Assessing Need for Teaching Development of Faculty at Universities of Pakistan: A Students' Perspective

Shaukat Ali Raza*, Syed Abir Hassan Naqvi* & Ahmed Sohail Lodhi*

_____

Abstract

The study explored the perceptions of students about the need for teaching development of faculty at Pakistani universities. A spectrum of 670 students from 67 departments of 33 faculties of 15 public sector universities constituted the sample. Data were collected through self-constructed questionnaire for which the (Cronbatch's Alpha) reliability coefficient was found as 0.7812. Principal component factor analysis generated three factors namely art of teaching, science of teaching, and sociology of teaching for which mean scores, alpha coefficients and correlations were calculated. One-sample t-test, independent samples t-test and one-way ANOVA were employed for significance and variance analysis. The study concluded that teachers of Pakistani universities are relatively weak in sociology of teaching, art of teaching, and science of teaching respectively as students have pointed out a high degree of need for development of faculty in these areas. For this purpose, universities are recommended to launch stern teaching development initiatives to fully satisfy their students.
Key terms: Need assessment; Teaching development; Art of teaching; Science of teaching; and Sociology of teaching.

_____

Introduction

University teachers are supposed to be responsible to produce quality graduates fit for the job market (Raza, Majid & Zia, 2010) and they can better perform their job if they are exposed to formal development initiatives taken for enhancing their clinical skills (Raza & Naqvi, 2011). Teaching development is a continuous process and involves teachers, departments and the university (Ali, 2008). Drawing upon disciplines such as anthropology, sociology, and psychology (Borko, 2004) and going "beyond the enhancement of teaching skills" (Cranton, 1994:728), teaching development safeguards faculty against obsolescence (Cambline & Steger, 2000) through

_____

* IER, University of the Punjab, Lahore – Pakistan

enhancing their technical, human, and conceptual skills (Sisodia, 2000) for survival of teachers as well as the university (Blackburn & Lawrence 1995; Bell & Gilbert, 2004).

Moving from traditional to contemporary approaches (Camblin & Steger, 2000); teaching development of faculty covers regional, national, interdisciplinary, and institutional perspectives (Quirk, Haley, Hatem, Starr, & Philbin 2005). It covers a broad range of strategies (Kodwani & Sing, 2004; Clayton & Ash, 2005; Lieberg, 2008) with different time durations (Gibbs & Coffey, 2004; DeRuntz & Meier, 2004) and evaluation patterns (Gibbs & Coffey 2004; Darling-Hammond, 2006).

As students are the direct observers of the teaching process (Raza, Majid & Zia, 2010), the current study was designed to explore their perceptions about the degree of need for teaching development of university teachers. The study investigated the extent students were satisfied and recommended ways for improvement. It would help faculty in strengthening their teaching as well as the universities to focus on faculty development.

Review of literature

Bell and Gilbert (2004:11) while exploring its constructivist view, described teaching in higher education as "helping the students to reflect on their own learning, in terms of both the degree of understanding of content and ways of thinking and learning and assessing the change and growth in students' ideas, as well as the extent to which they had learnt the ideas". Teaching as an interactive process within a context e.g. physical; social; institutional; and personal that may influence the success of this interaction, causes learning of something significant (Fink, 2006). But, teaching in higher education is not limited to giving information; rather it enables students for self-learning i.e. how to tap different resources of information (Kasowitz-Scheer & Pasqualon, 2002) throughout their life. A university teacher enable the students for tracing, managing, evaluating, and applying information in problem solving and continued professional development (Orr, Appleton, & Wallin, 2001).

Teaching may have different aspects such as science of teaching, art of teaching, and sociology of teaching (Ali, 2008). The scientific aspect of teaching helps a teacher in setting objectives, selecting material and strategies, and evaluating students' learning (Backhouse, 2007; Ali, 2008). However, setting objectives and selecting strategies alone may not work until the teacher knows the art to perform in the class (Ali, 2008). In fact, the teacher paints the pictures in the minds of students and personifies the words to create meanings for understanding. This argument highlighted the artistic dimension of teaching that is termed as a 'learned art' by Gray and Drew (2008). In addition to art and science, teaching is also a social process that leads to the development of society (Raza, Majid & Zia, 2010) and involves social interactions between students and teachers and students themselves necessary for professional and

personal development (Clayton & Ash, 2005) of students. The social development skills of the students depend largely upon teacher-student relationship (Sahu, 2005; Zieber, 2006). These relations that reflect students' perspective of teachers' teaching and their learning and in this regard Gibbs and Coffey (2004) also supported the early work (e.g. Ramsden, 1992; Trigwell, Prosser, & Waterhouse, 1999) on building a relationship between teachers' approaches to teaching and students' approaches to learning.

No matter what aspect of teaching is under consideration, teachers need to be effective for all students regardless of their mental, ethnic, socio-economic, and gender characteristics (Nieto, 2003; Grant & Gillette, 2006). This effectiveness of teaching could be achieved through enhancing the planning, process, and evaluation skills of university teachers (University of Wollongong, 2006) and it results in better scores of students (Imig & Imig, 2006).

This multidimensionality of university teaching demands highly skilled faculty but, in case of Pakistan, most of the times teachers enter in this profession without any formal training (Khan, 2005; Raza, Majid & Zia, 2010) and usually inadequate development facilities are available to them (Borko, 2004). Resultantly, higher education institutions are performing unsatisfactorily increasing stakeholders' demand for improvement through continuous participation of teachers in teaching development activities to avoid their obsolescence (Cambline & Steger, 2000) and churning out faculty and university productive (Bell & Gilbert, 2004: Formo & Reed, 2008).

This state of affairs is a serious concern for all stakeholders especially students who are reported to be unsatisfied over the roles teachers are playing to prepare students for job market (Raza, Majid & Zia, 2010). They are the fee-paying customers (Gursoy & Umbreit, 2005; Henderson-King & Smith, 2006) who buy education and select their courses like selecting articles from a shopping mall (Lawrence & Sharma, 2002). Therefore, universities are giving value to students' perceptions about teaching quality and recognizing their right to evaluate the performance of faculty (Lawrence & Sharma, 2002). The current study was designed to explore the need for teaching development of faculty at universities of Pakistan as perceived by students. More specifically, the study endeavored to answer the following questions:

1. Is there a significant need for teaching development of faculty at universities of Pakistan as perceived by students?
2. Is there any difference in the perceptions of students of Pakistani universities about need for teaching development of faculty in terms of factors of the survey scale to be identified through factor analysis?
3. Is there any difference in the perceptions of students of Pakistani universities about need for teaching development of faculty in terms of gender, degree program, discipline, , and university as independent variables?

Methodology

This paper is derived from the PhD thesis of the first researcher. Primary data were collected from students (Gursoy, & Umbeit, 2005; Fink, 2006) of 15 public sector universities situated in capital city and all four provinces of Pakistan through a multistage sampling technique. At the outset, 30% stratified random sampling was used to select 03 out of 09 universities from Sindh province; 01 out of 05 from Baluchistan province; 05 out of 18 from Punjab province; 03 out of 09 from Khaibar Pakhtoonkhwah (KPK) province; and 03 out of 09 public universities from Islamabad to ensure the same proportion of sample as it was in the population. At the next stage, one-third (33) faculties were randomly selected from (99) available faculties of sample universities. At the third stage, one-third (67) departments were randomly selected from (193) available departments of sample faculties of the sample universities. At the end, taking 10 from each sample department, 670 students were systematically selected from final semesters/year.

Data were collected by the researchers personally through a 14-item self-constructed scale developed through three stages. First of all inventories of faculty competencies related to teaching obtained from the literature (Rebore, 1987; Bland & Schmitz, 1988; Darling-Hammond, Chung, & Frelow, 2002; Sultana, 2004; Khan, 2005; Rosen, 2005; Berk, 2006) were put into a general format of questionnaire based upon 5-point Likert scale consisting of 20 items covering three main aspects of teaching i.e. art, science, and sociology of teaching. A focus group (Henderson-King & Smith, 2006) of 21 students was conducted taking three each from arts; science; commerce; law; engineering; education; and agriculture faculties of the three universities of the Punjab to gather opinion on the questionnaire.

Similarly, a focus group of 12 teachers from education, law, and commerce faculties of the University of the Punjab was also conducted to gather opinion on the questionnaire. Then a panel of 18 experts of different disciplines both from local and foreign universities was also consulted using Delphi Technique to gather opinion on the questionnaire. The inventory was reduced from 21 to 16 items on the bases of focus groups and expert opinion. Finally, 14 items were selected after deleting weak items with Cronbatch's Alpha scores o.4 and below (Raubenheimer, 2004) in the piloting stage.

The responses of students were quantified as 5 for very high; 4 for high; 3 for medium; 2 for low; and 1 for very low regarding the degree of development need of their teachers. Taking mean score 3.0 (Aksu, 2003; Raza, Majid & Zia, 2010) as the cut point, mean score 3 was taken as referred value. For mean values higher than 3.00, the degree of need for faculty development was considered as adequate; whereas, for mean values equal to 3.00 or below, the degree of need for faculty development was considered as inadequate.

Principal component factor analysis was employed to explore the factors for teaching development needs and mean scores and correlations were calculated for these factors. One-sample *t*-test, independent samples *t*-test and one-way ANOA were employed for significance and variance analysis.

Findings and discussion

Respondent profile revealed that in gender category males were 385 (57%) and females were 285 (43%). The discipline spread was found as engineering 41 (06%); social sciences 300 (45%); physical sciences118 (18%); business 79 (12%); languages 68 (10%); and agriculture 64 (09%). Degree program distribution of respondents was found as Graduate 108 (16%); Master 507 (76%); M Phil 36 (05%); and PhD 19 (03%).

The principal component factor analysis, presented in the table 1, explored three factors from teaching development needs data namely art of teaching, science of teaching, and sociology of teaching.

Table 1

Principal Component Factor Analysis of Teaching Development of Faculty rotated by Varimax with Kaiser Normalization and One-Sample t-test for Sub-Scales

Factors with constituent variables	Factor loading	Alpha	%age variance explained	Mean	SD	df	*t*-value
Art of teaching		0.914	21.524	3.865	0.387	669	42.324*
Content of subject(s)	0.773						
Teaching through case study	0.758						
Teaching through discussion	0.729						
Questioning techniques	0.721						
Problem-based teaching	0.649						
Classroom presentation	0.622						
Science of teaching		0.867	19.739	3.765	0.517	669	31.469*
Computer assisted instruction	0.755						
Evaluating students' learning	0.727						
Students' research projects designing	0.587						
Lesson planning	0.510						
Teaching-learning approaches	0.500						
Sociology of teaching		0.763	10.954	3.952	0.557	669	44.212*
Managing teacher-students relationships	0.757						
Comprehensive classroom management	0.727						
Students' guidance and counseling	0.501						

*$p<0.05$

Kaiser-Meyer-Olkin Measure of Sampling Adequacy, 0.877; Bartlett's Test of Sphericity with Chi-Square, 3115.551; degree of freedom, 91 at $p<0.000$; factor loading range (0.773 to 0.501) and their alpha values signify these subscales (Amirali, & Halai, 2010). For further verification, their correlations were also calculated as given in table 2.

Table 2

Correlation of Factors with the Whole Scale for Teaching Development of Faculty

Sub-scales	Science of teaching	Sociology of teaching	Teaching
Art of teaching	.521(**)	.454(**)	.831(**)
Science of teaching		.487(**)	.857(**)
Sociology of teaching			.833(**)

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

The correlations within subscales are lower than their correlation with the total scale for teaching development needs and this situation testifies them (Raza, Majid, & Zia, 2010).

The first research question was posed to explore the need for teaching development of faculty at universities of Pakistan. The alpha values and mean scores of the subscales are found to be significantly above the acceptable range, i.e. 3.0 (Aksu, 2003; Raza, Majid, & Zia, 2010, Raza, & Naqvi, 2011). As all the means are approximately 04, these scores point out a high degree of need for teaching development of faculty of Pakistani universities in all the three areas i.e. art, science, and sociology of teaching. These findings reflect the dissatisfaction of university students on the one hand and lack of teaching competencies of the teachers on the other as Khan (2005), Sohail and Daud (2006), Higgs (2007), Tierney (2008), Raza, Majid, and Zia (2010), Raza and Naqvi (2011) provide support for these arguments.

The second research question addressed the variation of degree on need for teaching development of faculty as perceived by students. The mean scores for art of teaching, science of teaching, and sociology of teaching sub-scale are 3.865, 3.765, and 3.952 respectively. All these means are approximately 04 pointing out a high degree of need for teaching development of faculty of Pakistani universities in these three areas. But for the purpose of comparison, it could be argued that sociology of teaching is the weakest area of faculty. Students may have social, cultural, economic, academic and personal problems which could hinder their learning. If teachers are competent enough to listen and solve such problems, students may prosper considerably. The social development skills of the students

demanded by the employers are invariably linked with teacher-student relationship which are built, maintained, and developed solely under the guidance of teachers (Lizzio, Wilson, & Simons, 2002; Stein, Hynes, & Unterstein, 2003; Sahu, 2005; Zieber, 2006).

For the guidance and counseling of students, teachers need specific skills which reportedly are lacking in the faculty of Pakistani universities and students seem to be dissatisfied over this situation (Khan, 2005, Ali, 2008). Backhouse (2007) and Lieberg (2008) reported students judging the quality of teaching of teachers and report to heads and teachers. Good working relationships with the students may help teachers also to evaluate their performance through which they may transform their teaching from teacher-entered to student-centered thereby following a major trend in higher education (Gallie and Joubert, 2004; Sohail and Daud, 2006).

The next weak area is art of teaching. Selecting, organizing and delivering the content to students; using appropriate teaching strategies such as case studies and discussions; and asking effective questions at appropriate time during the class is certainly an art that needs to be learned. Students of Pakistani universities are dissatisfied over these competencies of their teachers and have pointed out high degree of teaching development need for faculty in art of teaching. These findings are consistent with the findings of Zeichner (2006), Tierney (2008), Raza, Majid, and Zia (2010) in this regard.

In science of teaching, thought the gravity of problem is relatively small, even then the mean score 3.765 points out an almost high degree of need for teaching development of faculty in this area as perceived by the students. The students value research project designing as they may learn higher order research skills through skillfully devised research projects (Zieber, 2006). Compute-assisted instruction facilitates the instructional process on the one hand and enhances the motivation and learning skills of the students on the other (Dowling (2003; Sahu, 2005). Acquiring healthy teaching learning approaches; preparing effective lesson plans; and objective evaluation of students' learning reflect sound professionalism of teachers with which the Pakistani university students are not fully satisfied verifying the findings of Clayton and Ash (2005), Zieber (2006), and Ali (2008).

The third research question was about the difference of opinion among the respondents in respect of their background variables. No significant difference of opinion among the male and female students was found regarding art, science, and sociology of teaching. It means that all students unanimously emphasized over the need for teaching development of faculty of Pakistani universities.

The discipline analysis revealed that students from engineering and agriculture disciplines pointed out significant higher need for faculty development in science of teaching as compared with those from social

sciences. This tendency may reflect relatively higher level of awareness of engineering and agriculture students about the deficiency of faculty in science of teaching.

In degree program, students from graduate programs pointed out significant higher need for faculty development in sociology of teaching as compared with those from master degree programs. It may be due to the traditional higher level of faculty preference given to the master degree students against graduate program students. The longer association of faculty with master degree students may be another cause of this tendency.

Lastly, university analysis revealed that students from a general university of Baluchistan and one general and an agriculture university from Punjab have pointed out significant higher degree of need for development of faculty in art of teaching against those from an engineering university of Sindh. A similar need was pointed out by students from one general university of Sindh and Baluchistan, one general, one agriculture, and one engineering university of Punjab, an agriculture university of KPK, and two general universities of Islamabad against those from the biggest university of Sindh.

In science of teaching too, students from one general and one engineering university of Punjab and two general universities of Islamabad have pointed out significant higher need for development of faculty against the same engineering university of Sindh. A similar need was pointed out by students of one general university of Sindh and Baluchistan, three general and one agriculture university of Punjab, one general and one agriculture university of KPK, and two general universities of Islamabad against those from the same biggest general university of Sindh.

In sociology of teaching sub-scale as well, students from all other sample universities have pointed out significant higher degree of need for teaching development of faculty against those from the same biggest general university of Sindh, two general universities of Punjab, and one general university of KPK and Islamabad.

These finding reveal that students from most of the sample universities of Pakistan seem to be dissatisfied regarding art, science, and sociology of teaching of their teachers. This state of affairs is consistent with mean score analysis already described.

The above discussion provides answers to the research questions laid down for the purpose of current study and establish the fact that, though the situation is not totally disappointing, the students of Pakistani universities are not fully satisfied over the art, science, and sociology of teaching of their teachers fulfilling the purpose of the current study.

Conclusion and recommendations

Teaching is composed of sociology, art, and science. The behavior of teachers in and outside the class; feed-back patterns of teachers; and teacher-students relationship all matter in the development of students. Selecting, organizing and delivering the content to students; using appropriate teaching strategies such as case studies and discussions; and asking effective questions at appropriate time during the class depend upon the artistic abilities of teachers and do play an important role in students learning. Similarly, designing students' research projects; computer-assisted instruction; teaching-learning approaches of teachers; effective lesson planning; and objective evaluation of students' learning, cover scientific aspect of teaching and value in enhancing the students learning.

Sociology of teaching, art of teaching, and science of teaching respectively are not found as excellent and students of Pakistani universities are not fully satisfied as they pointed out a high degree of need for development of faculty in these areas. For the purpose of comparison, sociology of teaching of teaching was found as the weakest area of university teaching whereas art and science of teaching respectively were relatively at better positions.

There is not a very high degree of need for teaching development of faculty, but in order to achieve excellence for full satisfaction of students, Pakistani universities need to take stern initiatives regarding formal teaching development of their faculty. These initiatives for faculty development should cover individual, department, and university level strategies to make it a comprehensive endeavor. As continuous teaching development of faculty is just like sharpening the axe to enhance the productivity of wood-cutter, it must be taken seriously and may not be compromised in any case. Only then, the universities would be in a position to realize the national higher education objectives.

References

Aksu, M. B. (2003). TQM readiness level perceived by the administrators working for the central organization of the Ministry of National Education in Turkey. Total Quality Management & Business Excellence, *14*(5), 595-608.

Ali, S. (2008). Faculty Development Program for Universities of Pakistan: The Need to Develop a Model. Unpublished Doctoral Thesis. University of the Punjab. Pakistan: Lahore.

Amirali, M. & Halai, A. (2010). Teachers' Knowledge about the Nature of Mathematics: A Survey of Secondary School Teachers in Karachi, Pakistan. *Bulletin of Education and Research, 32*(2), 45-61.

Backhouse, F. (2007). The Science of Teaching. *University Affairs*, Retrieved July 14, 2007, from http://www.universityaffairs.ca/issues/2007/may/science_teaching_01.

Baiocco, S., & DeWaters, J. (1995). Futurist faculty development. *Academe, 81*(5), 38-39.

Bell, B., & Gilbert, J. (2004). *Teacher Development: A Model from Science Education.* Routledge Falmer.

Berk, R. A. (2006). *Thirteen Strategies to Measure College Teaching: A Consumer's Guide to Rating Scale Construction, Assessment, and Decision-Making for Faculty, Administrators, and Clinician.* Stylus Publishing.

Blackburn, R., & Lawrence, J. (1995). *Faculty at Work: Motivation, Expectation, and Satisfaction*. Baltimore, MD: The Johns Hopkins University Press.

Bland, C., & Schmitz, C. C. (1988). Faculty Validity on Review: Retrospect and Prospect. *Journal of Higher Education*, *59*(2), 190-224.

Borko, H. (2004). Professional development and teacher learning: Mapping the Terrain. *Educational Researcher*, *33*(8), 3-15.

Bramwell, L., & Hykawy, E. (1999). The Delphi Technique: A Possible Tool for Predicting Future Events in Nursing Education. *Canadian Journal of Nursing Research, 30*(4), 47-58.

Camblin, L. D., & Steger, J. A. (2000). Rethinking faculty development. *Higher Education, 39*(1), 1-18.

Clayton, P., & Ash, S. (2005). Reflection as a key component in faculty development. *On the Horizon*, *13*(3), 161-169.

Cranton, P. 1994). Self-Directed and Transformative Instructional Development. *Journal of Higher Education*, *65*(6), 726-744.

Darling-Hammond, D., Chung, R., & Frelow, F. (2002). Variation in Teacher Preparation: How Well Do Different Pathways Prepare Teachers to Teach? *Journal of Teacher Education, 53*(4), 286-302.

Darling-Hammond, L. (2006). Assessing Teacher Education: The Usefulness of Multiple Measures for Assessing Program Outcomes. *Journal of Teacher Education*, *57*(3), 269-277.

DeRuntz, B., & Meier, R. (2004). Assessing the professional development needs of the National Association of Industrial Technology's Industry Division members. *Journal of Industrial Technology*, *20*(2), 2-5. Retrieved July 28, 2007, from http://www.nait.org.

Dowling, C. (2003). New educational technologies: do they improve learning? *On the Horizon*, *11*(1), 14-16.

Fink, L. D. (2006). *Improving the Evaluation of College Teaching*. 'Supporting OU Faculty in Developing 21st Century Learners', Program for Instructional Innovation, University of Oklahoma. Retrieved February 28, 2007, from http://www.ou.edu/idp/tips/ideas/evaluation.html.

Formo, D. M., & Reed, C. (2008). *Job Search In Academe: The Insightful Guide for Faculty Job Candidates.* (2nd ed.). Stylus Publishing.

Gallie, K., & Joubert, D. (2004). Paradigm shift: from traditional to on-line education. *Studies in Learning, Evaluation, Innovation and Development*, *26*(3), 331-343.

Gibbs, G., & Coffey, M. (2004). The Impact of Training of University Teachers on their Teaching Skills, their Approaches to Teaching and the Approaches to Learning of their Students. *Active Learning in Higher Education*, *5*(1), 87-100.

Grant, C. A., & Gillette, M. (2006). A candid talk to teacher educators about effectively preparing teachers who can teach everyone's children. *Journal of Teacher Education*, *57*(3), 292-299.

Gray, P., & Drew, D. E. (2008). *What They Didn't Teach You in Graduate School: 199 Helpful Hints for Success in Your Academic Career.* Stylus Publishing.

Gursoy, D., & Umbreit, W. T. (2005). Exploring students' evaluation of teaching effectiveness: What factors are important? *Journal of Hospitality & Tourism Research*, *29*(1), 91-109.

Henderson-King, D., & Smith, M. N. (2006). Meanings of education for university students: academic motivation and personal values as predictors. *Social Psychology of Education*, *9*(2), 195-221.

Higgs, P. (2007). *What is Quality in Higher Education?* Retrieved June 25, 2007, from, http://www.philosophy-of-ducation.org:443/conferences/pdfs/ Higgs% 202007%20PESGB.pdf.

Hsu, C. C., & Sandford, Brian A. (2007). The Delphi Technique: Making Sense of Consensus [Online]. *Practical Assessment Research & Evaluation*, *12*(10), 1-8.

Imig, D. G., & Imig, S. C. (2006). The teacher effectiveness movement: how 80 years of Essentialist control have shaped the teacher education profession, *Journal of Teacher Education*, *57*(2), 167-180.

Kasowitz-Scheer, A., & Pasqualon, M. (2002). *Information Literacy Instruction in Higher Education: Trends and Issues.* (ERIC Digest). Retrieved July 1, 2007, from http://ericdigests.org/2003-1/information.htm.

Khan, M. N. (2005). *Designing a Model for Staff Development in Higher Education in Pakistan.* Unpublished doctoral thesis, University Institute of Education and Research, University of Arid Agriculture, Rawalpindi, Pakistan.

Kodwani, A. D., & Sing, M. (2004). Towards Effective Training and Development in Indian Public Sector Enterprises: A Case-based Analysis. *South Asian Journal of Management*, *11*(3), 36-56.

Lawrence, S., & Sharma, U. (2002). Commodification of education and academic labor: using the balanced scorecard in a university setting. *Critical Perspectives on Accounting*, *13*(5/6), 661-667.

LeBlanc, G., & Nguyen, N. (1997). Search for excellence in business education: an exploratory study of customer impressions of service quality. *International Journal of Educational Management*, *11*(2), 72-79.

Lieberg, C. (2008). *Teaching Your First College Class: A Practical Guide for New Faculty and Graduate Student Instructors.* Stylus Publishing.

Lizzo, A., Wilson, K., & Simons, R. (2002). University Students' Perceptions of the Learning Environment and Academic Outcome: Implications for theory and practice. *Studies in Higher Education*, *27*(1), 28-52.

Nieto, S. (2003). Placing equity first and center: some thoughts on transforming teacher education for a new century. *Journal of Teacher Education*, *51*(3), 180-187.

Orr, D., Appleton, M., & Wallin, M. (2001). Information literacy and flexible delivery: Creating a conceptual framework and model. *Journal of Academic Librarianships*, *27*(6), 457-463.

Quirk, M. E., Haley, H.L., Hatem, D., Starr, S., & Philbin, M. (2005). Primary Care Renewal: Regional Faculty Development and Organizational Change. *Faculty Development, 37*(3), 21-218.

Ramsden, P. (1992). *Learning to Teach in Higher Education*. London: Rutledge.

Raubenheimer, J. E. (2004). An item selection procedure to maximize scale reliability and validity. *South African Journal of Industrial Psychology*, *30*(4), 59-64.

Raza, S. A. & Naqvi, S. A. (2011). Quality of Pakistani University Graduates as Perceived by Employers: Implications for Faculty Development. *Journal of Quality and Technology Management, VII*(I), 57- 72.

Raza, S. A., Majid, Z., Zia, A. (2010). Perceptions of Pakistani University Students about Roles of Academics Engaged in Imparting Development Skills: Implications for Faculty Development. *Bulletin of Education & Research*. *32*(2): 75-91

Rebore, R. W. (1987). *Personnel Administration in Education: A Management Approach*. (2nd ed.). New Jersey: Prentice-Hall, Inc.

Rosen, L. M. (2005). *Instructional Development Needs Assessment*. Office of Faculty and Organizational Development, Michigan State University, East Lansing. Retrieved February 28, 2007 from http://www1.provost.msu.edu/   facdev/fod_archives/ 8_Nds_Assess_SURVEY_4-11.pdf.

Sahu, A. (2002). *Teaching Philosophy: On Some Aspects of Teaching Style*. Retrieved July 7, 2007, from http://faculty.coppin.edu/pagesasahu/ philosophy_ Teaching. html.

Sisodia, M. L. (2000). *Higher Education Growth and Future Options*. Jaipur, India: University Book House (Pvt.) Ltd.

Sohail, M. S., & Daud, S. (2006). Restructing a higher education institution: A case study from a developing country. *International Journal of Educational Management*, *20*(4), 279-290.

Stein, B. S., Hynes, A. F., & Unterstein, J. (2003). *Assessing Critical Thinking Skills*. Paper presented at SACS/COC Annual Meeting, Tennessee Technology University, December 6, 2003. Retrieved July 19,   2007,   from   http://iweb tech.edu/cti/SACS%20presentation%20paper.pdf.

Sultana, N. (2004). *Need Assessment and Designing a Model for Professional Development of College Teachers in Pakistan*. Unpublished doctoral thesis, University Institute of Education and Research, University of Arid Agriculture, Rawalpindi, Pakistan.

Tierney, W. G. (2008). *The Impact of Culture on Organizational Decision-Making: Theory and Practice in Higher Education.* Stylus Publishing.

Trigwell, K., Prosser, M., & Waterhouse, F. (1999). Relations between Teachers' approaches to teaching and Students' Approaches to Learning. *Higher Education*, *37*(1), 57-70.

University of Wollongong (UOW). (2006). *Teaching at UOW*. Retrieved July 24, 2007, from http://www.uow.edu.au/cedir/ult/index.html.

Yousuf, M. I. (2007). Using Experts' Opinions through Delphi Technique [Online]. *Practical Assessment Research & Evaluation*, *12*(4), 1-8

Zeichner, K. (2006). Reflections of a university-based teacher educator on the future of college and university-based teacher education, *Journal of Teacher Education*, *57*(3), 326-340.

Zieber, M. P. (2006). *Tutor's Role*. (NURS 3008-Introduction to Baccalaureate Nursing, School of Health Sciences, University of Lethbridge). Retrieved July 5, 2007, from http://www.uleth.ca/hlsc/courses/nursing/ 3000/Nurs3008.pdf.