

Analytical study for the assessment by Independent Monitoring Unit (IMU) for monitoring teaching effectiveness and physical facilities in Secondary Schools of Khyber Pakhtunkhwa

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Abstract

This study endeavors to find quality assurance in schools monitoring measured by the Independent Monitoring Unit (IMU) which covered critical areas of interventions and requires independent monitoring on monthly basis to track progress. This plan also sets out a series of interventions and reforms that will support the attainment of the objectives like teacher's attendance and enhancing teaching skills. The main objectives of the study were; 1) To find out the quality assurance of school monitoring by this Independent Monitoring Programme. 2) To assess the teaching effectiveness and effective use of ICT. 4) To assess the physical facilities of schools. 5) To assess the Support establishment of performance monitoring mechanisms. 6) To assess the increase retention and reduction of dropout with improved teaching, learning and with less teacher absenteeism. Null Hypothesis entail that there is no significant effect of IMU Programme in promoting effective teaching by teachers whereas Alternate Hypothesis reflects that there is a significant effect of IMU in promoting effective teaching by teachers. The study was perception based work whereas three stakeholders i.e. Head Masters, Teachers and Students were selected for this research study. The population of the study was all Government High schools Boys and Girls of the Khyber Pakhtunkhwa. Total six girls and boys schools were selected, out of these, sample of 50 (40 from Students, 08 from teachers & 02 from Head Masters) taken from each school. Thus total numbers of sample was 300. Name of selected schools were:- 1) GHS Boys Kirri Khesure lie at most northern part of D.I.Khan. 2) GHS Boys Parova lie at the most southern part of D.I.Khan. 3) GHS Boys Kachi Paind Khan situated in D.I.Khan city. Whereas three selected GGHS were:-1) GGCMHS No.1 lie in the heart of City. 2) GGHS Wanda Madad 35 Kilometer away from D.I.Khan City at North side. 3) GGHS Behari Colony, Zafarabad, D.I.Khan. It is concluded that IMU is a systematic and planned monitoring programme. Main focus was given to teacher's absenteeism. This programme may also extend to measure other dimensions like school physical facilities, teacher's competencies, students drop out and their retention etc.

Keywords: Monitoring, evaluation, Quality, education, Academic achievement.

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Introduction

(UNESCO 2003), Education is a standard process through which a nation strives to induce frailty by enhancing the self-consciousness of the single person who composes it. It is not a public edification; but it is social institutions that equip mental, physical, social, ideological and moral training to the individuals of the nation. So as to empower to have full consciousness of their objective. Teaching and learning are basic foundational characteristics of human beings. It is the need to learn and teach since ancestors of all human beings. In fact, the endurance of humanity confide upon this ancient and imperial undertaking.

(Davidson J & Wehipeihana, N (2010). Monitoring in education is a systematized acquisition and analysis of information as a project outcome. It is anticipated at elaborating the adequacy and effectiveness of education. It is based on targets set out and activities prepared during the planning phases of work. It helps to keep the work on track, and can let authorities know when things are going inaccurate. If done properly, it is an invaluable tool for good administration and it provides an advantageous base for evaluation. It enables us to determine whether the given resources are agreeable and are being well used, whether the capacity we have is sufficient, applicable and whether we are doing what we planned to do. Within the last three decades there has been tremendous theoretical and methodological progression within the field of monitoring. Despite its growth, there were many fundamental hindrance faced in this field of Monitoring. Monitoring is not a discipline that has been developed by practicing professionals over thousands of years, so we were not at the stage where we have huge encyclopedias that will walk us through any monitoring.

Annual Development Programme (ADP): 2014—2015). To focus upon the recent problem, the government of Khyber Pakhtunkhwa has launched the Independent Monitoring Unit (IMU) Programme, which was administered and executed by the E&SED Khyber Pakhtunkhwa. The main idea for launching this programme was to gain data about diversified appearance of schools, teachers, students, their attendances and future needs. Furthermore, this new system of monitoring has new idea to incumbent with the ICT. The data collector visited specified schools as per schedule and kept new data with android mobile set. Taken photo of the site and sent it to the IMU head office, which was accessed same time by the authorities of Management Unit. Intuitively, it mitigated the gap between school administration and higher ups. The same system was also launched by the government of Punjab few years ago and ultimately favorable results were obtained.

The researcher made an effort to provide a brief introduction of the study especially focus to classroom emotional intelligence with reference to self-esteem of secondary school students of district Dera Ismail Khan. This chapter was followed by the background of study, in which researcher highlighted the background related to classroom room emotional intelligence. Research gap also elaborated that this research study still needs much more research work especially focus to classroom related emotional intelligence. Statement of the problems indicated that the concept of classroom intelligence is a crucial aspect related to students learning, the researcher felt that it is quite imperative to have a glance into the relationship of classroom emotional intelligence on self-esteem and academic achievement of students at the secondary school level in district

Statement of the Problem

Keeping in view the defective monitoring and evaluation system of schools, there

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was a burning need of improvement in monitoring by the use of ICT in education. The Independent monitoring Unit (IMU) has started to establish a systematic system of monitoring of the Higher Secondary Schools in Khyber Pakhtunkhwa. In education, the role of monitoring in wholesome is the streamlining of education system and the development of children. It is very important that all the children should have proper education to become an ardent and contributing member of the society. Unfortunately, taking into account the literacy rates in Pakistan the reality on ground looks altogether different. Among major reasons of low literacy, many crucial reasons are; ghost schools, teachers' absenteeism and discontinuation of education by the children even at very early stages of education. In the above perspective, this research focused on the analytical study for the assessment by Independent Monitoring Unit (IMU) for monitoring teaching effectiveness and physical facilities in Secondary Schools of Khyber Pakhtunkhwa.

Research Objectives

Following were the primary objectives of the research:

- To ascertain the drawbacks/bottlenecks in existing monitoring system by IMU in Secondary Schools.
- To identify the role of IMU in teaching effectiveness of secondary schools' teachers.
- To suggest steps for the effective use of ICT in monitoring programme.
- To find out the positive aspects and achievements by IMU in improving quality education.

Hypotheses of the Study

Following were the hypotheses of this particular research study.

- H₀-1: No significant difference of perception exists among respondents regarding ascertaining the drawback/bottlenecks in existing monitoring system.
- H₀-2: No significant difference of perception exists among respondents regarding IMU effect the teaching effectiveness of secondary schools teachers.
- H₀-3: No significant difference of perception exists among respondents regarding effective use of ICT in monitoring program.
- H₀-4: No significant difference of perception exists among respondents regarding achievement of positive aspects in education by IMU.

Significance of the Study

This study significantly surrounds as the findings may be useful in the following ways:-

- This research may provide guidelines to teachers, parents and monitoring concerns.
- This study may also be helpful in the implementation of ICT technologies.
- It may be helpful in achieving of the monitoring and evaluation targets settled by the Education Department, Khyber Pakhtunkhwa.

Literature Review

(Daood Shah: 2009) "Effective monitoring is an exigent part of the percept of the local officers for assure quality education in the post devolution resume". Monitoring has an important role in project devising and exertion. It empowers us that where our target is and what is a right footmark. We can clear up as we go along and make sure that we are on the definite foot step.

(Zafar Malik, Nasir Amin Muhammad, Irfan Yasir) (2010). Monitoring has complementary function which often serve the institution for the purposes to get excellent result and prevail transparency. Effective monitoring process enables us to; a) determine botheration and changes in circumstances arousing



affect the project or program exertion; b) bestow fundamental data along with vision for decision-making; c) accommodate relative assurances that resources were used for agreed purposes; d) Bring into being valid data and information on the validity of present development plans, issues, strategies, as well as programs and projects, towards the achievement of mentioned development results/outcomes. By using correct, reputable and up to date data/information were the attainment of a monitoring system. Uniformly importance was given to the capacity of the monitoring officials to hatch effective use of raw data, information and indicators as well. Anton De Grauwe:2008, "Reference preceding discussions have probably shown that there is no ideal monitoring model and the search for one is difficult to catch, precisely because of the assortment of contexts. Neither is monitoring model/compact system that will have only positive impacts.

Independent Monitoring Unit (IMU) 'Brief Introduction'

The government of Khyber Pakhtunkhwa has developed and approved Education Sector Plan policy reforms and roadmap to achieve the objectives of quality education in the Province. Such reforms were broadly classified by E&SED-KP (2013—2019), which were; 1) Upgrade teachers' Pre-Service Professional Qualification, 2)Upgrade Teachers' In-service Professional Qualifications, 3) Restructure institutions and make Quality Improvements in Teacher Education Institutions and the Apex institute, 4) Plan for Enhancing existing capacity to meet Teacher demand, 5) Ensure the induction of Graduates meeting the minimum standards on the new Teacher Qualifications and 6) Establish a Quality Assurance Coordination System and Mechanism. The roadmap covers critical areas of interventions and requires independent monitoring on monthly basis to rack progress on each of the key performance indicators and communicate findings to the department enabling it to drive its implementation throughout the sector.

Training Manual- IMU, Government of Khyber Pakhtunkhwa: 2012, Education Management Information System (EMIS) E&SED established at provincial level has its presence in each district with scanty staff and was responsible to carryout annual school census. The existing EMIS system does not allow structured and periodic reporting from service delivery level. There was a gap in timely availability of data for informed decision making. In view of the importance of the roadmap the ESP the Government of Khyber Pakhtunkhwa had decided to establish Independent Monitoring Bunch within the department to acquire the aims of transparency and objectivity, both in collection of school level data and its analysis for course correction leading to remove regional and gender disparities in the Province.

This new system of monitoring has new idea to incumbent with the ICT. The data collectors make visits schools daily/weekly basis and keep their data electronically having Android Mobile phone, which access same time by the authorities of Management Unit. Intuitively, it mitigates the gap between school administration and higher ups. The same system of monitoring was also launched by the government of Punjab few years ago and ultimately favorable results obtained. Initially in Khyber Pakhtunkhwa, the IMU would be operative as a pilot project for two years; it could be elongate based on the affirmative results. The Finance Department Khyber Pakhtunkhwa has already sanctioned the plan that would cost Rs.650 million. The United Kingdom's Department for International Development would replenish the funds for establishing the monitoring system. Under this new system, over 28,000 primary, middle, high and higher secondary schools would be inspecting each month by monitoring and data collection officers. They would also report about physical conditions of the school buildings, besides recommending maintenance or construction of new facilities, if required. Furthermore, the IMU programme comprises of 485 trained personnel object to enhance the functioning of the schools with candid data, so invariably and explicit collected data will be advantageous for hard boiled planning in future. The government seems to have finally realized that enhancing enrolment in schools, especially at secondary levels, was a key national issue.

UNESCO:2006, The pursuit of the Government of Khyber Pakhtunkhwa Education for All (EFA) Action Plans has not been profitable due to lack of political commitment. The Government of Khyber Pakhtunkhwa did not officially endorsed EFA Programme. Seminars and Workshops have been arranged and wide stakeholder consultations held in preliminary stage but EFA Plan was reflecting as drafts document. The budget estimated cost Rs.99 in the year 2003, had been unrealistically high granted to the government's financial capacity. One by one monitoring and data collection officers will visit three schools in a day and put on all schools falling in his jurisdiction in a month," During visits to the schools, the monitoring officers checkup the attendance of teachers and students. They also sit in classrooms with students at the same time during the lecture of their teachers. The monitoring officers also keep check on the funds being utilized by the parents-teachers councils (PTC) on repairs of schools.

The monitoring and data collecting officers capitulate monthly reports to the secretariat of education department. They were in contact with Elementary and secondary Education department informed about the factual dropout rate, enrollment of students, curtailment of teachers, lacking facilities and other issues in government schools. Education Sector Reform Unit's director in the secretariat of education department was the head of the IMU on provincial level, the officers in grade-17 or 18 from the provincial management services group or district management group look after the IMU programme on district level. He has to perform in close liaison with the District Steering Committee (DSC) headed by Deputy Commissioner of the respective district.

Research Design

The research was descriptive in nature and survey research technique was used to find out the perceptions of Head Masters/Principals, teachers and students about the execution and implementation of Independent Monitoring Unit (IMU) in Khyber Pakhtunkhwa. Furthermore, this new system of monitoring encompasses new idea to incumbent with the ICT. The data collector visited specified schools and kept their data electronically, which accessed same time by the authorities of Management Unit. The same system of independent monitoring unit was also launched by the government of Pakistan in other provinces few years ago and ultimately favorable results were obtained.

Population

A population may refer to all of any specified groups of human being or of non-human entities such as objects, geographical areas, time units, methods, test or schools. For the current research all Headmasters/Principals, teachers and students of all high and higher Secondary Schools of Khyber Pakhtunkhwa were taken as population for research study. Nine lac forty three thousand nine hundred and one students, forty three thousand three hundred and thirty six teachers and two thousand six hundred and five Headmaster/principals of government high and higher secondary schools were chosen as population of this study.

Source: Annual Statistical Report Government Schools (2014—2015) Government of Khyber Pakhtunkhwa, Peshawar.

Sample and Sampling Technique

An efficient Random Sapling technique passed down for the choice of respondents in the government high and higher schools. Total six schools were selected from rural and urban areas of district Dera Ismail Khan. Twelve headmasters/principals, forty eight teachers and two hundred and forty students were taken as sample of the study.



Research Instruments

Thereafter brief study of all concerned official materials/record/PC-I of IMU Project, the research studies started under the charter of E&SE Department. It was descriptive perceptions based study and Questionnaire was developed for head masters, teachers and students. The given research instruments were clearheaded and used for data acquiring. The instruments possess questions on the various facets of teacher, students and monitoring staff. It revealed around teacher qualification, interest, absenteeism, training for teachers, curriculum, proficiency, teacher's behavior, teaching approach, pedagogical material and furniture.

Pilot Testing

Pilot studies, known as expediency studies, was premeditated to be an exigent constituent of a exceptional research design (Edwin et al, 2001). These studies were altogether smaller editions of decent research work, adopted by the researchers as a preliminary tool before the celebration of major research studies (Politetal, 2001). In this study, the efficacy affirms the data collection instrument was accrue through a pilot study. To pin down the feasibility and practical adequacy of scale for calibrating the respondents' perception with regard to analytical assessment by Independent Monitoring Unit (IMU) for monitoring teaching effectiveness and physical facilities in Secondary Schools of Khyber Pakhtunkhwa. Perception scale based upon collected information, assumption and vested. Early draft of the questionnaire was carried out on a total of 40 respondents, equally taken from various stratum of the population. The respondents were animated to commend corrections, adjustments or alterations in the phrases, wordings or conceptions of the questions. Ultimate draft of the questionnaire was refined on the basis of esteemed suggestions made by the respondents during the prefatory phase.

Table 4.1 Showing opinions of respondents about teachers' attendance by IMU.

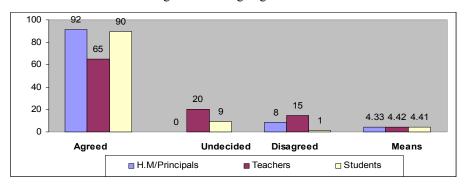
Item No.	Statement	Responses	Agreement Level					Mean
			%S A	%A	% UD	% DA	%SDA	Score
1	Due weightage given by IMU to teacher attendance.	Head Master /Principals	50	42	0	8	0	4.33
		Teachers	35	30	20	10	5	4.42
		Students	53	37	9	1	0	4.41
		Total	155	118	22	5	0	4.39

(ANOVA)

	Sum of Squares	Degree of Freedom	Mean Square	F	α	P
Between Groups	1.865	3	0.622	2.405	0.05	0.068
Within Groups	76.275	295	0.259			
Total	78.14	298				

Table 4.1 shows that 92% Head Masters/ Principals were agreed to the statement, 8% were disagreed with mean value 4.43. For Teachers, 65% agreed, 15%

disagreed and 20% were undecided about the statement with their mean score as 4.42. Similarly 90% Students agreed, 1% disagreed and 9% were undecided about the statement with mean value 4.41. This means that majority of respondents supported the statement. The mean value 4.39 falls within the level of agreement. The p (0.068) value was greater than the level of significance (0.05) which means that there was no significant mean difference in the perceptions of the respondents about the statement that IMU gives due weightage to teacher attendance.



Results

There was no eloquent difference settled up among the perceptions of Head Masters, Teachers and Students in regard to attendance of the teachers. It means that IMU has influenced all stakeholders in this aspect as the range of aggregate mean scores of Head Masters/Principals, teachers and students were 4.33, 4.42 and 4.41 respectively (Figure 4.1). There was an eloquent difference erect among the perceptions of Head Masters/Principals, teachers and students in regard to completion of course by teachers in specified given time by IMU. It means that IMU has influenced all stakeholders in this aspect as the range of aggregate mean scores of Head Masters/Principals, teachers and students were 3.83, 3.48 and 4.13 respectively (Table 4.2). There was a significant difference found among the perceptions of Head Masters/Principals, teachers and students regarding teachers spent their maximum time in delivering knowledge. It means that IMU has influenced all the stakeholders in this aspect as the range of aggregate mean scores of Head Masters/Principals, teachers and students were 3.50, 3.92 and 4.30 respectively.

There was no significant variation found among the perceptions of Head Masters/Principals, teachers and students regarding proper reporting to senior management by Monitoring Officer to make an important change. It seems that IMU has influenced all stakeholders in this aspect as the range of mean scores was 3.42, 3.58 and 3.33 (Figure 4.26). No particular difference occurred among the perceptions of Head Masters/Principals, teachers and students with regard to monitoring procedures by IMU to ensure that all school assets were in proper utilization and were good in use. It seems that IMU has influenced all the stakeholders in this aspect as the range of mean scores was 3.12, 3.18 and 3.08 (Figure 4.27).

Discussion

(Constitution of Pakistan-Article 25-A. Sindh Education Foundation: 2012). "scrupulous to education-the State shall dispense compulsory and free education to all children of the age of 5 to 16 years in such a manner as may be sustain by law" With reference to 18th constitutional amendment of Pakistan. "It was aimed to the devolution of powers to provinces". The research aimed to present broader results about the independent monitoring system of schools launched by the Government of Khyber Pakhtunkhwa in the year 2012 named "Independent Monitoring Unit (IMU). In Pakistan, Independent monitoring system has its unique nature. The whole monitoring system was divided into internal and

external monitoring mechanism. In internal system; Urban Sector Planning and Management Service Unit (USPMSU) working to monitor internal monitoring operations. The major emphasis was given to teacher absenteeism, students' dropout and available physical facilities in the schools. The teachers at different levels were required various sort of trainings. Because excellent teachers need not only ample knowledge of the subject matter to be discovered to students but also associated techniques and methods should be learned both in practice and theory.

Fixate to international and national goals, various education foundations were established at Provincial level. In Punjab, Punjab Education Foundation (PEF) was established to the achievement of goals i.e. Universal Primary Education (UPE), Adult Literacy etc. In Sindh, Sindh Education Foundation (SEF) was setup to show excellence in UPE, partnership for education and Integrated Education Learning Programme (IELP). (SEF at www.sef.org.pk). In Balochistan, Balochistan Education Foundation (BEF) was constituted focusing Article 25-A of the constitution that from 5—16 years age group has fundamental right (www.bef.org.pk). In Khyber Pakhtunkhwa, The Elementary Education Foundation (EEF) was established to achieve such goals with the specialty to the Dissemination. (www.eef.org.pk).

(Singal Dr. Nidhi:2009). The study also reveals that the impact of independent monitoring was not significant to the performance of teachers but also with the success of students as well. The findings of the study were also in line with the findings of Punjab P&D Department project of Monitoring and Evaluation. (2002). This independent monitoring system also inline with previous researches initiated in India. The present study will give different dimensions to improve the independent monitoring and evaluation phenomena and also enhance the key reforms for Sindh and Balochistan provinces.

Conclusion

This study regulates to check out the perceptions of stakeholders relating to assessment by Independent Monitoring Unit (IMU) for monitoring teaching effectiveness and physical facilities in Secondary Schools of Khyber Pakhtunkhwa. The stakeholders were comprised Head Masters/Principals, teachers and students. IMU has greater influence the school education. Focusing to research study, IMU improving the school, teachers' education and students' satisfaction. The stakeholders showed strongly effective role of IMU in many areas. They were agreed that IMU has given due weightage to teachers' attendance, teachers absenteeism, delivery of knowledge from teachers in classroom, in time course completion, improvement of classroom teaching by IMU. Majority of teachers appreciated IMU programme and teachers also wanted to maintain close liaison with monitoring staff. Head Masters/Principals and students mean scores showed that great improvement reflect in teaching with the introduction of IMU. Both Head Masters and students were in favor of IMU to take action against teachers showing poor performance. Also reporting system of IMU to senior management was excellent and quickest. Further more IMU stakeholders urge that IMU also minutely observed the physical facilities of school and school assets.

It has been concluded from teachers responses that IMU is a complex and time consuming monitoring programme. They stated that IMU has no such effect on teachers performance. Furthermore IMU has no directions and planning for teachers. Mostly Data Collectors waste the time of students and teachers. Same items checking by various monitoring concern is boring and hectic job. Teachers and Head Masters/Principals percept that teachers do not award any perceived benefits for continuous monitoring, extra work load and hardworking. No bifurcation exists between regular, punctual and dull teachers. They also highlighted that there was no motivational plan for teachers. Head Masters opinioned that IMU was not appreciated by teachers and no corner was reserved for parents to poke their interest, remarks and opinion.



(UNESCO: 1998). Sound measures are required to appoint the teachers for future among the most actuated candidate. Enhance their training standard and argue into the best among them to take on the most denounce posts. There will be an eloquent enrichment in quality where they are most desired. Hence enriching the quality and stimulation of teachers must be preference in all countries.

References

- Annual Development Programme (ADP): 2014—2015). Elementary & Secondary Education Department, Government of Khyber Pakhtunkhwa, Peshawar.
- Annual Statistical Report Government Schools (2014—2015). *Education Management Information System*, Department of Elementary & Secondary Education, Government of Khyber Pakhtunkhwa, Peshawar.
- Antom, De Grauwe. (2008). *School Monitoring Systems and their Impact on Disparities*. Education For All Global Monitoring Report 2009.
- Baig, A.A.H. (1992). *Education resources information centre* (ERIC#EJ 701984) Retrieved April, 2006, form www.eric.ed.gov.
- Curry, Dr. John (2007). *Professor of Educational Research*, North Texas State University (now retired), provided his research students (Sample Size Rule of Thumb).
- Davidson J & Wehipeihana, N (2010). *Actionable Evaluations:* A Bootcamp for Commissioners, Managers and Evaluators. Presentation at the ANZEA Regional Symposium Workkshop, http://realevaluation.co.nz/pres/ActionableEvaluation Bootcampanzea10.pdf
- Dawood Shah. (2009). *Monitoring the quality of Secondary Education in Context of Decentralization in Pakistan*. Bulletin of Education and Research.
- Director, Project-IMU. (2013). Workshop/Training Manual of PMU, Peshawar. Education for All (EFA). 2014. United Nations Educational, Scientific and Cultural Organization (UNESCO) Report, 7, Place de Fontenoy, 75352 Paris 07 SP, France.
- Edwin et all (2001). *The relationship of task success to task liking:* A replication. Psychological Reports, 18, 552-554A, Horwitz, St Jude Educational Research, 332 North Lauderdale, Memphis, TN 38105;
- E&SED, K. (2013-2019). *Khyber Pakhtunkhwa Teacher Education Strategy* 2013—2018. Government of Khyber Pakhtunkhwa.
- Eshya, Mujahid, Mukhtar. (2004). *Situation Analysis of The Education Sector*. UNESCO Pakistan.
- Gay, LR (2003). "Educational Research" London: Competencies for Analysis and Applications (7th edition) Upper Saddle River, NJ: Merrill Prentice Hall.
- John W. Best, James V. Kahn (1996). Research in Education 8th Edition. Butler University, Emeritus & University of Illinois at Chicago, Ruttle, Shaw & Wetherill, Inc. A Viacom Company, 160 Gould Street, Needham Heights, MA 02194
- Habib, Masooma. (2013). *Education in Pakistan's Punjab: Outcomes and interventions*. The Lahore journal of Economics.
- Helen, Clark. (2009). *Handbook on Planning, Monitoring and Evaluating For development results*: United Nations Development Programme (UNDP).
- Irina, Bokova. (2013—2014). *Teaching and learning:* Achieving quality for all. UNESCO Publishing.
- John W., Best & V. Kahn, James (1998). *Research in education* / John W. Best, -8th edp. cm.
- Mevarech, A. R., & Light, P. H. (1992). *Peer-based interaction at the computer:* Looking backward, looking forward. Learning and Instruction, Vol.2, Pp; 275-280



- Monitoring Report of Education for All. (2011). *Education Sector UNESCO*, email: efa@unesco.org.
- Monitoring and Evaluation, Research and Reporting. (2012). Basic Education, Republic of South Africa.
- Mustafa, Ghulam. (2010). Education Policy Analysis. Report of Khyber Pakhtunkhwa, UNESCO, Pakistan. OECD. (2011). Review of Evaluation and Assessment in Education Australia. P.26.
- O'Mahony, Michael (1986). *Sensory Evaluation of Food:* Statistical Methods and Procedures. CRC Press. p. 487.
- PC-I, Independent Monitoring Unit (IMU). (2012). *Elementary & Secondary Education Department (E&SED)* Government of Khyber Pakhtunkhwa, Peshawar.
- PILDAT (2012). Understanding Punjab Education Budget (2012—2013).

 Pope Edwin, et al., v. (2001) the United States: evidence for defendants
 Shapiro, Janet. (1996). Judgment Day or Management Tool? Olive
 Web: http://www.civicus.org (email: nellshap@hixnet.co.za)
- Sindh Education Foundation. (2012). Educational Dialogue on Governance of Education in Sindh.
- Singal. Dr. Nidhi. 2009. Education for children with disabilities in India.

 Training Manual. (2012). Independent Monitoring Unit (IMU)

 Directorate, Peshawar.
- UNESCO. (1998). World Education Report 1998. Teacher and Teaching in a Changing World. United Nations Educational, Scientific and Cultural Organization, France P.48
- UNESCO. (2006). Situation Analysis of Teacher Education in Pakistan.
- UNESCO (2010). Situation Analysis of Teacher Education in Pakistan: towards a Strategic Framework for Teacher Education and Professional Development.
- William H.; Saul A. Teukolsky; William T. Vetterling; Brian P. Flannery (1992). *Numerical Recipes in C:* The Art of Scientific Computing. Cambridge University Press. pp. p. 616. ISBN 0-521-43108-5.
- Zafar Malik, Nasir Amin Muhammad, Irfan Yasir (2010). *Training Manual;* Use of Data for Educational Monitoring and Supervision. National Education Management Information System Academy of Educational Planning and Management, Ministry of Professional and Technical Training Government of Pakistan, Islamabad.