentation of the percentages of Use*

The graph presents the various percentages of the use alternative assessment techniques in a more precise way.

Table 4

Secondary school teachers mean score of overall perception and use

	Mean	Std. Deviation
Overall Perception	90.45	6.93
Overall Use	64.45	4.65

Table 4 shows that the mean of "Over Perception" of alternative assessment techniques of rural and urban locality is 90.45 and the mean of "Overall Use" of alternative assessment techniques of both the localities rural and urban are 64.45.

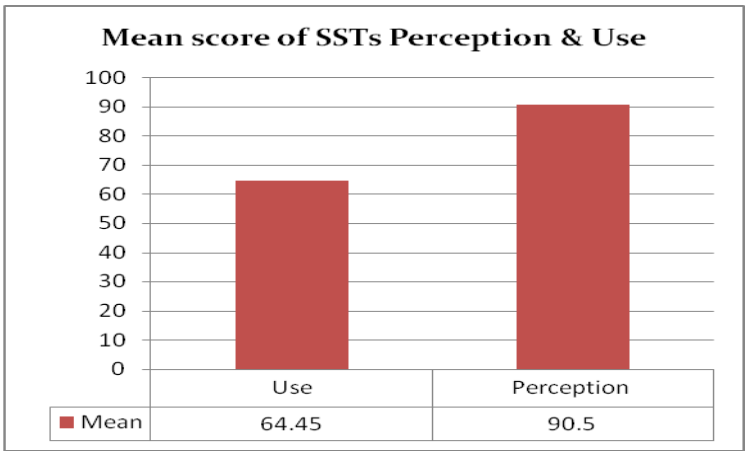

Figure 3. *Graphical representation of the mean score of perception and use*

The difference in the mean score of overall use and overall perception of alternative assessment techniques has been presented in the graph. This graph presents the confirmation to reject the null hypothesis that the secondary school teacher's perception and use of alternative assessment techniques are significantly different from each other.

Table 5

Comparison of rural and urban Secondary School Teacher's perception of alternative assessment techniques

Gender	N	Mean	SD	Std. Error	df	t-value	Sig
Perception Rural	21	89.47	8.33	2.02			
Perception Urban	19	91.50	5.12	1.28	26.81	-.836	.06

* The mean difference is significant at the .05 level

The summary of the statistics could not provide enough evidences to reject the null hypothesis. The mean score (M=89.47) of perception of rural secondary school teachers was different from the mean score (M=91.50) of urban secondary school teachers but the mean difference (MD=2.03) were not statistically significant. The null hypothesis was accepted to provide the result that perception of rural and urban teacher of tehsil Gujrat towards alternate assessment was same.

Table.6

Comparison of rural and urban SST's Use of alternative assessment techniques

Locality	N	Mean	Std. Deviation	Std. Error Mean	df	t-value	Sig
Rural	21	65.88	4.31	1.04			
Urban	19	62.93	4.65	1.16	30.41	1.882	.83

* The mean difference is significant at the .05 level

In order to test the hypothesis again t-test was used. It highlighted that the mean score (M=62.93) of use of rural secondary school teachers was different from the mean score (M=65.88) of urban secondary school teachers but not statistically significant. There were no significant evidences to reject the null hypothesis, which indicated that teachers of both urban and rural locality were utilizing alternate assessment for teaching of English at secondary level equally.

Findings and Discussion

The findings of this quantitative study were as following the mean score of the "Perception**"** of alternative assessment techniques is 90.45, and the mean score of the "Use**"** of alternative assessment techniques is 64.45. The t-test and descriptive statistic employed, explored that they were significantly different from each other. So, the first null hypothesis that there was no significant difference between perception and use of alternative assessment techniques was rejected. There was no significant difference between rural and urban secondary school teachers on the perception of alternative assessment techniques. More over rural and urban secondary school teachers were not different in the use of alternative assessment techniques.

From the findings of the study researchers concluded that teachers' have high perception towards alternate assessment. They have a clear cut understanding of various alternative assessment techniques but SSTs are not willing to use alternative assessment techniques as per their level of perception towards alternative assessment. Moreover, rural and urban secondary school teachers are not significantly different from each other.

The first finding is in consonance with the conclusion of the study conducted by Grabin (2007) for the use of alternate assessment. The results and conclusions of the study showed that the teachers have the perception and awareness about alternative assessment techniques but not actually using it in the classroom. So, there is a great difference between perception and practice. So, the study concluded that mostly teachers use traditional assessment practices in their classes. Second and third findings are in consonance with the results of the study "Classroom Assessment Practices of Ohio teachers" by Craig (1998). The common judgment about measurement practices

vary by locality. From these studies it can be concluded that alternative assessments techniques are being used mostly by teachers in urban schools whereas teachers in countryside background are not so much interested in alternative assessment techniques. Findings of the studies also revealed that teachers thought alternative assessment techniques as an extra burden. They still considered traditional assessment practices appropriate. These studies also pointed out that substantial practice of alternative assessment techniques may prove very useful at all levels of education. English Language Secondary School Teachers' in-service training with special reference to alternative assessment techniques in classroom is suggested, this training may also lead to improve constructive and encouraging attitude towards assessment methods in the classroom. According to the new learning theories, reforms should be made in traditional assessment system.

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Practices of Professional Ethics among University Teachers: An Analysis of Demographic Differences

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Abstract

The study was aimed to find out the role of demographic characteristics regarding practices of professional ethics among university teachers in Punjab, Pakistan. The study was focused on a single variable of professional ethics in three domains of teacher's work viz. Teaching, Research, and Administration. The population of the study comprised of seven hundred and seventy three teachers working at social sciences faculties of eight universities in the Punjab province (five in public and three in the private sector). The technique for selecting sample was proportionate stratified random sampling. Three instruments of data collection viz. Professional Ethics in Teaching, Professional Ethics in Research, and Professional Ethics in Administration were developed for the study. Data collected through the survey were analyzed using descriptive statistics, t-test and ANOVA. The results of the study showed that regarding practices of professional ethics, both in teaching and research, female teachers were significantly better than male teachers and higher qualification led to significantly better practices of professional ethics. With regards to administration, there were no significant differences regarding any demographic variable.

Keywords: Professional Ethics, Teaching, Research, Administration, Demographic Characteristics.

Introduction

Ethics, in general, is an axiological issue which deals with the values and morals. The major question is what is right and wrong. According to Mahony (2009) ethics deal "amongst other things, with right and wrong, ought and ought not, good and evil" (p. 983). Lategan (2003) describes ethics as "functions of principles and values --- [and its] effect on personal lives and social structures" (p. 220). Professional ethics are "work ethics defined as a set of attitudes concerned with the value of work" (Naagarazan, 2006, p. 5). Professional or work ethics define how people conduct in the workplace. Lategan (2009) emphasizes that only the knowledge of ethical codes and principles do not ensure ethical conduct. According to him "ethical conduct must never result in mechanically oriented actions, but must be personally integrated in the heart

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and soul of every person --- Therefore, it has to be connected with cultural and religious backgrounds in order to assure ethical behavior" (Lategan, 2009, p. 129).

In case of the teaching profession, Jayamma and Sumangala (2012) describe that "teacher professional ethics mean a set of dignified principles put into practice by the teachers. They are the valuable tactics that are exhibited and enforced by teachers in relation to the students, colleagues, community and to oneself, to produce a profound effect on strategy of education" (p. 15). They further emphasize that ethics, in general, is essentially the awareness of differentiating between what is right and what is wrong, and then in light of that knowledge, proceed in rightful manner. How teachers behave and conduct their business is vital to the effectiveness and integrity the teaching profession. The teacher's contribution is not limited to just teaching of mechanical curriculum in the classroom. It, in fact, is beyond this. Teaching skills and methodology do help to develop a competent teacher, but for the greater social setting, ethical teachers are fully aware to adapt their skills and methods to new demands and challenges towards harmonious and comprehensive development of students. Ethical teachers consider the significance of acquiring wider perspective on human values. Teachers have greater impact and influence on students with reference to values. These "values are reflected in what teachers choose to permit or encourage in the classroom" (Arthur, Grainger & Wray, 2006, p. 431). One must acknowledge that, despite the education and the institutions' code of ethics, it is not a simple task to be an ethical teacher. Undoubtedly there are guidelines, principles and some permanent rules for ethical teaching, there are certain ethical issues which are considered extremely unethical and illegal. For example, non-confidentiality, harassment, discrimination, and on the whole academic dishonesty. Despite these known situations, teachers also encounter several ethically ambiguous contexts. It appears that teachers are not well trained to manage ethical issues and problems they might face. Although they might be aware of some unethical situations such as bullying, harassment, non-confidentiality of grades etc., they might not be well equipped for other more delicate matters (Buskist & Benassi, 2012).

In Pakistan, the last decade has seen a great expansion in higher education institutions resulting in induction of a great number of teachers, the training programs of Higher Education Commission (HEC) have very little relevance to teacher's professional development especially in the area of professional ethics. Other than establishment of Quality Enhancement Cells (QECs) in HEC in order to assess some aspects of professional ethics (such as the problem of plagiarism), its focus is limited to enforcing penalties for misconduct/ malpractice, while the proper training and appraisal regarding comprehensive professional ethics for teachers in different roles is generally ignored. Presently teachers are expected to be competent in curricular content, pedagogical, and research skills only. The ethical part of teaching, in general, is neglected. With this in view, this study has been conducted to examine as to what

extent the university teachers practice professional ethics principles with reference to their diverse roles as teacher, researcher, and administrator; and also find out the differences in practices of professional ethics with reference to demographic characteristics.

Literature Review

Lishchinsky (2011) conducted a study to investigate ethical dilemmas in teaching practice. The sample of the study was fifty teachers. Grounded theory was used in the development of a coding process in three stages. According to Lishchinsky, "teachers deal with many ethical problems in their practice --- such as inappropriate allocation of resources, situations in which pupils are being discussed inappropriately, and irresponsible colleagues" (p. 648). The study formed following critical ethical dilemmas/tussles: (i) caring climate and the formal climate; (ii) tension between distributive justice (fairness of outcomes) and institutional standards; (iii) confidentiality versus institutional rules; (iv) dilemmas between loyalty to colleagues and institutional norms (e.g. protecting pupils); and (v) teacher's professional responsibility towards helping pupils versus parental pressure.

Puhan, Malla, and Behera (2014) conducted a study to analyze current educational issues on pre-service and in-service teachers. The study was conducted in a B.Ed College of Education in India. The purpose of the study was to explore teachers' perception on ethical education and examine current ethical problems in the field of teacher education. The study was carried out from a phenomenological context. The participants of the study were 200 teachers (one hundred pre-service and one hundred in-service). Interview schedule for obtaining direct information from the teachers was used in collection of data. Major findings of the study were: (i) the significant cause of ethical decline in educational system is the fast diffusion of corruption; (ii) privatization of educational institution was another cause e.g. self-financing private teacher institutions (commercial private teacher education institutions). The education became a marketable commodity, where the teacher education institutions were traders and students were the customers; (iii) political interference was greatly "responsible for misuse of human resource management in education. Political parties often use many teachers as their party workers and these teachers also participate willingly in politics" (p. 4). Such teachers had records of unethical behaviors and misconduct. Teacher-unions also significantly manipulate the decision making process. The ethical commitment of teachers has gradually decreased because of political interference; and (iv) unfair assessments, absenteeism, and missed ethical education in current teacher training curricula are some other major causes of unethical conduct.

Soltanzadeh, Amrahi, and Esm (2014) conducted a descriptive survey study about the standards of professional ethics of the faculty members as viewed by the students. The sample of the study was one hundred and four students selected through

stratified random sampling technique. The findings showed that students were not satisfied with the standards of professional ethics of the university and the faculty members.

Ryan and Bisson (2011) in their descriptive and analytical study indicated that being taught in American colleges/universities, ninety percent of America's business schools now offer some form of ethics training (Stark, 1993, p. 38). The researchers, however, emphasized that despite these efforts, such courses are not being taken seriously. They conclude that the fault might be with the teachers having dubious ethical approaches in their work, thus projecting such behavior in their students' minds, though unintentionally. The result is no sustainable ethics application in their life. They recommended that ethics be included in the whole curriculum having diversified courses.

Mahmoudian, Tabei, Nabeiei, Moadab, Mardani, Sarvestani, and Ghasemi (2013) conducted a study on professional ethics among managers of teaching hospitals of Shiraz University of Medical Sciences, Iran. The results show that there is a significant positive relationship between managers' educational levels and professional ethics, meaning that when managers' education level goes higher, their job ethics level does too. Moayedfar (2006) and Nikbakht (2003) had similar findings in education sector. The researchers stressed that education is one of the most important effective factors in job ethics. If manager's education is higher, his job ethics will be higher too in education sector. Yet poor work ethics among staff with low education level is significant. This issue affects overall performance. The research, however, showed that there is no significant relationship between age and managerial ethics in hospitals, which is the same as other's results. Also this research explains no significant relationship between gender and managerial ethics.

Wilks (2011) reviewed the related research on unethical behavior in organizational setting. The review shows that employees may get involved in unethical conduct with the intention of benefiting themselves, retaliating against the organization, or harming their colleagues. According the review, a number of studies link such behavior with perceptions of unfairness/injustice. Participants in this study comprised of one hundred and twenty six full-time employees in different professions working in various organizations in Portugal. Convenient sample was obtained through snowball sampling. There was a positive finding of the study i.e. higher the education levels, lower the degree of unethical conduct.

Methodology

The study is descriptive in nature, using self-report questionnaires. It is focused on a single variable of *Professional Ethics* (in three domains viz. Teaching, Research, and Administration).

Population of the Study

The Higher Education Commission (HEC) of Pakistan, in May 2015, issued ranking of 67 general HEIs (Higher Education Institutions) in Pakistan (HEC Ranking 2014 which is the 4th Ranking of Pakistani HEIs). Out of the total 67 HEIs, 22 universities (one third i.e. 33%) are in the Punjab province. Of these 22 universities, 18 universities offer Social Science disciplines. Teachers of these 18 general universities of Punjab, offering following social sciences disciplines constituted the population of this study. These disciplines, in the category of social sciences, have been identified by Pakistan's Higher Education Commission (HEC).

Sample of the Study

The study employed Proportionate Stratified Random Sampling technique. At first stage, those general universities in Punjab were selected which offer Social-Sciences in at least 5 disciplines. The number of general universities in Punjab offering social sciences in at least 5 disciplines is 14 (Public = 9; Private = 5). At second stage, 50% of population of universities and proportionate size by public and private. Five universities from public sector and three from private sector were selected. The total number of universities was eight. Universities were selected randomly by using lottery method. At third stage, all teachers were selected as the target sample of study from above randomly selected universities (N = 773). The detail is as under:

Table 1

Target sample of the study

No.	University Name	Public/ Private	No. of SS Disciplines	No of Teachers
1.	The Islamia University Bahawalpur	Public	11	92
2.	Bahauddin Zakariya University, Multan	Public	12	90
3.	Lahore College for Women University, Lahore	Public	10	156
4.	University of Sargodha, Sargodha	Public	10	120
5.	Government College University, Faisalabad	Public	11	146
6.	Forman Christian College, Lahore	Private	10	66
7.	University of Lahore, Lahore	Private	5	39
8.	Minhaj University, Lahore	Private	6	64
	Total			773

Note. SS=Social Science.

Instruments of the Study

Based on the review of existing literature, three instruments were developed to find out the practices of professional ethics among university teachers in three roles i.e. teaching, research, and administration. Item pools were generated for these scales. The

format of these scales was a 5-point Likert response. The first section of the questionnaire contained demographic information (gender, age, qualification, position, and work experience), while the second section covered the three scales.

Instrument Validation. For the concept of validity, Gay's definition was taken as criterion, which elaborates that validation is a "degree to which a test measures what it is supposed to measure --- [and] for what and for whom" (Gay, 2005, p. 138). Content validation process is considered vital for scales of high-quality. Polit, Beck, and Owen (2007) defined content validity as "the degree to which a scale has an appropriate sample of items to represent the construct of interest" (p. 459). In order to validate the developed instruments, the Content Validity Index (CVI) method was employed. According to the recommendations by Polit, Beck, and Owen (2007), "for a scale to be judged as having excellent content validity, it would be composed of items that had I-CVIs of .78 or higher and an S-CVI/Ave of .90 or higher [for the overall scale]" (p. 467). Here I-CVI stands for Item-CVI of individual items, S-CVI is the Scale-CVI of the overall scale, and S-CVI/Ave is a method to compute the S-CVI by calculating the average of the I-CVIs for all the items on that particular scale. A panel of experts (fourteen teachers from two public and three private universities) was consulted to validate the scales. After conducting the CVI analysis: (i) few items were rated irrelevant by the experts; (ii) some of these items were rejected, while others were revised as pointed out by the experts and also in line with recommendation by Polit et al. (2007) that "items with an I-CVI somewhat lower than .78 would be considered candidates for revision" (p. 466); and (iii) some experts after rating the items, also pointed out that some items, even though relevant to the construct, were somewhat akin to another item in these scales, and commented that it might be better to consider only one item in such cases. The comments and guidance of the panel of experts helped in the refinement of these scales.

Reliability of Instrument. To check the reliability of the instruments, questionnaires were administered to university teachers for pilot testing (415 teachers from 4 universities). The universities were part of the population but not included in the sample of the study. These were University of Gujrat; University of the Punjab, Lahore; Fatima Jinnah Women University, Rawalpindi; and University of Education, Lahore. The overall return rate was 50%. For estimating internal consistency Cronbach's alpha coefficient test was applied using SPSS to ensure reliability. All instruments were reliable with high Cronbach's Alpha coefficient (above .90).

Data Collection

For data collection, the researcher visited the sampled universities. In case, visits were not possible, the data was collected through mail providing a complete set of instructions. Of the 773 teachers, 439 responded with a return rate of 57%.

Data Analysis

The data collected were tabulated and analyzed using SPSS, the statistical software package. In order to examine data, both descriptive and inferential statistics were applied. To test the hypotheses, t-test and ANOVA (Analysis of Variance) were applied. For post-hoc analysis, Tukey's HSD test (Honestly Significant Difference) was used. All the hypotheses were tested at the significance level of 0.05 ($\alpha = 0.05$).

Professional Ethics' Practices: Demographic Differences in Teaching

Gender-wise Comparison. Gender-wise comparison regarding Professional Ethics' Practices in Teaching as perceived by university teachers is presented in Table 2:

Table 2

Gender-wise comparison regarding professional ethics in teaching

Gender	*N*	*M*	*SD*	*t*	*p*
Male	156	232.69	38.46	-2.07	.039
Female	214	242.20	49.73		

Note. *df* = 366.69 (Equal variances not assumed).

An independent-samples t-test shows that regarding practices of professional ethics in teaching, female teachers were significantly better than male teachers.

Age-Groups Comparison. Age-Groups comparison regarding Professional Ethics' Practices in Teaching as perceived by university teachers is presented in Table 3:

Table 3

Age-groups comparison regarding professional ethics in teaching

Age-Groups	*N*	*M*	*SD*	*df*	*F*	*p*
25-35	144	232.64	53.63	3	0.84	.473
36-45	97	241.70	43.70	283		
46-55	38	238.56	32.89			
Above 55	8	246.84	37.17			
Total	287	236.88	47.68	286		

A one-way between-groups analysis of variance was conducted to compare the role of age on practices of professional ethics. There was no statistically significant difference at the $p < .05$ level in the scores of practices of professional ethics for the four age groups: F (3, 283) = 0.84, p = .473.

Qualification-wise Comparison. Qualification-wise comparison regarding Professional Ethics' Practices in Teaching as perceived by university teachers is presented in Table 4:

Table 4

Qualification-wise comparison regarding professional ethics in teaching

Professional Qualification	*N*	*M*	*SD*	*df*	*F*	*p*
Masters	65	207.69	54.85	3	13.39	.000
Mphil/MS	164	244.07	43.70	358		
PhD	124	245.78	36.54			
Post Doc	9	254.90	30.57			
Total	362	238.39	45.62	361		

A one-way between-groups analysis of variance was conducted to examine the role of teachers' professional qualifications on practices of professional ethics. There was statistically significant difference at the $p < .05$ level in scores for the four teachers' professional qualifications groups: F (3, 358) = 13.39, $p < .001$. Examining the Mean values showed that practices of professional ethics improved significantly with qualifications. Tukey HSD Post Hoc test revealed that teachers with M.Phil/MS, PhD, and Post-Doc qualification were significantly better than teachers with Masters qualification regarding the practices of professional ethics in teaching.

Table 5

Post Hoc Tests: Tukey HSD (multiple comparisons) regarding professional ethics in teaching

(I) Qualification	(J) Qualification	Mean Difference (I-J)	Sig.
Masters	M.Phil/MS	-36.38*	.000
	PhD	-38.11*	.000
	Post Doc	-47.22*	.013
M.Phil/MS	Masters	36.38*	.000
	PhD	-1.72	.987
	Post Doc	-10.84	.886
PhD	Masters	38.10*	.000
	M.Phil/MS	1.72	.987
	Post Doc	-9.12	.929
Post Doc	Masters	47.225*	.013
	M.Phil/MS	10.84	.886
	PhD	9.12	.929

*. The mean difference is significant at the 0.05 level.

Professional Ethics' Practices: Demographic Differences in Research

Gender-wise Comparison. Gender-wise comparison regarding Professional Ethics' Practices in Research as perceived by university teachers is presented in Table 6:

Table 6

Gender-wise comparison regarding professional ethics in research

Gender	*N*	*M*	*SD*	*t*	*p*
Male	156	133.15	23.27	-2.56	.011
Female	214	140.43	31.50		

Note. *df* = 367.93 (Equal variances not assumed).

An independent-samples t-test shows that regarding practices of professional ethics in research, female teachers were significantly better than male teachers.

Age-Groups Comparison. Age-groups comparison regarding Professional Ethics' Practices in Research as perceived by university teachers is presented in Table 7:

Table 7

Age-Groups Comparison regarding Professional Ethics in Research

Age-Groups	*N*	*M*	*SD*	*df*	*F*	*p*
25-35	144	134.48	33.248	3	0.41	.746
36-45	97	137.61	28.906	283		
46-55	38	136.87	20.644			
Above 55	8	143.98	20.563			
Total	287	136.12	30.043	286		

A one-way between-groups analysis of variance was conducted to compare the role of age on practices of professional ethics. There was no statistically significant difference at the $p < .05$ level in the scores of practices of professional ethics for the four age groups: F (3, 283) = 0.41, p = .746.

Qualification-wise Comparison. Qualification-wise comparison regarding Professional Ethics' Practices in Research as perceived by university teachers is presented in Table 8:

Table 8

Qualification-wise comparison regarding professional ethics in research

Professional Qualification	*N*	*M*	*SD*	*df*	*F*	*p*
Masters	65	118.19	34.534	3	13.38	.000
M.Phil/MS	164	142.01	27.101	358		
PhD	124	141.39	22.668			
Post Doc	9	142.67	26.052			
Total	362	137.54	28.555	361		

A one-way between-groups analysis of variance was conducted to examine the role of teachers' professional qualifications on practices of professional ethics. There was statistically significant difference at the $p < .05$ level in scores for the four teachers' professional qualifications groups: F (3, 358) = 13.38, $p < .001$. Tukey HSD Post Hoc test revealed that teachers with Mphil/MS and PhD qualification were significantly better than teachers with Masters qualification regarding the practices of professional ethics in research.

Table 9

Post Hoc Tests: Tukey HSD (multiple comparisons) regarding professional ethics in research

(I) Qualification	(J) Qualification	Mean Difference (I-J)	Sig.
Masters	M.Phil/MS	-23.82*	.000
	PhD	-23.19*	.000
	Post Doc	-24.47	.057
M.Phil/MS	Masters	23.82*	.000
	PhD	.63	.997
	Post Doc	-.65	1.000
PhD	Masters	23.19*	.000
	M.Phil/MS	-.63	.997
	Post Doc	-1.28	.999
Post Doc	Masters	24.47	.057
	M.Phil/MS	.65	1.000
	PhD	1.28	.999

*. The mean difference is significant at the 0.05 level.

Professional Ethics' Practices: Demographic Differences in Administration.

Gender-wise Comparison. Gender-wise comparison regarding Professional Ethics' Practices in Administration as perceived by university teachers is presented in Table 10:

Table 10
Gender-wise comparison regarding professional ethics in administration

Gender	*N*	*M*	*SD*	*t*	*p*
Male	18	197.24	32.80	0.36	.718
Female	26	193.12	39.60		

Note. *df* = 42.

An independent-samples t-test shows no significant gender-wise difference regarding the practices of professional ethics in administration.

Age-Groups Comparison. Age-groups comparison regarding Professional Ethics' Practices in Administration as perceived by university teachers is presented in Table 11:

Table 11
Age-Groups Comparison regarding Professional Ethics in Administration

Age-Groups	*N*	*M*	*SD*	*df*	*F*	*p*
25-35	13	179.01	43.90	3	2.02	.131
36-45	12	183.09	37.30	32		
46-55	6	210.66	28.57			
Above 55	5	217.38	21.77			
Total	36	190.97	38.85	35		

A one-way between-groups analysis of variance was conducted to compare the role of age on practices of professional ethics. There was no statistically significant difference at the $p < .05$ level in the scores of practices of professional ethics for the four age groups: F (3, 32) = 2.02, p = .131. Examining the Mean values showed that practices of professional ethics consistently improved with age (though not statistically significant).

Qualification-wise Comparison. Qualification-wise comparison regarding Professional Ethics' Practices in Administration as perceived by university teachers is presented in Table 12:

Table 12
Qualification-wise comparison regarding professional ethics in administration

Professional Qualification	*N*	*M*	*SD*	*df*	*F*	*p*
Masters	5	195.73	35.15	3	1.51	.228
Mphil/MS	20	186.61	44.84	39		
PhD	14	196.82	24.26			
Post Doc	4	228.66	16.96			
Total	43	194.91	37.05	42		

A one-way between-groups analysis of variance was conducted to examine the role of teachers' professional qualifications on practices of professional ethics. There was no statistically significant difference at the $p < .05$ level in scores for the four teachers' professional qualifications groups: F (3, 39) = 1.51, p = .228. Examining the Mean values showed that practices of professional ethics improved with doctoral and post-doctoral qualifications (though not statistically significant).

Conclusions

Based on the results of the study, there is evidence to suggest that teachers, in general, follow and practice the principles of professional ethics often (about 75% of the time), be it in teaching, research, or administration.

In Teaching: (a) there is a significant difference in scores for males and females regarding the practices of professional ethics. Regarding practices of professional ethics in teaching, female teachers were significantly better than male teachers; and (b) there is significant difference for teachers' professional qualifications. Practices of professional ethics improved significantly with higher qualifications. Teachers with Mphil/MS, PhD, and Post-Doc qualification were significantly better than teachers with Masters qualification.

In Research: (a) regarding practices of professional ethics in research, female teachers were significantly better than male teachers; and (b) teachers with Mphil/MS and PhD qualification were significantly better than teachers with Masters qualification regarding the practices of professional ethics in research.

In Administration, there were no significant differences regarding any demographic variable. However, Mean values showed that practices of professional ethics consistently improved with age and doctoral/post-doctoral qualifications.

Discussion

The focus of the present study was practices of professional ethics among teachers in different roles and to examine any demographic differences. There is significant difference in scores for males and females regarding the practices of

professional ethics, both in teaching and research. Regarding practices of professional ethics in teaching and research, female teachers are significantly better than male teachers. Betweli (2013) conducted a study to explore teachers' professional misconduct and found that, in rural schools, male teachers were more prone to committing misconduct than females. Conversely, female teachers in urban schools were found to have more misconduct problems than male teachers. This study showed a contrast in urban and rural schools. A contradictory result is found in the study of Wilks (2011) with a focus on the unethical behaviors. It showed that there is no significant difference in unethical behaviors regarding gender. Rahim, Subroto, Rosidi, and Purnomosidhi (2013) found that female staff was better than males in term of ethical judgment. Although, the study is in a quite different field, it resonates with the current study regarding professional ethical behavior in male and female personnel. Akaah (1989) found that female marketing professionals demonstrate higher research ethics than males. Ruegger and King (1992) found females were more ethical than males in their perceptions of ethical business conducts. According to Sidani (2005), most cultures and societal standards expect females to act more ethically than males.

There is significant difference in scores for the four teachers' professional qualifications groups. Practices of professional ethics improved significantly with qualifications. Teachers with M.Phil/MS, PhD, and Post-Doc qualification are significantly better than teachers with Masters qualification regarding the practices of professional ethics in teaching and research. This might be because at Mphil and PhD levels, teachers get more training regarding communication skills and presentation skills. Reading ability and knowledge is enhanced because of more assignments and projects. At these levels, the opportunity of writing articles is also given at almost each course which is good for research ethics. Wilks (2011) found that unethical behaviors lowered with the level of education. Mahmoudian, Tabei, Nabeiei, Moadab, Mardani, Houshmand, Sarvestani, and Ghasemi (2013) in their study found that there is a significant relationship between managers' educational levels and professional ethics; this means that when managers' education level goes higher, their job ethics level does too. Giacalone et al. (1988) found that, in terms of business ethics, education played a significant role as more educated respondents were more ethical. Moreover, higher educated respondents were found to be less willing to compromise on their ethical standards. They argued that, in certain situations, less educated respondents might view an unethical situation as more acceptable and more profitable.

For further research, studies should be conducted in disciplines of natural sciences as well, as in every field, university teachers must keep in view that their pedagogical practices, research work, and administrative responsibilities are based on values and ethics rooted in high standards of professional morals, which lead to a healthy and positive teaching-learning process. All three areas (teaching, research, and administration) might be given particular attention in research studies e.g. studies only

on professional ethics in teaching, professional ethics in research and professional ethics in administration. Studies should also be conducted among teachers at school and college level. In the present study, the self-report nature of the instruments might have predisposed teachers to respond in a way that is socially more desirable. It is suggested that, for future research, teachers' professional ethics might be appraised by their students and their peers/administrators. Another approach might be to examine teachers' professional ethics at the group level i.e. studying professional ethics of teachers in a department as a group as perceived by teachers and/or students of that department.

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