

SCIENCE TEACHERS' PROFESSIONAL DEVELOPMENT CHALLENGES IN OMAN: SUPERVISORS' PERSPECTIVES

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Abstract

The objective of the study was to examine Practices and Challenges of Educational Supervision on the Professional Development of Science Teachers in Secondary Schools, Sultanate of Oman. The study employed the Quantitative method approach to collect and analyze data. Questionnaire was employed as the main instrument for data collection. According to Krejcie & Morgan's (1970) table; a random sample of (93) supervisors and (50) Science teachers were used. Quantitative data were analyzed using descriptive statistics tools including percentage analysis. The findings revealed that: the lack of material and resources at schools and trainings needs training needs were among the practices observed in schools. Apart from those, lack of sustainable and organized training system, budget and lack of coordination and commitment were the major challenges faced by supervisors noted during the study. It is also found that a situation made it difficult for supervisors to contribute adequately to the professional development of science teachers. Based on the findings, it was recommended that Education authorities to take appropriate measures including providing adequate resources and financial support to the schools and providing necessary training and administrative support for supervisors so that they would be in better position to assist teachers in their professional development.

Keywords: Science Teachers, Professional Development. Challenges.

1. INTRODUCTION

Supervision has its origin from the Latin word "Super video" meaning "to oversee" (Adenaike and Adebajo, 2000, p.151). Effective supervision of schools and teachers ensures proper functioning and collaboration of all persons and materials involved in the processing of a student and the performance of the teachers. Therefore, "Supervision can be seen as a way of advising, guiding, refreshing, encouraging, stimulating, improving and overseeing certain groups with the hope of persuading people to desist from applying wrong procedures in carrying out certain functions on their jobs and at the same time try to emphasize the importance of good human relations in an organization" (Akilaya, 2001, p251).

According to De Grauwe, (2001,p.112), supervisory practices in any situation reflect the major views about the nature of teaching, the roles of teachers and how they learn to teach. Until the 1980s; teaching was viewed basically as transmission of predetermined knowledge to students. Accordingly, teachers were designated with the responsibility of transferring knowledge in an unadulterated form as possible, through systematically tested procedures which are assumed to be undeniable and applicable to the society. De Grauwe, (2001) stated that; Supervisors are employed with the objective to evaluate, control and to check if teachers are using their skills in -transferring the knowledge as per prescribed methods in their classrooms and to take necessary corrective actions (De Grauwe,2001, p.112).

An education system in any country is established as a result of the determination of the broader aims of education which are in line with the aspirations of the country (Okumbe, 1998, p.73). To implement these aspirations effectively and to ensure the achievement of educational goals, schools split the short-term goals and objectives based on their educational requirements. Schools achieve this by implementing appropriate curriculum aspired by society in order to resolve the problem. Since long time educational supervision were mainly focused on administrative activities due to lack of proper expertise, and they were stationed at a distance from the school. Thus supervisory practices mainly focused on controlling rather than concentrating and supporting teachers on their professional development requirements. This traditional approach resulted in reduced quality and effectiveness of supervisory practices, which in turn led to search for new organizational model for effective and efficient supervision including cooperation of the members and stimulation of group thinking (Okumbe, 1998, p.74).

1.1 Statement Problem

One of the more recent concept of teaching is based on the assumption that knowledge is constructed, dynamic and conditional (Nelson, 1996, p.235) and teaching is an intellectually and morally complex work (Ball and Wilson, 1996. Studies in Australia has highlighted that teachers learn to teach by emulating their own students, generalizing from their own experiences as learners, and also by being socialized in schools, communities and education systems in which they work (Zelehner and Gore, 1990, p.346). Supervision in this paradigm is directed towards helping teachers become smarter at making professional judgments, not only about curriculum, students and pedagogy, but also about the structures and cultures in which their work is located (Oliva, 1997, p.98).

The traditional approach of supervision is a fault-finding approach, the supervisor goes to school to criticize and condemn teachers, not seeing anything good in them (Adenokun, 2000, p.226). Educational supervision is the process or act of seeing to it that the policies, principles and methods established for achieving the objectives of education are properly and successfully carried out (Akilaiya, 2001, p.147). It is said that modern trends in supervision are towards democratic principles where the supervisors is considered as a friend, a helper, ready to assist and support through professional advice and discretion.

Nowadays, improving the quality of education has been given priority in most of the countries. To monitor the quality, the national authorities highly depend on the school supervision, (De Grauwe,2001, p.45). Quality has different meanings depending on the kind of organization and the customers served (Certo, et. al., 2006, p.135). Particularly, education quality. According to (Dittmar, Mendelson and Ward, 2002, p.257) is "the provision of good education by well-prepared teachers". However, all teachers are not qualified enough and as a result they need support from supervisors (Giordano, et. al., 2008). To improve teachers' performance; the supervisors should also work with the aim to support teachers collaborative style. This will help to bring effective education through the improved teaching-learning process. Beach and Reinhartz, (2000, p.42) emphasized that the importance of the collaborative effort of all participants involved in the supervisory process. Standards must be formulated in the way that "both educators and their supervisors can reasonably understand the job expectations" (Stein, et. al., 2004, p.178).

Even though many reforms have been introduced to the Sultanate of Oman for improving the educational standards, major improvements in professional development of teachers and the educational supervision is to be carried out to get the desired results. The aims were to support Omanisation, build capacity to enable teachers to contribute effectively to educational reform, and implement a programmer of academic study whose rationale was compatible with, and supportive of, the goals of the Education Reform programmer (ELCD, 2002, p.22). Supervisors who tend to be responsible for a number of schools and has the primary responsibility of managing teacher development in schools through activities such as peer teaching, conducting workshops, observing, giving feedback, where are also instructed to make advisory visits to classrooms and appraise teachers (Harrison, & treagust, 1996, p.37). Such reforms have also made mixed impact on the quality of supervision and professional development of teachers in Sultanate of Oman.

The nature and quality of supervision available in the school is presumed to have impact on the expertise, practice and performance of teachers and ultimately affects the students' achievement. But only a few studies have been concocted on supervision of school leader ship in Sultanate of Oman. This study will help provide insight on the nature and practices of educational supervision in schools in Sultanate of Oman. This will ultimately help to provide better understanding and improved practice leading to better educational achievements.

1.2. Study Objectives

- a. To discuss the educational supervisors' roles played in improving teachers' performance.

- b. How do supervisors and teachers view educational supervision?
- c. What are the challenges faced by educational supervisors affecting the professional development of science teachers?

1.3. Significance of the Study

The nature and quality of supervision available in a school are presumed to impact the expertise, practice and performance of teachers and ultimately affects the students' achievement. But only few studies are known about supervision of school leadership in Sultanate of Oman. This study tries to investigate the supervision practices and the challenges faced by educational supervisors on the professional development of science teachers in secondary schools in Sultanate of Oman. This will help to create awareness and have a clear understanding of the practices and challenges faced by educational supervisors in the professional development of teachers. The study will also help to provide better understanding and improved practice leading to better educational achievements.

This study can provide certain significant benefits. The study will enable those who are involved in supervisory practices to assess the concept of supervision with the objective to improve the teaching and learning process. This study will provide an opportunity for teachers and supervisors to realize challenges faced by them during the process and provide their recommendations for improvement. The findings during study can contribute as a source of supplementary information for future and further researches on the subject and can provide information to the all concerned about the status of educational supervision. This can provide information to supervisors and other stakeholders on the teachers' perceptions and expectations on supervisory services. The study can also contribute by providing insight to the schools towards proper utilization of supervisory activities to achieve the best results.

2. LITERATURE REVIEW

This section discusses the relevant feature regarding the practices and challenges faced by educational supervision, and its impact on teachers' professional development.

2.1 Theoretical Framework

Educators around the most of the countries concern about the quality of teaching practiced in the classroom. They believe that, to a large extent, the quality of education in schools depends on the quality of teacher professional learning opportunities available (Darling-Hammond & Sykes, 1999, p.214).

Sergiovanni and Starratt (1983, p.33) define "educational supervision" as a set of activities and role specifications specially designed to influence instruction. Darling-Hammond, et.al., (2017) stated that educational supervision is a process of facilitating the professional growth of teacher interaction and helping the teacher to make use of the feedback in order to make more effective as desired. Proper supervision systems should contain by qualified supervisors for assessing the effectiveness of teaching because if the supervisors know their job, they cannot provide reliable supervision. Also if teachers do not trust the supervisors, the impact supervision will be low.

In any situation, supervision is intended for the improvement of work and the performance of staff. The main purposes of supervision in the educational sector are to improve the quality of classroom teaching and to facilitate positive improvement and professional development of teachers. Many scholars have defined educational supervision. In a broad sense (Pierce and Rowell, 2005, p.97) define supervision as a developmental process designed to support and enhance the individuals' motivation, autonomy, awareness, and skills necessary to effectively accomplish the job at hand. Other scholar like Gothrie and Reed, 1991, p.221) considered Educational supervision as "The function of leadership concerned with improving, enhancing and reinforcing teaching effectiveness". Similarly, (Eye and Netzer, 1965) defined it has "a form of service which is one phase of school administration dealing with the achievement of educational services."

Supervision is defined in several ways and sometimes as maintaining the school function by school administrators. Another author Harris, (1985, p.49) defines educational supervision as "what the school personnel do with adults and things to maintain or change the school operation in ways that directly influence the teaching process employed to promote pupils learning". Furthermore Knezevich, (1971, p:189) defines educational supervision as a planned program for the improvement of instruction, a program of in-service education and cooperation group development, the effort to stimulate, coordinate, and guide continued growth of teachers in schools, both individually and collectively, assistance in the development of better and satisfying teaching-learning situation, a means of maintaining existing programs of instruction as well as improving them to the level of satisfying both the needs of the teachers and of the school together. As indicated in the literature reviewed, educational supervisors should be concentrating on the different

educational function ranging from goal setting, curriculum implementation and training and developments for teachers.

In majority of the countries the confirmed main objective of school supervision and support is to improve the quality of education and monitoring the functions in schools. In Spain, for instance, the first function of the Inspectorate Service is to "ensure that the laws, regulations and any other legal dispositions of the educational administration are fulfilled in schools and services" (Alvarez Areces and Perez Collera, 1995, p. 163). In many countries, a part of a supervisor's job is to visit schools to monitor the activities. In all Indian states, for instance, the norms prescribe that every school is inspected once a year and visited two to three times a year by the inspecting officer (Singhal, et. Al., 1986, p: 22). School supervision can include evaluation of schools apart from inspection of teachers. However, in several countries, including former French colonies, as well as Thailand, Russia and Japan, it remains the main task of especially local-level inspectors to mark teachers (Watson, 1994).

Clearly, an inspector in visiting a school, may well perform both kinds of duty, for example collecting statistical data or looking into problems of supply of materials or staffing and building problems and, in the same visit, inspecting the work of particular classes or teachers" (Lyons and Pritchard, 1976, p. 25).

Pauvert (1987, p.219) states that "inspection should be considered as a service to interpret to teachers and the public the educational policies of the authorities and modern educational ideas and methods, and also to interpret to the competent authorities the experiences, needs, and aspirations of teachers and local communities. Watson (1994, p.74) argue that "their unique role is to act as the link between policy and practice, administration and feed-back, research and evaluation". This intercessor role has a pedagogic and an administrative dimension. Pedagogically, supervisors are expected to perform as agents of change. They should study, identify and help to spread ideas on good practices in education and implementation of these practices in schools. According to Glickman, et.al. (2004, p.47), the responsibility of supervisors in improvement of instruction, explained domains of supervision are: Direct Assistance, Curriculum development, group development, professional development, and Action research.

Glickman, et. al., (2004, p.167) noted virally any experience that enlarges a teacher's knowledge appreciation skills and understanding of his or her work falls under the domain of professional development the scholars further stated a supervisor with responsibility for professional development cannot hope to make every activity interesting and valuable to every teacher. This lead to the insight that the supervisor should not always be driven by needs and welfares of teachers, but the supervisor should also consider the goals and objectives of the school.

Oliva P. (1997, p.274) depict, teachers may undergo staff development within the instructional and curriculum domains as they do when they perfect skills in instructional and curriculum development learn new pedagogical skills and familiar with new programs. Therefore the supervisors should also undergo training that apart from the instructional development and curriculum development like developing organization skills, developing leadership skills, and enhancing creative abilities for problem solving and coping with stress.

Guskey (2002, p.118) describes professional development programs as systematic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students. Desimone, et al (2006, p.421) in looking at Professional development as an essential mechanism for deepening teachers' content knowledge and developing their teaching practices. In addition, (Fraser et al. 2007, p.263), list a number of competing claims for professional development that are evident in the literature of professional associations such as: lifelong learning for professionals, a means of personal development, a means of assuring a wary public that professionals are indeed up-to date, given the rapid pace of technological advancement, a means whereby professional associations can verify that the standard of their professionals are being upheld and a means for employers to garner a competent, adaptable workforce.

2.2 Supervision in Middle East, Gulf and Sultanate of Oman

The Sultanate of Oman has had a non-formal educational system throughout its history. However, the history of a modern educational system is not long, since its beginning was only in 1970 under the wise guidance of H.M. Sultan Qaboos bin Said (Al-Belushi, Al-Adawi & Al-Ketani, 1999, p.14).

According to Ministry of Development (1997, p.13), three stages can be identified in the development of education in Oman as below:

a) Stage one emphasized the rapid quantitative development of education;

b) Stage two started in the early 1980s, when the Ministry of Education initiated serious efforts to improve the quality of education; and

c) Stage three beginning from 1995, after the Conference on Oman's Economic Future, Vision 2020, when a number of reforms were introduced in order to cope with the educational requirements of the future (Ministry of Development, 1997, p.31).

2.3 Requirements of Professional Development of Teachers

According to Richard & Farell, (2006, p.219) Teachers need continued update of professional skills and knowledge to make them able to keep up with 21st century's requirements". According to Marcelo (2009, p.34) a new outlook for professional development of teachers has emerged which is categorized by the following aspects: Teacher is regarded as one who learns continuously while involved in specific teaching tasks, through evaluation, observation and reflection

The task of supervisors was not only to supervise the implementation of rules and regulations, but they also carried out functions such as advice, guidance, information and stimulation (Braaksma and Heinink, 1993, p. 209). "It is of the utmost consequence that you should bear in mind that this inspection is not intended as a means of exercising control but of affording assistance; that it is not to be regarded as operating for the restraint of local efforts, but for their encouragement, and that its chief objects will not be attained without the co-operation of the school committees; the inspector having no power to interfere and being instructed not to offer any advice or information excepting where it is invited" (Singhal et al., 1986,p.97).

According to Michelle, et. al., (2017) mentoring can be defined as a process (assistance) to other practitioners offered by experienced staff to other practitioners who needs other professional skills. The experienced teacher is appointed as a mentor to assist beginners or in experienced teachers to adopt them for the demands the teaching job requirements.

Current professional development for science teachers involves traditional lectures to convey science content and emphasis on technical trainings. Further, teacher-preparation courses and methods of teaching science frequently highlight technical skills rather than theory, and reasoning. Therefore, in order to attain desired results, professional development must include activities that engage prospective and practicing teachers in active learning to builds their knowledge, understanding, and ability. Becoming an effective science teacher is a continuous process that stretches from preservice experiences in undergraduate years to the end of a professional career.

The use of continuous professional development is to promote knowledge, reflection on staff practice, participation on educational panels, induction, mentoring, peer coaching, action research and keeping professional development portfolio (Craft, 2000, p.107). Induction, mentoring, peer coaching, action research is some of the professional development programs provided to teachers. It can be crucial for new staff to have job description and knowledge of the formal structure of the school. Unless teachers get sufficient information about their roles, responsibilities and other related issues.

Working conditions is another issue faced by the educational supervisors. The supervisors have many different tasks to be carried out. The number of students and teachers has increased during recent decades whereas the number of supervisors has not increases in the same trend. Further much time and energy is spent in report writing and administrative duties by the supervisors which effect their time for professional interaction with teachers. Lack of adequate budget and resources to cover the vast expanding areas of supervision are also factors affecting the supervisors in improving the professional development of teachers.

With respect to The Sultanate of Oman, the Ministry of Education (MOE), stipulated the establishment of educational supervision offices in each region (MOE, 2000, p.41). These offices are in charge of reinforcing the technical as well as administrative supervision. The supervision system is organized administratively as follows:

a) Each subject has a chief supervisor who manages eleven senior supervisors (one in each region). Senior supervisors in turn manage up to 21 regional supervisors.

b) Each regional supervisor has a number of schools that she/he visits on a regular basis.

c) Senior teacher at the school level, supervise teachers according to their subjects.

Educational supervision in Oman has undergone many changes in recent years,

3. RESEARCH METHODOLOGY

This section describes the methodology and procedures used for collecting and analyzing the study data. It

consists; the research approach, research methodology and the data analysis method used. The study will use survey for collecting the data. The survey will be conducted in selected government secondary schools in Sultanate of Oman.

3.1. Data Collection Methods

3.1.1 Sampling

Out of the study population that includes supervisors and Science teachers, a random sample were selected according to Krejcie & Morgan's (1970) table; that included (93) supervisors and (50) Science teachers, with a minimum two years working experience as educational supervisors in Sultanate of Oman.

3.1.2 Survey

The Quantitative method was employed for data collection. Structured questionnaires were prepared and sent to selected educational supervisors. The questionnaires will consist of items to assess the challenges faced by the supervisors, the strategies used to achieve the desired results. The survey questionnaires are is designed in five sections. The first section consists of demographic characteristics like gender, years of service, qualification of the supervisors and science teachers.

The second section consists of questions about contributions of educational supervision. This is intended to provide insight to the role of educational supervisors, their practices their role in improving the performance of science teachers. The third section of questionnaire consists of perception on supervisory services. This section is intended to collect information from the participants about their views on supervisory services. The fourth sections consist of questions about the challenges of educational supervision. This section is intended to provide information on the challenges faced by the supervisors and its effect in professional development of science teachers. And the fifth section includes views and suggestions which is intended to collect information related to the professional development activities, challenges faced during the process and concepts of improvement and professional development.

3.2 Reliability and Validity

Reliability of measuring instruments is the basis where the independent administration of the same measuring instrument delivers the same results when a comparison is made between two circumstances, (Voss et al., 1998). Cronbach's Alpha and Guttman's Lambda were computed to define the consistency and reliability and also to find out how the items are positively correlated to each other. The reliability in terms of stability over time denotes that the questionnaire will still achieve the same results when they are targeted to the same respondents under the same situations but at a different time (Cresswell, 2003, p.146).

While the reliability means; all questions in the questionnaire should be logical to determine the challenges faced by the supervisors in professional development of science teachers. Also, employing multiple data collection instruments help the researcher to combine, strengthen and amend some of the inadequacies of the data and for triangulating it (Creswell, 2003, p.177).

The questionnaire was provided in both languages, English and Arabic, to maximize the effectiveness of the data collection. Translation was done taking in to consideration, accuracy, fluency and facility of use in terms of translation as ineffective, as inaccurate translation could lead to misconstrued meaning and misunderstanding which can greatly hinder valid data collection.

3.4. Data Analysis

The data analysis during this study will be done using the quantitative analysis method for the systematic description of behavior to limit the effects of analyst bias, which is based on the constant comparative method of data analysis (Strauss & Corbin, 1990). Statistical methods, percentage analysis, and arithmetic mean analysis will be used to analyze the data during the study. Descriptive statistical techniques were also used to analyze data received during the survey for various items of the questionnaire. These will include averages, percentages, frequencies and totals. This study uses frequencies and percentages because they easily communicate the research findings to majority of readers (Gay, et.al., 1992). Microsoft excel was also used for analyzing the data collected during the study. Following procedures were also used to analyze data:

4. RESEARCH FINDINGS AND DISCUSSION

4.1 The survey findings

All survey samples' questionnaires that included (106) Regional Supervisors and (173) teachers questioners were completed and analysis. Demographics data results are: majority of the employees were male (67%)

and balance were females. All participants were of experience with of minimum two years' experience with education in Sultanate of Oman. Table 1 below summarizes the results of survey questions regarding the supervisory support provided currently during the supervisory process. 59% of the supervisors reported that they were helping teachers in formulating suitable instructional objectives, whereas 50% of teachers reported that they were not at all helped by the supervisors regarding the same. 64% of supervisors reported that they helped teachers in identifying the teaching resources, but only very less percentage (3 %) of supported this and 40% of teachers reported that they never received this support from supervisors. 34% of supervisors reported that supervision helped in improving teachers' skills in assessing student learning outcomes whereas only 0.08% of teachers supported this which shows the expectations of teachers about education supervision and the deviations from the expectation on the available supervision.

Table (1) Planning and Implementing Instruction Support

| Description | Respondents | Most of the time | Sometimes | Rarely | Not at all |
|---|-------------|------------------|-----------|--------|------------|
| Helping teachers in formulating suitable instructional objectives. | Supervisors | 55 | 35 | 3 | 0 |
| | Teachers | 4 | 6 | 15 | 25 |
| Assisting teachers in identifying teaching and learning resources | Supervisors | 60 | 29 | 2 | 2 |
| | Teachers | 5 | 10 | 15 | 20 |
| Assisting teachers in selecting teaching techniques to enhance learning | Supervisors | 56 | 32 | 5 | 0 |
| | Teachers | 5 | 9 | 13 | 23 |
| Helping teachers in organizing co-curricular activity. | Supervisors | 37 | 16 | 10 | 3 |
| | Teachers | 15 | 10 | 5 | 20 |
| Improving teachers skill in managing students | Supervisors | 41 | 45 | 5 | 2 |
| | Teachers | 5 | 7 | 14 | 24 |
| Improving teachers skills in assessing student learning outcomes | Supervisors | 32 | 25 | 6 | 3 |
| | Teachers | 4 | 10 | 12 | 24 |
| Assisting teachers to conduct action research | Supervisors | 21 | 19 | 10 | 16 |
| | Teachers | 4 | 7 | 13 | 26 |

Table (2) below summarizes the results of survey questions regarding the supervisory practices carried out currently during the supervisory process. 59% of the supervisors reports that supervisors helped in clarifying rules, regulation, procedures, and policies of the school whereas 60% of the teachers disagreed with this statement which shows that the proper concept of supervision is not achieved. 55% of the supervisors reported that they provide constructive feedback based on classroom observation, but only 0.4% of the teachers agreed with this statement. It should be noted that classroom observation is very useful to identify challenges during teaching and find possible for the problems together with the teachers. 60% of the supervisors agreed with the statement that supervision helped in evaluating performance of schools and give feedback for improvement, but only 0.4 % of the teachers agreed with this during the survey.

Table 2: Supervisory Practices of Educational Supervision

| Description | Respondents | Strongly Agree | Agree | Not Sure | Disagree |
|-------------------------------|-------------|----------------|-------|----------|----------|
| Clarifying rules, regulation, | Supervisors | 50 | 33 | 2 | 8 |

| | | | | | |
|--|-------------|----|----|----|----|
| procedures, and policies of the school. | Teachers | 1 | 11 | 8 | 30 |
| Conducting pre-observation Conferences | Supervisors | 57 | 25 | 5 | 6 |
| | Teachers | 3 | 5 | 10 | 32 |
| Observing teachers as per the time allocated for classroom observation | Supervisors | 57 | 30 | 2 | 4 |
| | Teachers | 5 | 4 | 29 | 12 |
| Conducting post-observation conferences | Supervisors | 46 | 25 | 12 | 10 |
| | Teachers | 2 | 5 | 31 | 12 |
| Providing constructive feedback based on classroom observation | Supervisors | 52 | 31 | 4 | 6 |
| | Teachers | 2 | 8 | 30 | 10 |
| Setting strategies for future improvement | Supervisors | 52 | 28 | 5 | 8 |
| | Teachers | 2 | 9 | 27 | 12 |
| Arranging inter-school visits to share good practices | Supervisors | 56 | 22 | 6 | 9 |
| | Teachers | 3 | 6 | 31 | 10 |
| Evaluating performance of schools & give feedback for improvement | Supervisors | 56 | 24 | 5 | 8 |
| | Teachers | 2 | 5 | 12 | 31 |

Table (3) below illustrates the results of the survey results from the supervisors and teachers related to their perceptions on educational supervision. Majority of the supervisors agreed that (mean 3.80) that supervision helps to improve quality of teaching & learning whereas the teachers (mean 1.97) disagreed with this statement. Supervisors did not agree (mean 1.92) with the statement that supervision is meant for controlling teachers whereas majority of the teachers reported otherwise (mean 3.73) which shows that the concept of supervision is not properly understood by the supervisors and teachers and hence do not deliver desired results.

Table (3): Perceptions of Educational Supervision

| Description | | Respondents | | Grand Mean | T-value | P-value |
|---|------|--------------------|-----------------|------------|---------|---------|
| | | Supervisors (N=93) | Teachers (N=50) | | | |
| Supervision helps to improve quality of teaching & learning | Mean | 3.80 | 1.97 | 2.885 | -.335 | .738 |
| | SD | .961 | .669 | | | |
| Supervision focuses only on weak points of teachers | Mean | .34 | 4.97 | 2.655 | 0.32 | .975 |
| | SD | .675 | .718 | | | |
| Supervision is meant for controlling teachers | Mean | 1.92 | 3.72 | 2.82 | -.148 | .883 |
| | SD | 1.334 | 1.712 | | | |

| | | | | | | |
|---|------|------|------|------|-------|------|
| Supervisors focus on administrative matters | Mean | 2.1 | 3.93 | 2.69 | -.678 | .096 |
| | SD | .667 | .740 | | | |

Note: Mean < 2.00 "Disagree", Mean 2.00-3.00 "Undecided", Mean > 3.00 "Agree"

To answer the third research questions: What are the challenges faced by educational supervisors affecting the professional development of science teachers?

Table (4): Challenges of Educational Supervision

| Description | Respondents | Strongly Agree | Not Sure | Disagree | Total |
|---|-------------|----------------|----------|----------|-------|
| Supervisors lack of skill in applying techniques of supervision | Supervisors | 6 | 30 | 57 | 93 |
| | Teachers | 31 | 17 | 2 | 50 |
| Teachers lack of knowledge about the concept of supervision | Supervisors | 59 | 8 | 26 | 93 |
| | Teachers | 12 | 5 | 33 | 50 |
| Supervisors use of supervision for administrative purpose only | Supervisors | 61 | 13 | 19 | 93 |
| | Teachers | 30 | 5 | 15 | 50 |
| Supervisors lack of commitment for their work | Supervisors | 2 | 3 | 88 | 93 |
| | Teachers | 31 | 4 | 15 | 50 |
| Supervisors use of less participative approach | Supervisors | 14 | 2 | 77 | 93 |
| | Teachers | 34 | 4 | 12 | 50 |
| Shortage of budget to support supervisor practice | Supervisors | 71 | 0 | 22 | 93 |
| | Teachers | 17 | 5 | 28 | 50 |

The findings revealed that, the survey questions related to the challenges faced during the educational supervision shows that: 61% of the supervisors did not agree with the statement that supervisors lack skill in applying techniques of supervision, whereas 62% of teachers supports this statement which clearly shows the difference on perception and challenge faced by the supervisors. 63% of supervisors agreed with the statement that teacher's lack of knowledge about the concept of supervision which is also a hindrance to the proper supervision process. 68% percentage of teachers reported that supervisors' lack of commitment for their work which is also another challenge faced by supervisors during the supervision process. 62% of teachers confirms the statement that supervisors lack commitment for their work which shows that teachers are not comfortable with the type of current supervision process. Also 68% of teachers agree with the statement that supervisors use less participative approach during the current supervision process which is another example which shows that teachers are not satisfied with the current supervision process.

5. CONCLUSION AND RECOMMENDATION

It is evident during the study that that most of school supervisors are entirely engaged in administrative based supervision rather than in educational based supervisory services. This clearly implies that, supervisors do not help teachers to solve problems that are related with the instructional activities and related to the professional development of teachers. Supervisory activities were to be held professionally understanding the concept of supervision and for providing professional support to teachers instead of a fault finding exercise. The authorities should provide necessary trainings and workshops to the supervisors to provide more understating on international concepts of educational supervision and supervisory requirements in Sultanate of Oman.

Educational supervision can be made more effective if the task of supervision is to assist teachers to resolving their problems faced during the instructional process and lead to their professional development. Study shows that professional supervision can lead to better teaching and improved learning process. Based on the findings, it can be concluded that supervisors have several obstacles to overcome during the supervision process. Educational supervision can be improved by overcoming the main obstacles that hinder the effectiveness of supervision like lack of professional awareness, commitment, limited experience, lack of collaboration, lack of cooperative effort, and positive actions among concerned parties that can provide worthwhile support to teaching and learning process.

The existence of the policies and rules for supervision alone does not mean that teachers are aware of them. During the study, the teachers demonstrated varying degrees of awareness related to supervision processes available to them. Further the finding of the study reports that most supervisors were focused on routine administrative accomplishments than pedagogical issues. Therefore, it can be concluded that existing policies related to supervision are not communicated to the teachers in proper manner which is hindering the effectiveness of educational supervision,

During the study it is found difficult to encourage teachers to provide their opinion freely due to the timing and also due to the insecurity felt by teachers about their jobs. Another issue is that found was that some teachers have traditional and fixed mindset about education and it is difficult for them to put aside their preconceived beliefs and accept the new changes for example introduction of digital reports and trainings. This makes it difficult to recognize and identify a problem. Another issue faced during data collection was weak response from teachers. It was required to call and follow up with teachers several times to encourage them to respond to the survey.

5.1 Applied Conclusions

During the study some respondents reported that they received is very less supervision and some teachers reported that they have never been under classroom supervisions. This along with the other findings during the study, the results indicate that secondary school supervisors try to supervise their teachers, but mostly through informal supervision. Some of the supervisors are confident to supervise teachers but not doing so in class supervision to monitor the teaching practices of the science teachers. From the survey report it can be concluded that no specific methods and techniques are used by supervisors' in supervising science teachers. The reason for this is that supervision is being done in informal way and supervisors do not carry out instructional supervision in the classroom. According to the survey response on the period of service, majority of them had less experienced in the teaching process. Based on the survey report it can be concluded that educational supervisors initiate teachers to use all their experience and knowledge in teaching practices. A majority of school supervisors participated in survey agreed that supervision improves the professional development of teachers but majority of teachers did not agree to this point. This shows the lack of awareness among the teachers and supervisors on the concept of supervision and differences in their perceptions about educational supervision.

The survey report it can be concluded that teachers do not like to be supervised since they think that they are doing well without supervision or some think that the supervision is unnecessary. Experienced teachers mostly prefer to be either less supervised or do not like to be supervised at all.

According to the survey results it can be concluded that major challenges that affected supervisory practices were that the supervisors lack the required skills in applying techniques of supervision and teachers lack adequate knowledge on the concept of supervision, lack of strong commitments towards roles of supervision, lack of involved supervisory approach and shortage of resources

5.2 Recommendations

a) Supervisors need to understand the professional concept of supervision and change the tendency of using more time of supervision for supervision administrative activities than monitoring teaching learning activities. They should leave and delegate supervision of routine administrative activities to stakeholders. This will equip supervisors with ample time to support teachers by offering guidance to promote effective performance, and professional development of teachers.

b) in order to enhance the quality of the educational supervisors in equipping them for supporting professional development of teachers and to keep up with modern trends of education, it is advisable the Ministry of Education and schools to organize adequate refresher training, seminars and workshops.

c) Teachers should also be provided seminars and training on the role of educational supervision in enhancing their professional development.

d) Supervisors should closely work with teachers to improve the technical, conceptual and social relation skills.

e) Supervisors are not conducting classroom observation and hence they could not support teachers in improving teaching practices. Therefore, supervisors are recommended to focus on pedagogical issues and in professional development of teachers.

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