

An Empirical Investigation of Contemporary Instructional Innovation and Work Support System Practiced at Omani Schools

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Abstract

The present study is exploratory in nature. Data for the present study was collected from primary sources using interview schedules, conducting in-depth interview with teachers at schools, and secondary sources like published reports from Ministry of education. Population of the present study comprises of teachers at Bahla Schools in Sultanate of Oman. The list of schools at Bahla includes Al Mamour Girls' School, Sulaimi Boys' School, Bisya School, High Valley School, Al-wadi Alala School. Four schools were randomly chosen from among the listed schools at Bahla and around fifty percentages of samples were proportionately selected from each school. Out of total 200 samples collected only 180 were found to be valid on the basis of consistency of responses and therefore taken fit for analysis. The collected data was processed with suitable statistical tools and results were drawn out. The study reveals the fact that the school should provide good support to the teachers in their task accomplishments. In short if the teachers face less or no difficulties in fulfilling the role expectations, their morale would be high which in turn will support the student engagement and teaching learning atmosphere at schools.

Key Words: Instructional innovation, Student engagement, Teaching and Learning, Learning efficiency.

1. Introduction

1.1 History of education in Oman

In 1970 there were only three formal schools with 900 students in the whole country. Oman's national educational program expanded rapidly during the 1970s and the 1980s. In 2006–2007 about 560,000 students attended 1053 public schools. The number of students in private schools is about 65,000. There are also extensive programmes to combat adult illiteracy. Sultan Qaboos University, the only national university near Muscat, was founded in 1986, and in 2006 it had 13,500 students. The 2006 Human Development Report found the literacy rate to be 31.4% in adults, up from 54.7% in 1990. For the same period, the youth literacy rate increased from 85.6 to 97.3%. Public expenditure on education was reported to be 4.6% of GDP and 26.1% of total government spending¹.

Preschool education is provided to children less than 10 years old. It is offered by the private sector and some public organizations. Supervision is the responsibility of the Ministry of Education and the Ministry of Social Affairs. Nursery enrollment is very limited and estimated to be only 1%. Kindergarten is available mostly in large cities and enrollment is estimated to be 15%.

In 1997, the ministry began development work on a Basic Education programme to gradually replace the three levels General Education system. The aim of the reform is to create a unified system covering the first ten years of schooling. Basic Education is organized into two cycles: the first cycle covers grades 1 to 4 and the second cycle covers grades 5 to 10.

Secondary Education: Following primary education, pupils who successfully complete that level advance to the next level of education, which is divided into two equal parts called preparatory and secondary education, lasting a total of six years. The first preparatory schools were established in 1972. One was designated for boys and one for girls. Preparatory schools often share facilities with either a primary or secondary school. At the preparatory level, students may choose from four specific options: general education, health sciences, military studies, or vocational training. At the end of preparatory education, students take a national examination. The first secondary school opened during the 1973-1974 academic year with an enrollment of 25 students. By 1985, there were more than 12,000 secondary students in

Oman. Although secondary education levels still have lower enrollments than primary education (67 percent enrollment), this rate has been growing. Secondary education has two options, general education, which prepares pupils for the university, or a vocational education, which prepares pupils for careers. General education provides one year of basic academic subjects and two years in the humanities or sciences. The specialized vocational education includes basic academic subjects, but emphasizes Islamic, commercial, agricultural, industrial, or teacher training. During 1998-1999 academic school years, a new system was initiated, which consisted of ten years of basic education and two years of secondary education. This was introduced to 17 schools with the intent of gradually implementing this change throughout the country.

1.2 Schools at Bahla:

Oman's government realized that there was a need to provide a well-educated, resourceful local workforce for the future. Major programs for building schools were undertaken and continue to this day and standards of education have been raised significantly throughout Oman and also in Bahla, an important town in the Sultanate which is well known for its tourist spots, a fort and handicrafts. There is fairly wide choice of schools in Oman especially in Bahla, although state schools usually aim at Omani citizens and Arabs only, as these schools are based on an exclusively Islamic curriculum. The Ministry of Education controls standards in the state schools and have some influence over the establishment, legitimacy and running of those in the private sector, in some instances stipulating that school hours and days match those of the state schools. Government takes initiatives on improving educational process and finding solutions for the challenges faced by some schools.

1.3 Conceptual Definitions

Innovation: "The successful introduction of a new thing or method" (Brewer and Tierney, 2012). In essence, "innovation seems to have two subcomponents. First, there is the idea or item which is novel to a particular individual or group and, second, there is the change which results from the adoption of the object or idea" (Evans, 1970).

Student engagement refers to the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education.

Associated Definitions:

- Learning Efficiency: The ability to learn and comprehend with the least cost and effort.
- Learning: the acquisition of knowledge or skills through study, experience, or being taught.
- Online learning: **is** a way of studying for an internationally recognized qualification without needing to attend classes on campus. It is aimed at those who wish to study for a postgraduate qualification alongside work or other commitments.
- Competency-based Education recognizes that all students enter a program with different skills and proficiencies and that each moves at a different rate.
- The Internet of Things in learning The increased connectivity between devices and "everyday things" means better data tracking and analytics, and improved communication between student, professor, and institution, often without ever saying a word.
- Virtual/Augmented Reality in teaching students can immerse themselves in real-life learning situations that are either too dangerous or not possible to experience otherwise.
- Artificial Intelligence :(AI) the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

2. Review of Literature:

Brunner (1996)¹ in his work suggested viewing education in a broader context of what society intends to accomplish through its educational investment to the young community. The "how" of the teaching (instructional methodology) is as important as the

“what” says Morais *et al.*, (2004)². Ahmed Al-Rabbani & Mohsin Al- Salmi & Hamad Al-Salmi (2002)³, in their article titled “Challenges among Omani School”, examined “globalization impacts on all global cultures” and found out globalization and rapid technological penetration in the information age has massive and unpredictable impacts on all global cultures and societies, with positive and negative outcomes

According to Diamond (2005)⁴, “New technologies, whether or not they succeed in solving the problem that they were designed to solve, regularly create unanticipated new problems”. Glasson (2009)⁵, in his article “Challenges Faced by Teachers”, studied the challenges faced by teachers when he handles more classes. Many studies found that students strongly believe in the role of their teacher in fostering their values (Al-Hindi, 2001; Al-Saying, 2006; Barhom, 2009; Kashaln, 2010)⁶. However, fostering values among school students is not an easy task, as they are often disconnected from the role of education in non-academic dimensions as from the value system itself. This barrier is increasing due to the rapid pace of change and the role of international technology in life (Al-Dosoqi & Abdel Moti, 2004; Kutto, 2013)⁷. Derek Bok, a former Harvard University President, wrote, neither American students nor our universities, nor the nation itself, can afford to take for granted the quality of higher education and the teaching and learning it provides. (Bok, 2007)⁸.

The role of teachers is powerful in terms of not only academic instruction, but also being role model examples (Character Education Partnership, 2011)⁹. Marcus (2012)¹⁰ in his work examined that the teacher education and professional development are definitely one of the primary areas that call for innovative approaches: teachers must be taught to teach well. Christensen and Eyring(2011)¹¹, who wrote about disruptive innovations that force universities to change, predict that teaching in the future will be disruptable as technology improves and shifts the competitive focus from a teacher’s credentials or an institution’s prestige to what students actually learn. Ben Wildavsky, Andrew Kelly, and Kevin Carey wrote that higher education system also betrays an innovation deficit in another way: a steady decline in productivity driven by a combination of static or declining output paired with skyrocketing prices (Wildavsky *et al.*, 2012)¹².

As per Brewer and Tierney (2012)¹³, sustaining innovation continues the current dimensions of performance. Innovations may come as a result of inspiration, continuous creative mental activity, or “supply pushed” through the availability of new technological possibilities in production, or “demand led” based on market or societal needs. George Friedman argues that computers have had “profoundly disruptive consequences on cultural live throughout the world” (Friedman, 2012)¹⁴, which could not have left education unperturbed. Research of exemplary educational systems across the world vividly demonstrates that teacher quality is the fundamental element of educational success: “It is especially teachers who shape students’ learning environments and help them reach their intellectual potential”: (Vieluf *et al.*, 2012)¹⁵.

Laura Iancu (2013)¹⁶ in her article titled, “Challenges Facing teachers At School Beginning and Tools to Address Them”, studied the role of educators to keep students interested in learning and found out that children have become accustomed to new technologies and are always eager to learn new skills and discover fun activities. A strong warning about the negative effects of the Web comes from Maurer *et al.* (2013)¹⁷, who caution that modern media, particularly networked computers, are endangering our capacity to think, to remember clearly, and to read and write with concentration; they also imperil creativity. According to Sousa (2014)¹⁸, the widespread use of technology is having both positive and negative effects on students’ attention and memory systems. In studies of student satisfaction, students commonly rate their online experiences as satisfactory, with convenience being the most cited reason (Cole *et al.*, 2014)¹⁹. Neil Postman addressed another concern of overemphasizing the role of technology in education, cautioning against “surrendering education to technology” (Postman, 1993)²⁰, which may have far-reaching social and cultural consequences (Serdyukov, 2015)²¹.

Program for International Student Assessment (PISA) evaluations keep revealing disappointing results for our middle school (Pew Research Center, 2015)²²; a large number of high school graduates are not ready for college (College preparedness, 2012)²³; and employers, urn, are often dissatisfied with college graduates (Thomson, 2015; Jaschik, 2015)²⁴. Innovation in any area or aspect can make a change in education in a variety of ways. Ultimately, however, innovations are about quality and productivity of learning (Camins,2015)²⁵. MattanGriffel writes, “We need to change the role of teachers. What kind of people do we consider teachers? How do we elevate teachers in society?” (Crichton, 2015)²⁶. Teachers of Trinity Grammar School (2017)²⁷ in their article “What Are The Main Challenges Facing Teachers?”, studied the effective ideas for students in learning process and found out the difficulty in identifying and finding effective ideas to educate children.

3. Need of the Study:

Education requires proper and special allocation of both human and physical resources. Education needs a greater commitment than any other development activity as it is a continuous labour intensive process. It requires skilled and highly trained and dedicated staffs who work strenuously. It also needs well-structured curricular, adequate teaching and learning materials, well-built buildings and adequate furniture. To provide all these, governments, communities, parents and other stakeholders must sacrifice other priorities. Teachers in particular face many challenges in delivering the knowledge and skills that support the success of the students.

Hence the present study is undertaken to investigate if any contemporary instructional innovative practices are being experimented in the teaching learning process at schools and thereby how it enhances the quality of performance among teachers at schools. The study tries to explore the associated challenges faced by omani school teachers in the phase of delivering quality education to the students at Bahla, a renowned city at Sultanate of Oman. Teachers with low morale in teaching profession work with negative attitudes. Hence the researcher tries to observe why few teachers lose interest in their profession? And its relation with the challenges they face. The study was conducted to aid the education policy makers in evaluating whether their objectives were valid and to what extent they have been achieved and what further measures or actions should be taken to achieve the set goals. The information would also be helpful to academic contributors and innovators who rethink strategies for the upliftment of schools.

4. Problem of the study

Education is the major and important need in initiating and preparing a student through learning, which enables him/her to play active roles in society. Teachers are the frontline individuals in the provision of education service. They are the human resources who control the operations of schools in terms of transferring knowledge, skills and attitudes to students. Numerous research studies have proved that teachers play important role in ensuring high quality education for students, regardless of the country in which they are teaching (CarrHill1984; O’Sullivan 2002; VSO 2002.) In short, “teachers are essential players in promoting quality education.”

Though various discussions have been made in association with assessing adequate teaching standards in schools in Oman, few studies have attempted to discover facts like new trends and techniques being followed in teaching and learning and its related challenges like, inadequate reward for professional work, lack of professional teachers, poor environment at primary and secondary level, non-conducive learning, poorly constructed and ill equipped infrastructure, short supply of instructional materials etc. Therefore, these problems become challenges that affect the effectiveness and efficiency in teachers’ teaching performance in schools.

To ensure that pupils gain the right education, critical and detailed information are needed to help and convince all stakeholders to revise and come up with solution on how to assist teachers so that they may do what they ought to perform. This study is an attempt to investigate if the contemporary instructional innovative practices are being experimented in

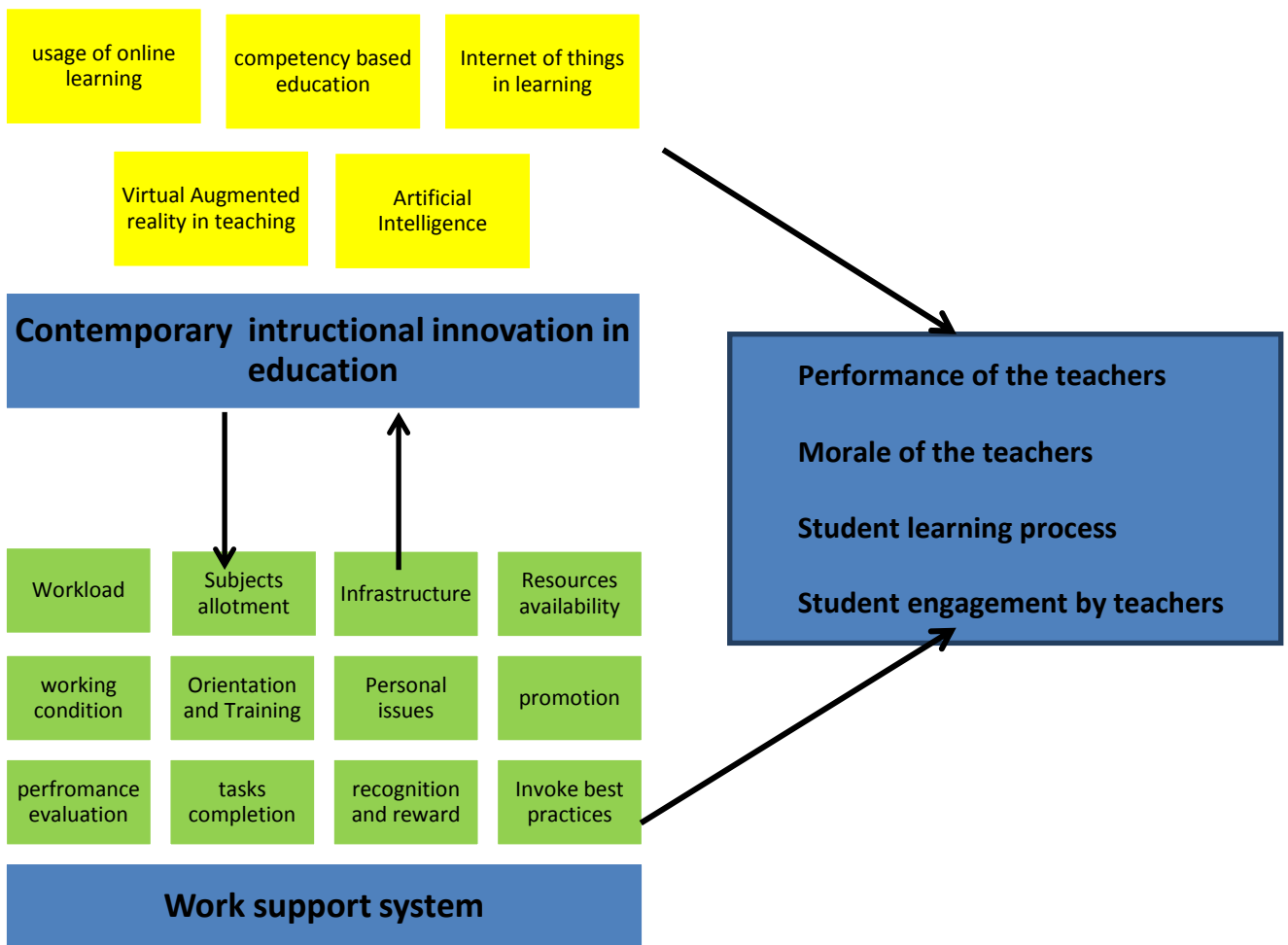
the teaching learning process at schools and thereby student engagement among teachers at schools. The study tries to explore the associated challenges faced by omani school teachers in the phase of delivering quality education to the students at Bahla, a renowned city at Sultanate of Oman. With the above mentioned idea the present research is conducted with the following questions in purview:

1. To detect if contemporary instructional innovative practices are being practiced in schools at Oman.
2. How to increase effectiveness of education at school level?
3. How innovations are being integrated in teaching and learning process?
4. What are the challenges faced by school teachers in delivering quality performance to students?
5. Is there a relation between work support measures provided by the school and the morale of the teachers?

5. Objectives of the Study:

1. To study if the contemporary instructional innovative practices are imbibed in their teaching learning process at schools in Bahla.
2. To explore the work support system facilitated and the related challenges faced by school teachers in the phase of delivering quality education to the students at Bahla, Sultanate of Oman.
3. To study the factors influencing the morale of the school teachers at Bahla schools, Sultanate of Oman in course of student engagement process.

6. Conceptual Framework



7. Methodology of the Study

The research design for the present study is exploratory in nature. The data and facts that relate to contemporary instructional innovations being experimented in Bahla schools at Oman were studied and the related work challenges are identified compiled and are associated with the quality performance of the school teachers, their morale, student learning process and engagement. Data needed for the present study was collected from primary and secondary sources; via interview schedules, in-depth interview with teachers at schools, published reports from Ministry of education etc. Population comprises of all the teachers at Bahla Schools, Oman. The list of schools at Bahla include Al Mamour Girls' School, Sulaimi Boys' School, Bisya School, High Valley School, Al-wadi Alala School in which proportionately 50 percentage of samples were selected randomly from four schools in Bahla. Hence multistage sampling was adopted in this present study with 'Convenience sampling' in stage I and 'Quota sampling' in stage II. Out of 200 total samples collected only 180 responses were found to be valid on the basis of consistency of responses and therefore taken fit for analysis.

The collected data was processed with suitable statistical tools and results were drawn out. Determinants influencing the study were tested for its reliability using Cronbach's Alpha test where the respective scores are greater than seven. Hence the validity of the determinants was proved. Likert's five point scaling technique was used on the basis of which Summary statistics using mean and Standard Deviation was calculated. Correlation and path coefficient analysis was applied to find out the most influential challenges in teaching learning process and its impact in the process of student's engagement among teachers at Bahla, Sultanate of

Oman. Relevant sub samples were grouped on the basis of demographic profiles of the respondents, namely age, level of education, educational qualification, working experience, workload allotment to teachers and comparisons were made to test the association between demographic profiles and the performance of teachers, difficulties faced by them in teaching learning process and student engagement using Chi square analysis.

8. Analysis and its implication

8.1 Testing the work support system and contemporary instructional innovative practices offered at schools:

Workload allotment, infrastructure, working condition, personal issues, subject allotment, resource availability, training and development programs, reward and promotional measures, tasks completion, professional standards, recruitment and placement plays an important role in providing work support system to teachers to deliver quality work performance and in turn enhance teaching learning process among students. Hence various factors influencing the teaching learning process was analyzed and thereby the challenges faced by school teachers were studied. To do so, teachers were asked to state their agreement and disagreement on five-point Likert's scale ranging from the most unfavorable responses to most favorable responses on a set of statements related to different aspects of challenges in teaching learning process. The results are shown in Table No: 8.1.

Table No 8.1

Determinants	N	Mean	SD	Varian ce
Workload is highly manageable and can be handled easily	180	4.64	1.452	2.108
Subjects are allocated as per qualification	180	3.29	1.027	1.056
All other works are allotted as per the skills/ knowledge/experience	180	3.29	.960	.922
Number of teachers handling each subjects are adequate in school	180	4.03	1.303	1.697
Role and responsibilities are defined and communicated clearly	180	3.14	1.185	1.405
Subject's /work can be requested by teachers	180	3.12	1.015	1.031
Infrastructure in school is good	180	2.69	1.014	1.029
Class rooms are equipped well (Black boards/white boards /projectors /computers)	180	3.29	1.171	1.371
Staff rooms at school are well maintained	180	3.12	1.092	1.192
Student teacher ratio is convenient and manageable	180	4.87	1.131	1.278
Teaching materials supplied are well prepared by school	180	2.81	1.298	1.685
Teaching materials are available on time to all teachers and students	180	2.95	1.265	1.601
Working condition is satisfactory at school	180	3.30	1.077	1.161
Personal issues are considered in work allotments	180	4.22	.847	.718
In service training given is highly professional, effective and appropriate	180	3.04	.965	.931
Induction training is given to newly joined teachers	180	3.73	1.067	1.138
Opportunities to attend professional conferences are given to all teachers	180	2.75	1.133	1.284

Teachers are sent to observe the best practices from other institutions	180	3.12	.767	.588
Training is need based and be requested by teachers	180	3.32	1.335	1.782
school give a chance for on-line forum for professional development and discussion	180	3.40	1.455	2.118
Teachers are given training based on our staff appraisal programs	180	3.06	1.164	1.354
Schools take initiatives to improve the teaching practices and methods	180	3.52	1.207	1.458
Teachers are given more chances to promote and upgrade in	180	3.12	1.164	1.355
Teachers are involved in school system planning and	180	2.91	1.050	1.103
Online course delivery , conducting quizzes, activity programs	180	3.40	1.455	2.118
Education is imparted on the basis of competency of the	180	1.05	.997	.954
Internet plays a vital role inside the classroom teaching and	180	2.91	1.050	1.103
Real life online projects are adopted into the curriculum	180	2.25	1.014	1.029
Artificial Intelligence is being introduced into the system of	180	1.26	.964	.923
Teachers are able to fulfill the learning needs of students	180	3.35	1.179	1.391
Teachers are able to fulfill the expectations of school	180	4.24	.972	.945
Teachers are able to fulfill the expectations of parents	180	4.06	1.066	1.137
Teachers are able to fulfill the expectations of peers	180	4.43	1.114	1.241
School gives all support in the work of teachers	180	3.24	1.289	1.661

The above table depicts that factors like workload (4.64), Number of teachers handling each subjects (4.24), Student teacher ratio (4.87), Personal issues (4.22), fulfillment of the expectations of school administration (4.10), Parents (4.06), Peers (4.43) shows a mean value greater than the average mean value (3), and hence it is considered as favorable response under Likert’s Scaling Technique. In case of other factors, the mean value is almost equal to the average mean score which shows a neutral response.

Infrastructure in school (2.69), Teaching materials preparation (2.8) and availability (2.9), Opportunities to attend professional conferences (2.75) and Teachers involvement in school system planning and developmental decisions (2.91) shows an unfavorable response among the teachers. Contemporary instructional innovative practices secured a neutral response in the usages of online course delivery, conducting quizzes, activity programs (3.4) and unfavorable responses in imparting competency based education to students (1.05) and experimentation of artificial intelligence into the system of learning (1.26). This shows that schools have to go a long way to try out and imbibe contemporary instructional innovative practices.

8.2 Testing the relationship between work support system and quality of work performance among teachers at schools

In testing the relationship between the vital work support systems adopted at schools and its association with the quality of work performance among school teachers, the following null hypothesis was formulated and was duly tested using Correlation and Path Coefficient Analysis. The inter-correlation matrix of explanatory variables depicting the relationship of stated variables are furnished in the table no. 8.2. It is seen from table 8.2 the correlations between all the explanatory variables are significant at one percent level and are both positive and negative. Variables like workload, Number Of Teachers Handling Subjects, Student Teacher Ratio, poor Working Condition, In-Service Training are negatively correlated which states the fact the better facilities the school offers the more will be the quality of teachers performance in the school and vice versa.

H₀: Workload, Subjects allotment, Number of teachers handling subjects, Infrastructure, Student teacher ratio, Teaching materials, Working condition, In-service training does not have an influence on the quality of work performance among school teachers.

Following relationship was considered in this case : $Y = f (x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8)$

$Y =$ Quality of work Performance among school teachers

$X_1 =$ Workload

$X_2 =$ Subjects Allotment

$X_3 =$ Number Of Teachers Handling Subjects

$X_4 =$ Infrastructure

$X_5 =$ Student Teacher Ratio

$X_6 =$ Teaching Materials

$X_7 =$ Working Condition

$X_8 =$ In-Service Training

Path Coefficient Analysis

The direct effect of each of the explanatory variables on the dependent variable and the indirect effect of each explanatory variables on the dependent variable through other explanatory variables are explained by path coefficient analysis and the results are furnished in the table no: 8.3.

TABLE No: 8.2

INTER-CORRELATION MATRIX

		workload	Subjects allotment	Number of teachers handling subjects	Infrastructure	Student teacher ratio	Teaching materials	Working condition	In-service training	Quality Performance of teachers
workload	Pearson Correlation	1	.350**	.185*	-.204**	.574**	-.275**	.409**	.097	-.355**
	Sig. tailed) (2-		.000	.013	.006	.000	.000	.000	.194	.000
Subjects allocated per qualification	Pearson Correlation	.350**	1	.235**	.133	.303**	.033	.456**	.253**	.169*
	Sig. tailed) (2-	.000		.002	.074	.000	.662	.000	.001	.024
Number teachers handling each subjects	Pearson Correlation	.185*	.235**	1	.325**	.200**	.037	.216**	.474**	-.045
	Sig. tailed) (2-	.013	.002		.000	.007	.624	.004	.000	.545

are adequate										
Infrastructure of school is good	Pearson Correlation	-.204**	.133	.325**	1	.023	.414**	.141	.320**	.173*
	Sig. (2-tailed)	.006	.074	.000		.762	.000	.060	.000	.020
Student teacher ratio is convenient	Pearson Correlation	.574**	.303**	.200**	.023	1	-.093	.583**	.291**	-.669**
	Sig. (2-tailed)	.000	.000	.007	.762		.212	.000	.000	.000
Teaching materials are well prepared by my school	Pearson Correlation	-.275**	.033	.037	.414**	-.093	1	-.015	.247**	.222**
	Sig. (2-tailed)	.000	.662	.624	.000	.212		.840	.001	.003
Working condition is satisfactory at school	Pearson Correlation	.409**	.456**	.216**	.141	.583**	-.015	1	.220**	-.362**
	Sig. (2-tailed)	.000	.000	.004	.060	.000	.840		.003	.000
Service training given is highly professional, effective and appropriate	Pearson Correlation	.097	.253**	.474**	.320**	.291**	.247**	.220**	1	-.133
	Sig. (2-tailed)	.194	.001	.000	.000	.000	.001	.003		.076
Quality Performance of teachers	Pearson Correlation	-.355**	.169*	-.045	.173*	-.669**	.222**	-.362**	-.133	1
	Sig. (2-tailed)	.000	.024	.545	.020	.000	.003	.000	.076	

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

* . Correlation is significant at the 0.05 level (2-tailed).

TABLE No: 8.3

Table showing the Direct & Indirect Effect of Explanatory Variables

	X1 Workload	X2 Subjects Allotment	X3 Number Of Teachers	X4 Infrastructure,	X5 Student Teacher Ratio	X6 Teaching Material	X7 Working Condition	X8 In- Service Training	Y Quality of work Performance
X1	0.187	0.573	0.332	0.570	0.175	0.165	0.734	0.465	0.962**
X2	0.176	0.607	0.823	0.570	0.169	0.352	0.351	0.273	0.639**
X3	0.779	0.578	0.348	0.620	0.229	0.251	0.322	0.543	0.797**
X4	0.152	0.494	0.307	0.542	0.275	0.112	0.701	0.351	0.942**
X5	0.101	0.783	0.246	0.597	0.323	0.244	0.312	0.572	0.951**
X6	0.223	0.682	0.532	0.142	0.241	0.562	0.512	0.345	0.652**
X7	0.312	0.211	0.174	0.745	0.700	0.364	0.542	0.168	0.962**
X8	0.546	0.554	0.843	0.242	0.253	0.114	0.513	0.452	0.657**

It was seen from the table 8.3 that among the eight explanatory variables namely X1 Workload, X2 Subjects Allotment, X3 Number Of Teachers Handling Subjects, X4 Infrastructure, X5 Student Teacher Ratio, X6 Teaching Materials, X7 Working Condition and X8 In-Service Training with dependent variable Y, Quality of work Performance among school teachers, four explanatory variables, X1, X4, X5 and X7 have higher positive direct effect on the dependent variable Y. The variable X1 (workload) also has a higher positive indirect effect on Y through X7 (working condition). Similarly the variable X5(student teacher ratio) had positive indirect effect on the dependent variable Y through X2(subject allotment). The variable X4 (Infrastructure) had higher positive indirect effect on the dependent variable Y through X7(working condition). The variable X7 (working condition) had higher positive indirect effect on the dependent variable Y through X4(Infrastructure).Hence the four explanatory variables, X1, X4, X5 and X7 were substantially important as they contribute to variable Y.

8.3 Testing the relationship between the challenging factors and the morale of the schools teachers

In testing the relationship between the most influencing factors that affect the morale of the schools teachers the following null hypothesis was formulated and was duly tested using Correlation. The inter-correlation matrix of explanatory variables depicting the relationship of stated variables are furnished in the table no. 8.4. It is seen from table 8.4 the correlations between all the explanatory variables are significant at one percent level and are both positive and negative. Variables like role and responsibilities and Need based training are positively correlated to the morale of teachers at school.

H₀: Work allotment, role and responsibilities, willing of subjects /work to handle, Opportunities to attend professional conferences, observe best practices from other institutions, Need based training, on-line forum for professional development, Promotion and upgrade in career, Involvement in school system planning and developmental decisions does not have an influence on the morale of school teachers.

Following relationship was considered in this case :Y = f (x1, x2, x3, x4, x5,x6,x7,x8,x9)

Y = morale of the teacher

X1 =works are allotted as per skills/ knowledge/experience

X2 = role and responsibilities

X3 = willing of subjects /work to handle

X4 = Opportunities to attend professional conferences

X5 = observe best practices from other institutions

X6 = Need based training

X7 = on-line forum for professional development

X8 = Promotion and upgrade in career

X9 = Involvement in school system planning and developmental decisions

TABLE No: 8.4 INTER-CORRELATION MATRIX

		works are allotted as per skills/knowledge/experience	role and responsibilities	request of subjects /work to handle	Opportunities to attend professional conferences	observe best practices from other institutions	Need based training	on-line forum for professional development	Promotion and upgrade in career	Involvement in school system planning and developmental decisions	morale of the teacher
Subjects are allocated as per qualification	Pearson Correlation Sig. (2-tailed)	.141 .058	.247** .001	.273** .000	.288** .000	.168* .025	.361** .000	.475** .000	.350** .000	.476** .000	.009 .905
works are allotted as per their skills/knowledge/experience	Pearson Correlation Sig. (2-tailed)	1	.239** .001	.447** .000	-.098 .192	.164* .028	.207** .005	.125 .095	.270** .000	.271** .000	-.152* .041
role and responsibilities are defined and communicated clearly	Pearson Correlation Sig. (2-tailed)	.239** .001	1	.520** .000	-.124 .098	.460** .000	.177* .018	.220** .003	.587** .000	.311** .000	.318** .000
request the subjects /work to be handled	Pearson Correlation Sig. (2-tailed)	.447** .000	.520** .000	1	.006 .936	.369** .000	.311** .000	.157* .035	.329** .000	.340** .000	.104 .165
Opportunities to attend professional conferences given to all teachers	Pearson Correlation Sig. (2-tailed)	-.098 .192	-.124 .098	.006 .936	1	.113 .133	-.077 .306	.312** .000	-.033 .662	.328** .000	-.481** .000

Teachers are sent to observe the best practices from other institutions	Pearson Correlation (2-tailed)	.164*	.460**	.369**	.113	1	.180*	.236**	.434**	.250**	-.213**
	Sig.	.028	.000	.000	.133		.015	.001	.000	.001	.004
request the school on what training is needed	Pearson Correlation (2-tailed)	.207**	.177*	.311**	-.077	.180*	1	.538**	.476**	.006	.164*
	Sig.	.005	.018	.000	.306	.015		.000	.000	.941	.027
school gives chance for on-line forum for professional development	Pearson Correlation (2-tailed)	.125	.220**	.157*	.312**	.236**	.538**	1	.572**	.237**	-.021
	Sig.	.095	.003	.035	.000	.001	.000		.000	.001	.776
chances to promote and upgrade in career	Pearson Correlation (2-tailed)	.270**	.587**	.329**	-.033	.434**	.476**	.572**	1	.238**	.135
	Sig.	.000	.000	.000	.662	.000	.000	.000		.001	.071
involved in school system planning and developmental decisions	Pearson Correlation (2-tailed)	.271**	.311**	.340**	.328**	.250**	.006	.237**	.238**	1	-.236**
	Sig.	.000	.000	.000	.000	.001	.941	.001	.001		.001
morale of the teacher	Pearson Correlation (2-tailed)	-.152*	.318**	.104	-.481**	-.213**	.164*	-.021	.135	-.236**	1
	Sig.	.041	.000	.165	.000	.004	.027	.776	.071	.001	

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

* . Correlation is significant at the 0.05 level (2-tailed).

8.4 Testing the significant differences among the school teachers in relation to the challenges and their demographic profile:

Table No: 8.5

Particulars		Difficulties in performing the work allotted		Total	Chi Square value	df	p value (0.01 level of significance)
		YES	NO				
Age	20-25	0	4	4	37.123 ^a	3	.000
	26-35	27	56	83			
	36-45	0	60	60			
	above 46	0	33	33			
Total		27	153	180			
Educational Qualification	HD	15	16	31	33.653 ^a	3	.000
	Bachelor	12	121	133			
	Master	0	8	8			
	phd	0	8	8			
Total		27	153	180			
Experience	less than 1	15	0	15	98.170 ^a	4	.000
	1-3	0	20	20			
	3-5	4	28	32			
	5-10	8	52	60			
	above 10	0	53	53			
Total		27	153	180			
Level of education	primary	15	12	27	41.765 ^a	2	.000
	secondary	4	72	76			
	HS	8	69	77			
Total		27	153	180			
Workload of teachers	5-10	19	117	136	26.295 ^a	3	.000
	11-15	0	12	12			
	ABOVE 16	8	24	32			
Total		27	153	180			
Particulars		If challenges influence the student learning at school		Total	Chi Square value	df	p value (0.01 level of

		YES	NO				significance)
Age	20-25	0	4	4	4.320	3	.229
	26-35	12	71	83			
	36-45	8	52	60			
	above 46	9	24	33			
Total		29	151	180			
Educational Qualification	HD	0	31	31	12.216 ^a	3	.007
	Bachelor	29	104	133			
	Master	0	8	8			
	phd	0	8	8			
Total		29	151	180			
Experience	less than 1	0	15	15	17.367 ^a	4	.002
	1-3	0	20	20			
	3-5	4	28	32			
	5-10	8	52	60			
	above 10	17	36	53			
Total		29	151	180			
Level of education	primary	0	27	27	27.045 ^a	2	.000
	secondary	4	72	76			
	HS	25	52	77			
Total		29	151	180			
Workload of teachers	5-10	21	115	136	4.221 ^a	2	.121
	11-15	0	12	12			
	ABOVE 16	8	24	32			
Total		29	151	180			

The table 8.5 depicts the challenges faced by the teachers' in relation to student learning at school. It shows that majority of the teachers are between the age group of 26-35 and most of them have stated that challenges faced by teachers neither affect their performance nor the student learning process in schools. Majorities having bachelors as their educational qualification, with more than 5 years of teaching experience, working at secondary and higher secondary level of school education, with a workload of 5 to 10 hours of teaching per week as well have stated the same. It was empirically tested with the formulation of the hypothesis whether the demographic profiles of the teachers have an association with the challenges faced at schools and their influence in teaching learning process.

H₀- There is no association between the Age/Educational Qualification/Experience/Level of Education/workload of the teachers and the challenges faced by them and the influence in teaching learning process.

Ha- There no association between the Age/Educational Qualification/Experience/Level of Education/workload of the teachers and the challenges faced by them and the influence in teaching learning process

The results depicted in the Table no. 8.5 proves the fact that there is association with the difficulties faced by teachers and their demographic profile say age ($\chi^2 = 37.123^a$ p value :0.00001), Level of education ($\chi^2 = 41.765^a$ p value :0.00001), Educational Qualification ($\chi^2 = 33.653^a$ p value :0.00001), workload of teachers ($\chi^2 = 26.295^a$ p value : 0.002125) and Experience ($\chi^2 = 98.170^a$ p value : 0.08119) as the chi square value is more than the p value at 1 percent level of significance. In addition while testing the association with the challenges faced by teachers in teaching and learning process and their demographic profile say age ($\chi^2 = 4.320$ p value :0.00001), Level of education ($\chi^2 = 27.045^a$ p value :0.00001), Educational Qualification ($\chi^2 = 12.216^a$ p value :0.00001), workload of teachers ($\chi^2 = 4.221^a$ p value : 0.002125) and Experience ($\chi^2 = 17.367^a$ p value : 0.08119) proves the fact that there is association with the challenges faced by teachers and their demographic profile as the chi square value is more than the p value at 1 percent level of significance. Hence the Null hypothesis is rejected in both the cases mentioned above.

9. Recommendations and Conclusion

Education is a sector that needs continuous improvements in the delivery of instructions that ultimately results in innovation. Education, if imparted purposefully and done correctly expedites life success. The more unique and distinctive the educational experience is, the more valuable it is. Best initiatives have to be taken by schools to work on building resources, infrastructure, upgrade quality standards, invoke best practices, and innovation into regular curriculums. The present study is undertaken to study the contemporary instructional innovation being experimented in the teaching learning process at schools and the work support systems provided by the schools to enhance student engagement among teachers. The study tries to explore the associated challenges faced by omani school teachers in the phase of delivering quality education to the students at Bahla, a renowned city at Sultanate of Oman. Workload allotment, infrastructure, working condition, personal issues, work support measures, subject allotment, resource availability, training and development programs, reward and promotional measures, tasks completion, professional standards, recruitment and placement plays an important role in influencing the teachers quality of work performance at schools and in turn teaching learning process among students. Hence various factors influencing the teaching learning process was analyzed and thereby the challenges faced by school teachers were studied and the results were drawn out listing the following suggestions:

- ❖ It is widely observed that many teachers have recently been making a range of demands. Among their demands are improvements in their working conditions, such as reducing their classroom teaching time and better provision for teachers posted far from home.
- ❖ It is generally recognized that “teacher quality” is one of the most important factors influencing student achievement. It needs to ensure that teachers possess the skills, knowledge and training needed to cope with many changes and challenges which lie ahead. It also needs to ensure that teachers are provided with working conditions that enable them to carry out their duties to an appropriately high standard.
- ❖ In recent scenario many schools have introduced an open, fair and transparent system of teacher’s recruitment and placement, appropriate in-service training, professional standards, accountability and appropriate working conditions.
- ❖ In addition to the above mentioned few other notable challenges faced by School teachers are: balancing the different learning needs of students, respecting expectations from school administration, helping parents and students to meet long-term goals, difficulty in monitoring the entire class, involvement of Parents, lack of Support from Schools, lack of teacher education, parent/teacher relationships, lack of motivation and monetary concerns as well should be taken care by schools.

❖ In addition to working on standards of learning achievement, it is expected to have completed the development of professional standards for school principals, teachers and supervisors. With the introduction of professional standards, teachers and leaders will be expected to play a key role in identifying their own needs and directing their own improvement. These standards are likely to be an important development in helping to clarify roles, evaluate staff performance and in determining appropriate staff development programs.

❖ Among other duties, schools' principals are now expected to supervise teachers at least once a year, organize school efforts to improve teaching, and develop an action plan based on the whole-school evaluation report. With increased autonomy, principals and schools will be expected to accept increased accountability.

❖ The schools on its behalf can give chances for teachers to observe best practices from other institutions. Teachers have space in requesting the management to train them with skills matching their need. Every school has to give its teachers to perform online forum based on their performance appraisal.

❖ Schools should try hard to improve the teaching pedagogy by inculcating innovations among teachers in the field of education. Few practices can be tried out in schools like usage of online in the distribution of materials, worksheets, conducting quizzes and tests, showing videos and making demonstrations with smart boards. Internet of things can be adopted in academic and in managerial related tasks at a less percentage at the introductory level.

❖ The schools should permit teachers to involve in system planning and development decisions. Thereby every teacher is able to justify the learning needs of students within their limits and the expectations of school administration, parents, and peers.

The school should provide good support to the teachers in their task accomplishments. In short if the teachers face less or no difficulties in fulfilling the role expectations, their morale would be maintained at higher level which in turn will support the student engagement and teaching learning atmosphere at schools.

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