

An Evaluation of the Effectiveness of the Professional Development
Program for Senior and Acting Senior Teachers Provided by the
Directorate of Training, Ministry of Education, Bahrain

Submitted for the Degree of Doctor of Education

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2007

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This work is dedicated to

My Beloved Father

Abdulla Fouad

Who believed in me

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who helped me to make this happen**

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Abstract

An Evaluation of the Effectiveness of the Professional Development Training Program for Senior and Acting Senior Teachers provided by the Directorate of Training, Ministry of Education, Bahrain

Farida Abdulla Fouad Aboubshait

The Directorate of Training, which is a part of the Ministry of Education in Bahrain, offers training programs to school teachers on a regular basis. Hence hundreds of such training programs and professional development programs are being launched, run and renewed for teachers and other educators in Bahrain. In totality, almost all public school teachers will have attended at least one of these training sessions. However, the impact of this training on teachers' practices is believed to be minimal

In Bahrain, two previous studies have been undertaken to investigate the effectiveness of specific programs offered by the Training Directorate, Ministry of Education, but neither of them tracked the impact of such training programs on the trainees' practices or performance in their workplaces.

This study evaluates the effectiveness of the 'Professional Development Program' provided by the Directorate of Training in the Ministry of Education in Bahrain on the skills of the Arabic, English, Maths and Science senior teachers and acting senior teachers in the government secondary schools of Bahrain.

The investigation was done from the different points of view of the key training partners: trainers, trainees, school administrators and teachers in their schools. It analyses the effect of the training program on the personal and functional skills of the trainees and its impact on their skills and practices. This study clarifies the most and least effective components of the training program, their characteristics and their relation to the changes. It reveals which factors encourage and discourage senior teachers to transfer learning to their workplaces.

Furthermore, this study focuses on the importance of the teachers' professional development, its significance for educational development and reform, and also its effect on the students' performance. It probes the learning process, the learning models, the professional development models and the models of evaluation.

As a contribution to the field, the researcher has designed a new program evaluation model that may be used as guidance in the Directorate of Training to facilitate best practice in the field of professional development, to achieve the expected results and also ensure the transfer of learning to the workplace, with a good return on investment.

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Chapter 1: Introduction

The Research Problem

Despite the huge efforts made by the Ministry of Education in Bahrain in the areas of training or teachers' professional development, teaching methods in Government secondary schools remain unchanged and out of date. Teaching specialists, students and parents are complaining of traditionalism in teachers' practices. The fact is that teachers' practices have not improved during the last decade, in spite of the increasing importance and responsibilities assigned to the Ministry's Training Directorate. Teachers are blaming the Training Directorate for implementing inadequate training, and schools are complaining of a shortage of training programs.

The Training Directorate (administration, training specialists, and trainers) is claiming, on the one hand, that the graduate level of the educational system (especially university graduates) is too weak to constitute a solid academic base, and allow the acquisition of reliable applied skills; and on the other hand, that the schools' regulations and culture neutralise the effects of the training program.

As a training specialist, the researcher comes across many complaints from students and parents about the traditionalism of teachers' practices. It is commonly felt that teachers' practices have not sufficiently improved during the last decade. Responses to the last section of training questionnaires and other feedback results show that teachers are blaming the Training Directorate for implementing inadequate training programs, and schools are complaining of a shortage of those same programs.

The problem confronting the researcher, therefore, is that: regardless of the reciprocal complaints made by both the educational system and the training system; despite the fact that the training programs are continuously run and renewed; and despite the fact that the every Public School teacher has attended at least one training session, it is undeniable that the impact of training on teachers' practices is negligible.

Purpose, Aims and Objectives of the Study

This study will undertake an evaluation of one of the professional development programs offered by the Training Directorate in the Ministry of Education in Bahrain, in order to understand the phenomenon outlined above. The researcher will evaluate the effectiveness of the Senior Teachers' Professional Development program that is offered to senior and acting senior teachers in secondary schools. In fact, training effectiveness is an area which has never been studied deeply in the history of the Training Directorate in the Ministry of Education in Bahrain.

The aim of this study is to investigate the effectiveness of the senior teachers' training program across skills in subjects like Arabic, English, Maths and Science among senior teachers in Bahrain Government Secondary Schools. It is a training program evaluation; according to Scriven (1967), such evaluation has two primary purposes: to improve the effectiveness of training and to demonstrate its results.

In this study, the researcher will carry out a summative evaluation to assess the impact of the training program. The objectives of this study are: to investigate, through the point of view of the main training partners: trainers, trainees, school administrators and teachers in their schools, the effect of the training program on the personal and functional skills of the trainees and its impact on their skills and practices. This study will clarify the most and least effective components of the training program, their characteristics and their relation to the changes. It is also expected to reveal those factors that encourage and discourage the transfer of new skills into senior teachers' practice.

Importance of the Study

Although hundreds of training programs have been launched for teachers and other educators in Bahrain, only two main studies have investigated the effectiveness of the specific programs offered by the Training Directorate in the Ministry of Education of Bahrain, and none of them has tracked the impact of such training programs on the trainees' practices or performance.

Although evaluation is considered generally to be an important aspect of any training program; there is no demand for it. The lack of evaluation of teachers' training is seen as the main reason for the continuous ineffectiveness of teaching.

With so few examples of evaluated programs available, teacher education programs experience little pressure to evaluate. Evaluation's low priority in pre-service and in-service teacher education program development is one explanation for programs' unresponsiveness to rapidly changing teaching conditions.

Dalton and Moir (2005) p.1

This study however will evaluate the effectiveness of one professional development program offered by the Training Directorate at the Ministry of Education in Bahrain, and seek evidence of the impact of the training on teachers' practices.

This study is very important because studying and evaluating the actual situation is always considered the first step towards reform and development. Effective and timely evaluations are key factors in the continual development of any system. Evaluation is a vital part of the training management cycle: it can offer both evidence and recommendations for the future planning and development process.

This study aims to be one of the leading studies in this field in Bahrain. The Ministry of Education regard the current study as the third piece of research carried out on training, but the first on the effectiveness of those programs run by its Directorate of Training. The result of this study can form a baseline for the future planning and development of the training system and the training programs provided by the Ministry of Education in Bahrain, as well as defining the responsibilities of different training partners in improving the training outcomes.

Studying the effectiveness of the professional development program can offer a positive learning experience that provides an opportunity to demonstrate

performance and identify solutions to the recognised challenges. It can also be used as a management information tool and also within the planning process, ensuring that decisions are made using strong evidence. It can offer policy-makers and program designers a chance to view the outcomes and impacts of training and feed them with necessary lessons for developing future practices.

The Scope and Design of the Study

This study will investigate the effectiveness of the Senior Teachers' and Acting Senior Teachers' Professional Development Program. It will explain the outputs, the outcomes and the impact of the program on the personal and functional skills of the trainees. In addition, it will explore the effectiveness of the procedures and delivery of the program, and their influence on the outcomes.

The research will also investigate the effect of the program in terms of several factors such as the training methods, the trainers, the tools and the suitability of the program contents to the training needs of the participants. It will investigate whether the program was effective in bringing about change at the school level and whether it ultimately affected students' learning. The research will also investigate the factors that facilitated or hindered the transfer of learning to the workplace.

Research methods need to be chosen carefully in order to collect the data required to answer the study questions. Studying the effectiveness of the program will require the use of more than one research method, because of the nature of this investigation which is evaluative in nature. Both qualitative and quantitative research methods will be used to complement each others' findings.

The research will use a non-experimental, descriptive case study, in which the senior teachers' development of knowledge and skills will be studied after attending the professional development program. This study will be done quantitatively and from the point of view of the participants themselves, using a questionnaire to detect changes in relation to the effect of the program.

Qualitative investigation will complement the quantitative results and to validate the data. Other factors that might affect changes in the knowledge, skills and practices of the senior teachers will be investigated. The training program, the training process, the training environment, the training system and the education system will be investigated through interviews, observations and document analysis.

The Context of the Study

Bahrain is an Arab state and an island on the Arabian Gulf. It neighbours, Saudi Arabia and Iran, share the coastline with it. Historically, Bahrain has connections with people and nations outside the Arab region which brought the people into early contact with other civilisations. With its advantageous location on the Gulf, it worked as a major gate-way in the early days. and in the Middle Ages Bahrain people developed trade relations with India and as far as China; and in the modern era Bahrain became involved with the European powers that sailed into the Indian Ocean and around Southeast Asia. In the twentieth century, the discovery of huge oil deposits in the Gulf made the nation once again a crossroads for the contemporary world and led to tremendous material and social changes (The Library of Congress, 2007).

The people in Bahrain are mostly Muslims, Arabs who live in tribal societies, family and clan relations underlie most political and economic activity. Bahrain's population is around 708,573 which include 235,108 non-nationals; the annual population growth rate is around 1.4%. The literacy rate in Bahrain is around 89% both male and female. The age structure shows that the majority of its population (69.5%) are in the 15-64 age group, followed by 26.9% aged 0-14 years, the over-65s comprise only 3.7% (The Central Intelligence Agency , 2007).

Bahrain was a British protectorate until August 15, 1971, the day on which Bahrain officially became independent. The same year Shaikh Isa bin Salman announced that the country would have a constitutional form of government. However, King Hamad bin Isa Al Khalifa, after coming to power in 1999, changed the government to a constitutional hereditary monarchy, adapting a new constitution on 14 February 2002 and making economic and political reforms.

Economically, Bahrain is facing declining oil reserves, so it has turned to petroleum processing and refining and has transformed itself into an international banking centre (The Central Intelligence Agency , 2007). With its greatly developed communication and transport facilities, Bahrain is home to many international firms with businesses in the Gulf. Petroleum refining and production are responsible for 11% of GDP (exclusive of allied industries), and underpin Bahrain's strong economic growth in the recent years (The Central Intelligence Agency, 2007).

In its attempt to reduce its dependence on oil, Bahrain encouraged the finance and construction to be major sectors of Bahrain's business economy and in August 2006 Bahrain and the US implemented a Free Trade Agreement (FTA), the first FTA between the US and a Gulf state. Unemployment, especially among the young, and the depletion of oil and underground water resources are major long-term economic problems in the country (The Central Intelligence Agency , 2007).

Education in Bahrain

Throughout history, Bahrain has been considered a leading country and fastest growing economy among the Gulf States in Education (The library of Congress, 2007). 1919 marked the beginning of a new public school system in Bahrain. Al-Hidaya Al-Khalifia School was opened as the first school for boys and in 1928 the Education Committee decided to open the first public school for girls.

The Education Committee consisted of several leading merchants and was headed by the late Shaikh Abdulla bin Isa Al-Khalifa who was popularly known as 'the Minister of Education' (Ministry of Education, 2007). It was responsible for managing the schools but because of the financial and administrative difficulties faced by the Education Committee, schools have been under the direct control of the government since 1930 (Ministry of Education, 2007).

Changes in economic and social structure in Bahrain affected the education system (National Report, 1996). After the discovery of oil, Bahrain's economy was no longer dependent on pearl diving, fishing, dhow building, agriculture and

handicrafts as major sources of income, and one of its main focuses is the development of the human resources necessary to meet the demand for Bahrainis qualified in the different new fields, especially industrialisation.

In order to link education with the economical growth of the country, its objectives, systems, content and plans shifted to meet the necessary changes. Girls are involved in the education process, more subject specialisations are offered in schools, curricula and teaching methods have also changed to comply with labour market demands and to provide better preparation for employment (National Report, 1996).

To meet all the financial challenges encountered by virtue of economic development, the Ministry of Education discovered the importance of increasing the efficiency of education, upgrading its productivity and adapting the principle of the best utilisation of resources. This was done through implementing some changes in school administration, financing, curricula, teaching methods and educational costs (National Report, 1996).

In Bahrain education is compulsory for all school age children, in either public or private schools. There are also several special institutions for children with severe learning disabilities; however, since 2003 children with lesser learning disabilities can attend specific government schools where there are remedial classes for slow learners and low achievers.

Education is free in public schools for all Bahraini and non-Bahraini children. The public system does not allow coeducation, therefore there are separate boys' and girls' schools at all levels. There is, however, coeducation both at University level and in the private schools.

The educational ladder in Bahrain consists of primary education - first cycle (grades 1-3), primary education - second cycle (grades 4-6), basic education - third cycle (grades 7-9) and secondary education (grades 10-12) (Ministry of Education, 2007). Normally, primary first cycle and second cycle are in the same school, while third cycle and the secondary schools are separate. In general, female teachers

teach in girls' schools and male teachers teach in boys' schools. However, there are some public boys' primary - first cycle schools where the teaching and administrative staff are women.

The educational system in Bahrain is based on two fundamental principles. The first is to provide education for all school-age children throughout the country. In fact, Bahrain occupies an advanced position globally in the field of fighting illiteracy (Bahrain News Agency, 2006 a). The second principle is to improve the quality of education to meet the needs of individuals as much as the needs of the social and economical development of the country (National Report, 1996).

To promote education, the Prime Minister and the Crown Prince highlighted the importance of educational development and teachers' training as one of the most significant initiatives of the comprehensive economic reform program which aims to improve the level of competencies of the national workforce (Bahrain News Agency, 2006 a).

First, the education budget has significantly increased since the year 2000, when it was (Bahraini Dinars) BHD 87 million, reaching BHD 160 million in 2006 (Is this Ministry of Education, 1997-2006) an average of 9.3 per cent annual increase. Secondly, a group of new developmental projects were established to develop education in accordance with the latest scientific technologies in the field of education, such as the electronic teaching and learning in the 'Future Schools' project. The third scheme was initiating qualitative and quantitative development of education such as building new, modern schools and developing new projects to improve students' performance, teachers, curricula and the environment (Bahrain News Agency, 2006 a).

Developing the curriculum is an area which has always taken its due place in the development process. The Ministry is keen to enhance students' abilities in mathematics, science and English language to equip them for the future labour market. Another plan aiming at developing education was the formation of an independent organisation in charge of monitoring the performance of education and training institutions, creating a specialised college for preparing and training school

teachers and principals, and establishing technical schools for students (Bahrain News Agency, 2006 b).

As an area of development, Ministry of Education reviewed the career structure of the educational personnel and developed a new teachers' Cadre in 2005 to enhance the value of the teaching profession. This Cadre was linked to the professional development of the teachers.

The Ministry of Education has worked on setting up a developmental vision to upgrade the education system in the kingdom. This vision has been translated into several actions and priorities, some of which are related to the development of the teachers and school staff. One is enhancing teachers' confidence and upgrading their status to be able to play a key role in educational development. The other is promoting the efficiency of academic staff in schools by studying the status of teachers' training and suggesting appropriate continuing professional development programs (National Report, 1996).

Teachers' Professional Development

Teachers' education and preparation has changed dramatically through the history of education in Bahrain. At the beginning of the last century, children were taught to read the Holy Quran by adult specialists whose main job was to teach reading and enforce some societal values in the children's minds. These teachers were much respected and were placed in the top hierarchy of Bahrain society. No educational qualifications were expected, and the only requirement was to be able to read Quran and have a good reputation within the neighbourhood.

Teachers' training and development started in 1919 when the Ministry of Education recruited teachers and administrators from other Arab countries such as Egypt, Jordan and Palestine who were then advanced in the field of education. These teachers worked as mentors and coaches for the local teachers. In 1982, the Ministry started sending teachers to the American University in Beirut for further training courses, followed by some training in Egypt in 1984 (Hejazy and Al Mannai, 1996).

In 1948 the Ministry of Education started evening training sessions for teachers. In 1966 the Male Teachers' Institute was established, followed by the Female Teachers' Institute 1967 (Hejazy and Al Mannai, 1996). Since then, only those who graduated from the Institutes or hold a bachelor's degree have been appointed as teachers. These Institutes were known for their excellent teachers' preparation programs in all subject specialisations, and still enjoy a high reputation among educators today.

Since there were many existing teachers who held only a secondary school certificate and had no formal training, in 1973 Ministry of Education, with cooperation from UNICEF, introduced the Educational Rehabilitation Centre whose primary role was to train undergraduate teachers. This centre managed to graduate around 733 teachers and head teachers (Hejazy and Al Mannai, 1996) who are considered the best in the field yet.

At the beginning of the 1980s, the Ministry of Education sought to raise standards and the teachers' qualification criteria changed to at least a bachelor degree, plus educational certification. For this purpose, the Educational Rehabilitation Centre was linked to the Education Department at the University of Bahrain in 1981 (Hejazy and Al Mannai, 1996).

The University of Bahrain played a major role in the pre-service training of educational staff. The College of Education offered several educational programs such as an Associate Diploma in Early Childhood Education, Bachelor of Education, Bachelor of Physical Education and Bachelor's degree programs in specialised subjects. These courses ceased in 2006, for reasons that included doubt over quality of outcome, limited need, and the Ministry of Education's plan to develop a teachers' college in the very near future.

The teachers' recruitment policy had also changed through the years. It started in 1919 when every person who could read and write was qualified to teach but gradually developed to require a bachelor's degree in a subject and an educational qualification, until 1994 when new procedures were developed for teaching requirements. University graduates in all subjects should pass a

proficiency test in order to be eligible for entry to the teaching profession. If they do not pass, they have to attend a long intensive course usually offered by the Directorate of Training.

The administrative and educational system in Bahrain has witnessed transformation in educational reform since the visit of the UNESCO mission in 1983 (National Report, 1996). From that time, the Ministry of Education started forming a qualitative educational development strategy in which the improvement of teachers' education and training is considered top priority. As a result, in 1983, the Ministry of Education decided to detach the Educational Rehabilitation Centre from the University of Bahrain to form a Training Directorate, which was responsible for providing training programs to enhance the academic, educational and professional development of teachers and school staff.

The Ministry of Education in Bahrain continued to advance the teaching profession, a trend which is apparent in almost all its annual educational plans since 1989. These plans communicate an educational philosophy that calls for the professionalisation of teaching, both to meet the individual and social educational expectations, and to eliminate the common perception of teaching as a transit stage towards other professions rather than as a profession in itself (Educational Plan, 1990).

Since 1990, the Ministry of Education has sought to transform teaching into a profession, and to organise the teaching practices to be compatible to other professions in terms of licensing, organisation and development (Ministry of Education, 1990) Professionalisation is viewed as a continuous, comprehensive process that starts with teacher training and continues through in service (Ministry of Education, 1990)

The Ministry of Education has a vision for the growth and development of the profession (Ministry of Education, 1990). It expects a thorough academic preparation for teachers that focuses on subject specialisation. It requires high-quality educational training for teachers, without which no teacher can practise. It calls for teachers' general knowledge and liberalisation as a requirement. It insists

that none of these requirements will work without changing the teachers' attitudes toward teaching as a profession, and without implementing the work ethics.

Ministry of Education created a vision, set policies and encouraged practices toward professionalisation, however, it never reached this stage. The reasons were, it is argued, (Hejazy and Al Mannai, 1996) that there were no properly defined roles and responsibilities for the bodies concerned, neither were there links between them and the concept of professionalisation. Each party dealt with this concept according to its own values, beliefs and degree of commitment towards it.

There was no well-communicated understanding of the concept of professionalisation. Policy-makers differ in their understanding of this concept. Some believe that it is a matter of deepening subject knowledge. Some believe that it is a matter of taking full responsibility towards the profession while others believe that it is a way of practice, more than a certification process (Hejazy and Al Mannai, 1996)

No matter what was the real understanding to the concept of professionalisation, the practice does not reflect a genuine attempt to reach it. There is a gap between the Ministry's vision and the attitudes of its members towards professionalisation which is a major area of concern to all related bodies. This gap is obvious in teachers' academic and educational preparation. On the one hand, teachers are not prepared for the fundamental demands of improving education, which in itself guarantees a poor outcome. On the other hand, new teachers are criticised by the public because they are less liberal, less knowledgeable and less confident than they are expected to be, and they have identity issues related to their profession.

In spite of this situation, the Ministry of Education has plans for teachers' training and development towards professionalisation. This plan moves towards continuous teachers' professional development and teachers' involvement in its related policies and procedures.

However, based on the researcher's experience, teaching and teacher development in Bahrain are facing many challenges that are often publicly aired. Some of the challenges come from the teachers themselves, who wish to improve their knowledge in order to provide more effective education for students and to be up-to-date with educational issues. Parents and guardians pose another challenge. They want an educational system that prepares their children for adult life in a world of increasing competition for employment. A third concern arises from government bodies, whose agenda is to improve the national economical performance by increasing educational achievement.

The Bahrain, government is controlling both legislation and educational resources. It supports the educational development in many ways. It calls for teachers' professional development, improving the curriculum, equipping the classrooms with materials and resources and developing laws and policies related to education. However, in reality, teachers' professional development receives the least attention of all because:

Many in the bureaucracy and government see teacher development as problematic, with respect to the time taken to bring about change, the low proportion of teachers who engaged with the requested change, the funding implications of the universal teacher development, the failure to effect discernible change in learning outcomes, and the lack of career incentives to entice change.

Bell & Gilbert, 1996, p.8

The school management and the teachers themselves see professional development as problematic. The school management is concerned with many issues that can arise when teachers attend the professional development programs, such as choosing the right programs that are suitable to the individual teacher's professional needs, providing good teachers' substitutes when teachers are away for professional development during school hours, dealing with demands of change that may result from teachers' development and dealing with the uncooperative

teachers and the trouble caused by career movements through promotion (Bell & Gilbert, 1996).

Professional development can be a frustrating experience to some teachers. Although teachers engage in all forms of teacher development programs on their own initiative, at their own expense and in their own time (Wylie, 1992, p.128), they feel that they are unable to use their knowledge to improve the learning of their students. Due to this situation some teachers may stop further professional development or they may even leave the teaching profession (Bell & Gilbert, 1996).

Teachers express further concerns. They feel helpless, their practice being dictated by either the rigid curricula or by the senior teachers (Bell & Gilbert, 1996). They feel that their efforts are not valued or appreciated by the school management because they have to undertake the development activities on their own time. They feel that they are not supported with the resources needed to implement change, and even the proposed innovative changes are never appreciated or encouraged. Teachers feel weary and tired of the many school activities that they have to attend.

In the Bahrain Ministry of Education, as in any other systems, policy-makers' main concern is the efficiency, effectiveness and desired results of the professional development. They want to know that they are getting an adequate return on their investment. They want to know that they are meeting the main purpose of professional development which is improving students' achievements.

The Directorate of Training and Professional Development

The Ministry of Education in Bahrain created the Training Directorate in 1983 to enhance teachers' training and development. The Training Directorate's name had been changed twice since then, first to the Directorate of Training until 2005, and now it is called Directorate of Training and Professional Development.

Since 1988, the roles and responsibilities of the Directorate of Training have been as below: (Directorate of Training, 1991)

- Conduct research and training needs studies
- Plan various training programs after identifying the competencies required and the training target groups.
- Plan the implementation of the training programs in terms of: objectives, content, training tools, evaluation tools, trainers, time, place and budget.
- Ensure implementation of international quality standards.
- Identify the trainees' selection criteria and participate in selecting them.
- Prepare all logistics required for implementing the training programs in coordination with other parties concerned.
- Study collaboration opportunities with other training bodies and sign memoranda of understanding (MoUs) as possible.
- Coordinate and follow up the training programs implemented by others.
- Provide a comprehensive evaluation system and analyse the results of all current training programs, plans and training methods and study the effect of the training outcome.
- Provide resources and literature related to training and its activities.
- Follow up with new trends in the training field.
- Organise conferences and seminars for the Ministry's staff development.
- Analyse and write the scores of the trainees and provide them with formal certificates.

The above scope of work is significantly comprehensive. It has granted the Directorate of Training huge responsibilities ranging from researching, studying and analysing to planning, liaising, organising, evaluating and ensuring quality. It has given the Directorate responsibility for training as a process, in that it is accountable for its inputs, process and outputs.

The Directorate of Training established two internal divisions to satisfy this scope of work. The Training and Development division has almost 25 staff members and is responsible for planning, liaising, organising and implementing the training programs. The Evaluation division, however, consists of only 6 staff and it is responsible for studying the training needs, evaluating the training programs and studying their effects.

The Evaluation division complains of shortage of staff and blames this situation for not being able to carry out its full responsibilities, especially measuring the training needs and the training effects. The Training and Development division is also in constant struggle to increase its manpower to be able to meet the demands of training in terms of planning, liaising, organising and implementing the training programs.

The Directorate of Training's staff has increased around 20 per cent since 1997, while its activities have more than doubled. It provided 92 different training programs in the school year 2006-2007 (Directorate of Training and Development, 2006-2007).

The Ministry of Education allocates 4-5 per cent of its annual budget to support training activities (Appendix 1-1). Thousands of Bahraini dinars are spent annually on teacher training. This budget has grown from BHD 312,000 (approximately £400,000 GBP) in 1997, when 5,188 public school staff were trained, to BHD 700,000 (£915,000 GBP) in 2006 when 12,000 were trained (FMIS, 2007). These figures show an increase of 130 per cent in ten years. There is 124 per cent increase in budget while 131 per cent increase in number of trainees which means that the two figures go hand in hand.

In 1997, the number of school staff was 7,837 (6,676 teachers and 1,161 other school staff), in comparison with 12,844 school staff in 2006-2007 (10,832 teachers and 2,012 other school staff) (Education Statistical Bulletin 2005-2006), (Appendix 1-2). From the above figures, it appears that 66 per cent of school staff had been trained in 1997, while 93 per cent of the staff were trained in 2006-2007.

This massive percentage of training appears to exceed all expectations. It is clear from the above figures that Ministry of Education considers professional development as its core area of development. It has always been clear that Bahrain is in the lead among her neighbouring countries in terms of teachers training (AEBGC, 1983) however, it must be asked if quantity also represent quality. Are the programs effective, and have they created changes in the workplace? Have they been effective in developing the students' performance?

This effort on the part of the Directorate of Training deserves the fullest attention from policy-makers to ensure that this hard work is not wasted. The Ministry previously invested in two studies related to evaluating the effectiveness of the training programs provided by the Training Directorate. One of them was done in 1996 Evaluating Teachers' Training: An analytical, diagnostic study to the training programs provided by the Training Directorate in the Ministry of Education and the second was done in 2001, Evaluative Study for the Effectiveness of the Training Programs of the Basic Subjects: Arabic, Science and English.

The first piece of research concluded that some of the programs were successful in providing some benefits to the trainees but it was a limited effect. It argued that the success of the training programs was due to several factors. One, which was clear in the planning and implementation stages of the training programs, was the desire to put in the necessary effort and resources. There was also dedication and commitment on the part of the training staff (trainers, specialists and coordinators), which created an important base for development. The continuous efforts of the trainees were another aspect that contributed to the success of the program.

The researchers claimed, however, that the enthusiasm for professional development and the efforts of the training staff and trainees were negated by the existing training culture and policies. Worryingly, this situation does not seem to have improved since 1996.

Until 2006, the Directorate of the Training had no well-defined philosophy concerning teacher training and development (Al Nahar, 2001). However, it is clear from the budget allocated, and the yearly development plan of the Ministry of Education since 1983, that there was a serious interest in professional development, although not written in the form of a philosophy.

This interest is clear in several statements documented in a number of official texts such as: "The training is a continuous process", "It is a necessity to increase the qualification requirement of the teachers in Bahrain to a university degree", "It is

important to improve the teacher's academic level", 'It is essential to increase the teacher's educational level", "The teacher is an important partner in training" , "Training is an obligation of each individual in education" (Al Nahar 2001, p.3-4). All of these statements were translated into the continuous provision of various training programs, at different levels and specialisations for all individuals in the Ministry of Education.

It can be seen that the documents of the Directorate of Training yearly plans show a cycle of development in the nature of the training provided by the Directorate of Training. It had moved from being, in 1919, a simple training that focused on developing the teachers' teaching methods, to more advanced academic preparation in 1983, and then to developing the teachers' performance and the teaching profession, a process which started clearly in 1993 and developed further by 2006.

In spite of this revolution, there was no official professional development plan devised by the Ministry of Education that contain specific priorities to be followed by the Directorate of Training (Hejazy and Al Mannai, 1996). This is still the case, therefore the Directorate of Training sets its own priorities according to its understanding of needs in the educational field.

Studying the Directorate of Training's report (Directorate of Training and Development (DoT) (2006-2007), some continuity and logic can be found in its programs. It has been moving toward fulfilling the main objectives of the Ministry and its divisions. It has offered different types of training programs: including short programs requested by the different divisions of the Ministry to satisfy specific goals, such as training specific teachers in specific skills, a new concept, or a new curriculum. Another type of training is represented by the programs related to developmental projects such as the Development of the Primary, Elementary and Secondary Education. A third type of program is related to IT preparation and use of technology in teaching, learning and support activities. There is a fourth type of program, is related to education and management.

These programs cater for the entire Ministry's staff (teachers, senior teachers, school principals, school specialists, school administrators, and the Ministry's support staff). In his opening statement for the Training Programs Guide, the Training Manager stressed that "this year: 2006-2007 the Ministry will witness quality difference in the Directorate's programs that are going to reach the biggest sector ever", by which he is referring to more than 80 per cent of the Ministry's staff (Directorate of Training and Development (DoT), 2006-2007 p.2).

Although suffering from shortage of staff, the Directorate of Training is flexible in meeting the needs of the Ministry. It has been stretching its services continuously to provide a huge quantity of training programs, to the extent that is seen as providing "Mass Training" (Hejazy and Al Mannai, 1996). This term indicates low quality of training.

The demands of the Ministry of Education, although not based on a vision that is clearly communicated to everybody, have been met by the Directorate of Training which, however, lacks the resources required for providing quality training. The Directorate had to develop a "Management by Disaster" style in order to meet the constant requirements of the Ministry (Hejazy and Al Mannai, 1996) for human development.

In addition, the training coordinators in the Directorate of Training had no control over the programs' inputs or outputs. They did not study the training needs or the training effects (Hejazy and Al Mannai, 1996). This situation has not changed since 1996 and the Directorate of Training has lost its way in this respect. In 2006 there was an attempt to study the outcomes of training; however, this consisted only of interviews during school visits with a sample of a few trainees who had attended the programs. This type of investigation cannot be a valid indicator of the efficacy of training.

The Directorate of Training has always struggled to find good trainers (Hejazy and Al Mannai, 1996) and the struggle continues to date. It is still suffering from its limited staff in terms of quality and quantity. For this reason, the Directorate is forced

to use individual trainers from inside and outside the Ministry's different divisions, and has therefore no control over their schedules, commitment or quality of work.

The Directorate of Training's facilities were poor. The rooms were small and training equipment was limited, which hindered the training activities (Hejazy and Al Mannai, 1996). This situation is still almost the same. In 2001, the Directorate of Training built a new building to accommodate the administration offices and some extra training rooms. Unfortunately this beautiful building did not serve the purpose fully. In addition to its limited space for the administration offices, the training rooms were also small and were equipped with heavy desks and chairs which curtailed the mobility of the trainees. White boards and overhead projectors prevented the trainers using new technology.

The Directorate of Training allocates a resource centre to serve all trainees, trainers and researchers in their work. However, the use of this centre is limited because its opening depends upon the availability of the person in charge. If that person is on leave or out of office, the centre is closed. This centre has been closed for two years because the person in charge had left the Directorate and the post has still not been filled.

The above concerns of the previous researchers indicate that the Directorate of Training is constantly trying to improve its image in terms of providing a large number of programs in the field of education. Its limitations with staffing, identifying training needs, studying the training outcomes and controlling the quality of its inputs and output is not registered or accounted for

It is hoped that the present research will facilitate change, in order to produce better results in the teachers' development and eventually in students' performance. Several recent studies have confirmed that good teachers are essential in order to improve schools and produce a skilled workforce. One study showed that even as effective teachers can raise student achievement, ineffective teachers can have lasting negative effects on student performance (Education Statistical Bulletin, 2005-2006)

Outline of the Thesis

In the following chapter, the literature that is relevant to the study will be reviewed. Teacher effectiveness and its relation to students' learning will be investigated, and the role of school leadership and its effectiveness in the education development process will be examined. In addition, this chapter will study learning, the different learning theories and how adults learn and benefit from learning. This chapter will also reveal the different learning theories with some focus on Mastery Learning Theory. It will also focus on the teachers' and principals' professional development process in terms of its importance, its models, its theories and its evaluation.

In Chapter 3, the research methodology used in the study will be illustrated. The main purpose of the study, the key questions in relation to the purpose of the study and the paradigm used and its fitness for the study purpose will be discussed. The approach, methods used and means of ensuring its validity and reliability will be explained. Details about sampling, data collection methods and the statistical and qualitative procedures that deployed in the study will be given. Ethical issues will be explained, as well as how trustworthiness was ensured in the study.

In Chapter 4, the statistical details of the study are presented and the findings in relation to the methods of study are discussed. The results of the effect of the professional development program and the factors impacting on its effects will be reported. Ways, in which the program could be successful in bringing about positive changes in schools, if transfer of learning is achieved, will be explained.

In Chapter 5, the findings are analysed, in comparison with the earlier literature review. This chapter includes a detailed analysis of the program goals, content, strategies, trainers, evaluation system and budget, and focuses on the difference in characteristics between the most effective and the least effective components of the program. In addition, a model framework or a guideline is presented that, it is suggested, can be used by policy-makers, trainers, training coordinators or officers, school principals and all the training partners while planning successful professional development.

In the concluding chapter, the originality of this study, its relevance and importance to the educational field in the Kingdom of Bahrain are discussed. Recommendations are also made for training policy and practice in general, and specifically for the Ministry of Education. At the end, the researcher's own experiences throughout the transformation are presented and her development as a researcher in this learning process is acknowledged.

Chapter 2: Literature Review

Teacher Effectiveness and Student Learning

The widely held traditional view that school inputs make little difference to student learning, is quite contrary to many studies that suggest that not only can schools make a lot of difference, but most of this difference is attributed to teachers' quality, teachers' general academic abilities, subject matter knowledge, knowledge of teaching and learning, teaching experience, certification status, teacher behaviour and practice (Darling-Hammond, 1999).

In the United Kingdom, the Mortimore et al. (1988) study was the first in Britain to clearly link school and teacher effectiveness. The study was based upon a four year cohort study of 50 primary schools, which involved collection of a considerable volume of data on children and their family backgrounds ('intakes'), school and classroom 'processes' and 'outcomes' in academic (reading, mathematics) and affective (e.g. self conception, attendance, behaviour) areas' (Reynolds, 2005 p.13)

This study revealed twelve school and teacher effectiveness factors that were correlated with effectiveness across outcome areas, nine of them were related to teachers' effectiveness such as: The involvement of teachers, Consistency among teachers, Structured sessions, Intellectually challenging teaching, A work-centred environment, A limited focus within sessions, Maximum communication between teachers and students, Record-keeping and Positive climate.

In 2002, a study on teachers' effectiveness was conducted for the 'Department for Education and Skills' (DfEE) in UK (Reynolds, 2005). This study found that the main elements to teachers' effectiveness: Professional characteristics, classroom climate, and teaching skills correlated .43 with pupil's achievement.

In the United States of America, a study of teacher effectiveness at the classroom level using the Tennessee Value-Added Assessment System to make estimates of school, class size, teacher, and other effects on student achievement found that differential teacher effectiveness is a strong determinant of differences in student learning, far outweighing the effects of differences in class size and heterogeneity (Wright *et al.*, 1997).

Other research (Sanders & Rivers, 1996) shows that students who are assigned to several ineffective teachers in a row have attained significantly lower achievement than those who are assigned to several highly effective teachers in sequence.

According to research in Tennessee, on average, the least effective teachers produce gains of about 14 per centile points among low-achieving students during a school year whereas the most effective teachers post gains among low-achieving students that average 53 per centile points. The effects of teachers, whether they hinder or promote achievement, are also long-lived and can be measured in subsequent student achievement scores.

Huggins et al. 2002, p.3

Some researchers link teachers' effectiveness to their qualities. The Education Trust in cooperation with the Chicago-based Joyce Foundation, three states—Ohio, Illinois and Wisconsin—and their three biggest school systems—Cleveland, Chicago and Milwaukee—did a study *How Poor and Minority Students are Short-changed in Teacher Quality*. This study demonstrates the clear link between teacher quality and student achievement. It found that 'In the highest-poverty high schools with high teacher-quality indices, twice as many students met state standards as did students in other similarly high-poverty high schools with low teacher-quality indices' (Peske and Haycock 2006, p.2). It also found that there was a big difference in students' readiness for college depending on the quality of teachers in their schools.

Studies show that students with better quality teachers learn better. A Texas study of 900 districts conducted by Ronald Ferguson of Harvard University (Haycock, 1999) found that teacher expertise (as measured by teacher education, licensing examination scores, and experience) explains 40 per cent of the difference in student achievement in reading and mathematics. Teacher quality explains most of the gap in achievement between African-American and white students (after controlling for socioeconomic status). Similarly, a Boston study by Bain and

Company (Haycock, 1999) found that students of the top-third teachers produced gains on maths tests that exceeded the national median while the bottom-third showed virtually no growth.

Researchers consider teachers' experience as part of their qualities that support their effectiveness. 'Regardless of initial achievement level, students taught by experienced teachers perform better than those taught by inexperienced teachers' (Huggins et al. 2002, p.3). Experienced teachers are effective because they are able to apply their extensive knowledge to solve problems; they have abilities to notice things, an instinct for acting right and getting things done in an efficient manner (Berliner, 2001).

Other researchers argue that teachers' qualifications are part of their qualities that determines student achievement. One study (Ferguson, 1991; Greenwald *et al.*, 1996) shows that 42 per cent of the difference in student achievement is related to teacher qualifications. This is almost double the next closest factors of the level of parents' education, which accounted for 24 per cent. In a similar study in New York, a group of researchers attributed 90 per cent of the variation in student achievement to differences in teacher qualifications (Armour et al., 1989 in Darling-Hammond & Ball, 1997).

In addition, researchers assert that there is a significant positive relationship between education coursework, teachers' formal education and teachers' training on teacher effectiveness (Ashton & Crocker, 1987; Evertson, et al. 1985 in Darling-Hammond 1999, p.13). In a review of research, Evertson, Hawley, and Zlotnik (1985) concluded that 'among students who become teachers, those enrolled in formal pre-service preparation programs are more likely to be effective than those who do not have such training' (Darling-Hammond 1999, p.13).

In addition, a recent research recognised three main teachers' qualities that increase their effectiveness and significantly influence pupils' progress, and they are: teaching skills, professional characteristics and classroom climate (McBer, 2001). Teachers' teaching skills and methods and the culture of teaching are at least as strong an influence on what students learn as is the content and depth of

the curriculum, to the extent that researchers claim that the lower performance of American students relative to many of their international peers is largely related to how Americans teach (Stigler & Hiebert, 1999).

A recent examination of factors increasing teachers' effectiveness and influencing students' learning, observed some variables related to teacher-learner interactions (Munro, 2001). It claimed that 'the interactions foster varied learning functions that have an impact on learners' existing knowledge in varied ways' (Munro, 2001, p.210).

While several studies suggest that there are aspects of teachers' effectiveness that may be related to teachers' qualities they do not reveal much about what it is about teachers' behaviours or capabilities that makes the difference in how their students perform. 'Research on teachers' personality traits and behaviours has resulted in few consistent findings' (Schalock 1979; Druva & Anderson, 1983), with the exception of studies finding a recurring positive relationship between student learning and teachers' "flexibility," "creativity," or "adaptability" (Berliner & Tikunoff, 1976; Schalock, 1979; Walberg Waxman, 1983 in Darling-Hammond, 1999, p.14).

Moreover, two reviews of studies have shown little or no relationship between teachers' measured intelligence and their effectiveness on students' achievements (Darling-Hammond 1999). And studies of teachers' scores on the subject matter tests of the National Teacher Examinations (NTE) have found no consistent relationship between this measure of subject matter knowledge and teacher performance as measured by student outcomes or supervisory ratings (Darling-Hammond, 1999).

After this study on teachers' effectiveness, the researcher can safely conclude that the teachers' effectiveness has a great impact on students' performance. However, the most effective qualities are teachers' qualifications, teaching experience, expertise, teaching skills, professional characteristics, positive climate and teacher-learner interactions.

Leadership Effectiveness and School Improvement

Professional development tends to work most effectively when certain organisational cultures are established. Leadership manages the culture, the people, the structure and the power in any organisation. Every individual within the organisation forms a force that influences and is influenced by the others (Busher, 1998). Teachers as well as principals can be leaders in the schools. In fact, teachers' leadership is seen as a key vehicle for school improvement and renewal (Muijs & Harris, 2006).

The leadership manages the culture in the organisation. It is the leadership's responsibility to take care of:

the degree of trust between people; the extent to which people can discuss openly their differences; the extent to which people are included or excluded from decision making (a measure of collegiality); the extent to which senior staff are available to or are prepared to listen to other staff and students; and the degree to which organisational processes are rule-bound or tasks-driven.

Busher 1998, p.25

It is the leadership's responsibility to take care of the values and beliefs of a team, work group or community which are expressed in the language, customs and rituals used by that group and encouraged and emphasised by its leader or leadership of that group.

Nias 1999 in Busher 2001, p.55

In a criticism of this, Bates (1987) argues that successful leadership has become as much a matter of getting the culture right as it is of getting the technology right.

The leadership manages the structure of the organisation as well. It controls the diverse goals and diffuses areas of influence. It organises the different interests

of the organisation's members so they do not overcome the main interest and goals of the organisation. It views the organisation as a "web" woven from interactions and diversity of its members and conflict is one of its basic elements (Altrichter & Elliott, 2000).

Historically, school leaders were expected to perform primarily managerial and political roles (Cuban, 1988 in Mazzeo, 2003). However, according to the Institute for Educational Leadership,

schools of the twenty-first century will require a new kind of principal, one whose main responsibility will be defined in terms of instructional leadership that focuses on strengthening teaching and learning

Mazzeo 2003, p.1

Leadership are expected to play a highly significant role in improving students' learning since it 'is second only to classroom instruction among all school-related factors that contribute to what students learn at school' (Indiana Principal Leadership Academy, 2005, P. 7).

In support of this argument, several reviews by Hallinger and Heck (1996a, 1996b, 1998 cited in Leithwood et.al., 2006) concluded that the total (direct and indirect) effects of leadership on student learning account for about a quarter of total school effects.

While leadership explains only 5 to 7 percent of the variation in pupil learning across schools (not to be confused with the very large within school effects that are likely), this is actually about one-quarter of the total across-school variation (12 to 20 percent) explained by all school-level variables, after controlling for pupil intake or background factors

(Leithwood et.al., 2006, P. 13)

In addition, leadership effects on pupil engagement have been explored by some researchers because some evidence suggests that school engagement is a strong predictor of pupil achievement. Ten quantitative studies in Australia and North America, recently have evaluated the effects of transformational school

leadership on pupil engagement and found significant positive relationship between them (Leithwood et.al., 2006)

In less advantage settings, where leadership is mostly needed, researchers believe that there are very large leadership effects not only on school conditions but on pupil learning as well.

Indeed, there are virtually no documented instances of troubled schools being turned around without intervention by a powerful leader. Many other factors may contribute to such turnarounds, but leadership is the catalyst.

Indiana Principal Leadership Academy, 2005, p.7

However, research shows that many current and potential school principals lack the above mentioned qualities necessary to lead in today's schools (Mazzeo, 2003). A 2001 Public Agenda report found that 29 per cent of superintendents believe the quality of principals has declined measurably in recent years (Farkas, et al., 2001 in Mazzeo, 2003).

Because of the importance of finding strong school leaders to meet the educational development challenges, policymakers must get involved in the system of leadership development and 'how principals are certified or licensed, prepared for practice, and provided additional training to improve their skills' (Mazzeo 2003, p. 3).

Leadership is a sum of several qualities such as the ability to make things happen, to have vision and initiative to make space for learning, improvement and change. Leadership establishes trust, cooperation, collaboration and coordination within the members of the organisation. It makes flexible rules and good decisions in the best interest of the organisation. These qualities are to be found in school leadership in order to develop education, and leadership can be found through effective professional development.

Leadership and Student Learning

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Several reviews by Hallinger and Heck (1996a, 1996b, 1998 cited in Leithwood *et al.*, 2006) concluded that the total effects, both direct and indirect, of leadership on student learning account for about a quarter of total school effects:

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Researchers believe that school leaders can make a difference to school effectiveness and student achievement. Leaders influence school performance by 'shaping school goals, direction, structure, and organizational and social networks and by guiding the school policies, procedures and practices' that contribute directly to student learning (Hallinger & Heck in IEL, 2000, p.6)

Leaders can influence students' learning through motivation. Some of the most effective areas for encouraging student motivation are the school culture, instructional climate and environment. According to Deal, 'school culture can be embodied and transformed through channels such as shared values, heroes, rituals, ceremonies, stories, and cultural networks' (Deal, 1987 cited in Renchler, 1992, p.1). Improving the school climate is another aspect of school leadership.

Klug (1989) notes that school leaders can influence levels of motivation by "shaping the school's instructional climate," which in turn

shapes "the attitudes of teachers, students, parents, and the community at large toward education". By effectively managing this aspect of a school's culture, principals can "increase both student and teacher motivation and indirectly impact learning gains".

Renchler, 1992, p.1

In addition, researchers argue that the school environment has its own effect on students' learning, because a positive 'psychological environment' strongly influences student motivation (Renchler, 1992). School leaders can create this type of environment by:

establishing policies and programs that: stress goal setting and self-regulation/management, offer students choices in instructional settings, reward students for attaining "personal best" goals, foster teamwork through group learning and problem-solving experiences, replace social comparisons of achievement with self-assessment and evaluation techniques and teach time management skills and offer self-paced instruction when possible.

Maehr, 1991 in Renchler, 1992, p.2

The effect of school leaders on pupil engagement has been explored by some researchers because some evidence suggests that school engagement is a strong predictor of pupil achievement. Ten quantitative studies in Australia and North America, have recently evaluated the effects of transformational school leadership on pupil engagement and found a significant positive relationship between them (Leithwood *et al.*, 2006).

In disadvantaged schools where good leadership is most needed, researchers believe that leadership has significant effects, not only on school conditions but on pupil learning as well:

Indeed, there are virtually no documented instances of troubled schools being turned around without intervention by a powerful leader.

Many other factors may contribute to such turnarounds, but leadership is the catalyst.

Indiana Principal Leadership Academy, 2005, p.7

In spite of the importance of school leadership in developing students' learning, research shows that many current and potential school principals lack the qualities necessary to lead in today's schools (Mazzeo, 2003). A 2001 Public Agenda report found that 29 per cent of school superintendents in USA believe the quality of principals has declined measurably in recent years (Farkas, *et al.*, 2001 in Mazzeo, 2003).

Because of the importance of finding strong school leaders to meet the challenges of educational development and because 'without the principal's leadership, efforts to raise student achievement cannot succeed' (IEL, 2000, p.6), policymakers must get involved both in the system of leadership development and also in 'how principals are certified or licensed, prepared for practice, and provided additional training to improve their skills' (Mazzeo 2003, p.3).

Leadership is the sum of several qualities such as the ability to make things happen, vision, and initiative to make space for learning, improvement and change. A good leader establishes trust, cooperation, collaboration and coordination within the members of the organisation and makes flexible rules and good decisions in the best interest of the organisation. These qualities are to be found in school leadership through powerful, ongoing professional development focusing on effective strategies for improving student learning.

The Importance of the Training and Development of School Leaders

Historically, professional development for school leaders has been done with no systematic plan (Lashway, 2002), however, in recent years, policymakers and practitioners have begun to realise the importance of sound professional development tailored to the needs of leaders and the students they serve.

Since districts can no longer assume that highly qualified leaders will appear on their doorstep when needed, many are filling the gap through home-grown professional development. When leaders are learners themselves, they are better able to empathise and serve as models when they ask teachers to rethink their practice

Lashway, 2002, p.4

Worldwide, there have been many attempts to improve school leadership. In 2000, the National College for School Leadership in England (NCSL) established a leadership development framework to create a coherent and flexible framework for the development and support of school leaders. This program is of five different stages (Earley & Bubb, 2004): the emergent leadership, the established leadership, the entry to headship, the advanced leadership and the consultant leadership.

These stages are usually linked and leaders attend them according to their development needs and experience. The main targets within the Framework (NCSL, 2007) are the qualification for headship and three national programs: Leading from the Middle, National Professional Qualification for Headship (NPQH), Head teachers' Leadership and Management Programme (Headlamp) and Leadership Programme for Serving Head teachers (LPSH).

The Emergent Leadership stage (NCSL, 2007) is target toward those who are looking for a leadership position, who are leading others and have leading responsibilities or subject and specialist leaders who will attend 'Leading from the Middle' Program.

The Established Leadership stage (NCSL, 2007) is for experienced deputy and assistant heads, who have decided not to pursue headship, however, the Entry to Headship stage is merely for those leaders who are seeking headship positions and seeking professional qualification for leaders.

The Advanced Leadership stage (NCSL, 2007) is aimed at head teachers with four or more years of experience. In this stage the head teachers will attend the

Leadership Programme for Serving Head teachers (LPSH) as an enrichment program. In addition, the Consultant Leadership stage (NCSL, 2007) is to recognise the importance of the head teachers' role by identifying consultant leadership as the culmination of an experienced leader's career.

Along with this framework (NCSL, 2007) the National College for school leadership is offering a wealth of other strategic programmes designed to meet the main skill needs of head teachers and other leaders in the light of policy development.

On the other hand, In the United States of America, the State of Louisiana has applied a model of leaders' preparation program known as Louisiana's Two-Tier Licensure System. It is considered an approved certification structure for educational leadership.

Principals with a Level I certificate will be required to enrol in a two-year Educational Leader Induction Program guided by a university facilitator and principal mentor.... To obtain the Level II certificate, candidates must complete the induction program and develop a portfolio that documents their efforts to meet the state's standards for school principals.

Mazzeo 2003, p.4

The Blueprint for Government Schools (2004) in the Victorian government, Australia, has developed a program for high performing principals. The program intends to develop "system leaders" in terms of collaboration, empowerment, capacity building, inclusiveness and continuous learning. Through the program, school leaders are encouraged to look beyond their own school and recognise the combined responsibility for transforming the system and the schools that are in it. The program creates and encourages the value of leaders as life-long learners and the central role they play in systemic reform. This program aims at providing principals with a variety of development opportunities and tailored professional learning through range of activities such as coaching and mentoring.

In spite of all the efforts, researchers' believe that even the best preparation programs do not provide for the professional needs of the training principals. Professional development for principals is often neglected and when it is available, it is usually poorly linked to state reform efforts, varies widely across districts and regions, and is rarely tied to standards (Snipes *et al.*, 2002).

To enhance principals' professional development (Mazzeo, 2003), states need to improve principal leadership development, especially the areas of licensure; develop plans to address professional needs; allocate sufficient funds for professional development practice; and develop systematic strategies for instructional improvement that include high-quality professional development for practicing principals that is linked to national standards.

Policymakers need to act decisively and immediately to raise a new generation of high-quality school leaders. By attending to the environment in which the school leaders will work, including pay and working conditions, policymakers can achieve this goal and make important progress towards improving teaching and ultimately student learning in every classroom (Mazzeo, 2003).

The Importance of Teachers' Professional Development

Millions of dollars are spent annually because educators believe that professional development helps in developing students' learning. Many researchers argue that professional development is an essential ingredient in student achievement and the ongoing development of teachers' knowledge and skills does matter (National Commission on Teaching and America's Future, 1996).

Students spend most of their time in close contact with teachers, either interacting with them or working under their supervision and direction. Logically enough, what teachers know and do directly affects the quality of students' learning under them. Since teachers' effectiveness is a prerequisite to students' learning, and professional development aims to improve teachers' effectiveness, and can 'produce immediate gains in teacher quality' (Sparks & Hirsh, 2006, p.3), it can be argued convincingly that professional development is the key to student learning (Figure 2-1).

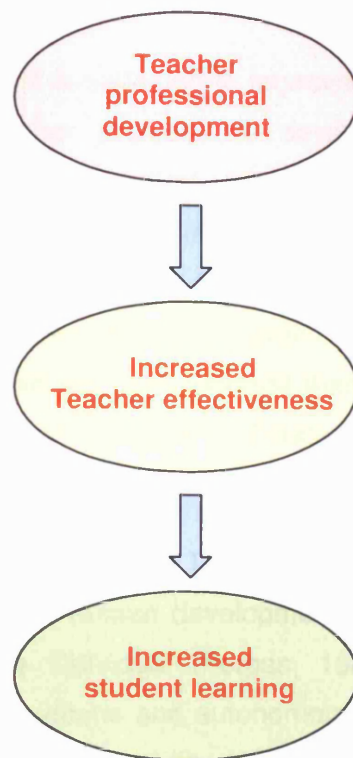


Figure 2-1 The link between professional development and student learning

In education, several studies show that improving teachers' knowledge and their teaching skills is essential to raising student performance. Therefore, a 'quality Professional Development program can raise student achievement' (Sparks & Hirsh 2006, p.2). Effective professional development is the means to improve teachers' knowledge of teaching and learning, teachers' experience and teachers' behaviours and practices in an attempt to produce effective teachers. The main goal of professional development is a change in individuals' knowledge, understanding, behaviours, and skills - and in values and beliefs (Southern Educational Development Laboratory (SEDL), 2006).

Effective staff development must be linked to student learning (Killion, 2000 a). Effective staff development prepares teachers to demonstrate high expectations for student learning. 'Giving teachers the means to demonstrate high expectations for all students is essential content for staff development. Holding high expectations for students, involves change in beliefs; holding high expectations for students leads to increased student achievement (Killion, 2000a, p.1).

Professional development is expected to improve teachers' qualities. Teachers themselves report that teacher professional development has improved their teaching. Around 85 per cent teachers who participated in the professional development program said it provided them with new information, nearly 65 per cent reported it motivated them to change their teaching practices, more than 62 per cent said that these professional development programs inspired them to seek further information or training, and 42 per cent reported that the programs changed their views entirely on teaching (National Centre for Educational Statistics, 1998b).

Teacher development is often thought of as a human development because it involves the development of self-identity. The main task of learning is identity work. In western culture, the study of human development and the development of self-identity has focused on the individual (Forgas, 1981). Teachers are seen as individuals who are separate, unique and autonomous, possessing the capacity for self-direction, self-reliance and responsibility (Gergen, 1991, p.11).

As a trainer by profession, the researcher observed that in recent years expectations from programs that prepare principals have increased remarkably. Unfortunately,

Most preparation takes place in college and university based graduate programs. Many of these programs were initially developed when school leaders were expected to fill managerial and political roles, and they have struggled to train a new breed of instructionally oriented principals

(Murphy *and* Forsyth, 1999)

University-based preparation is 'still based on a managerially focused curriculum and a traditional academic model of organisation. University programs confer credits and degrees and are not designed to measure competencies. Only a few programs have close ties to schools or districts' (Mazzeo, 2003, p.3)

In addition, efforts to improve college and university-based preparation during the past three decades have had only a limited effect (Murphy and Forsyth, 1999).

There is a need for high-quality professional development programs (American National Development Council, 2002) that focus on student learning and the specific problems practitioners face; that reinforce and sustain group work and collaboration among teachers, principals, and district personnel; link directly with day-to-day work in real schools and classrooms; sustain a consistency of focus over time; and use feedback from teaching and learning to inform program development and evaluation.

Educational reform in England has created an acute need for urgent and high-quality staff development and training (Earley & Bubb, 2004). Teachers' critical role in the delivery of the government's educational reform was recognised and therefore introduced the Continuing Professional Development (CPD) strategy in 2001 in which it is declared that 'all our ambitions for education depend on teachers doing well in the classroom' (DFEE, 2001a: 3 in Earley & Bubb, 2004).

Improving teachers' and school leaderships' effectiveness is a high priority for many local and national governments' agendas. Budgets, policies and efforts are allocated and extended to develop the main resources of the schools in an attempt to advance education; however, this goal might not be reached without effective professional development programs because they are crucial for organisational growth and school improvement.

Establishing and Managing Effective Professional Development

Understanding and managing professional development in any organisation is important to its effectiveness and success, however, professional development needs to meet some criteria in order to be effective and meet the goals of the trainees. Effectiveness is related to quality, and 'the measure of a training program's quality is its effectiveness. Training is effective to the degree that it produces the desired behaviour in the population being trained' (Shapiro, 1995, p.1).

Establishing effective professional development requires encouraging the development of models that produce immediate gains in teachers' qualities which leads to a change into all aspects of the school. A growing number of researchers and policy-makers are working on plans to develop professional development programs and focus them on improving the learning of all students; all the effort and the money spent in this attempt will be wasted if quality programs are not recognised and encouraged.

Some educators argue that effective professional development makes the link between subject matter and pedagogy:

It expands teachers' repertoire of research-based instructional methods to teach that content and help students master new skills. Such programs create regular opportunities for serious collaborative planning, develop classroom assessment skills, and connect teachers to other professionals within and beyond their schools

Sparks & Hirsh 2006, p.8

To set the stage for effective professional development, it is important to establish a culture of learning as a pre-requisite of effective professional development. In education, 'if professional development is to be effective, schools will have to develop a culture of learning for all members of their communities' (Blandford, 2000, p.13). The culture of learning involves continuous change on the part of teachers, administrators and all school staff members.

Organisational change and development is often linked to the individual's learning. 'Individual learning and organisational changes must occur simultaneously and support one another if the gains made in one area are not to be eliminated by continuing problems in another' (Sparks & Hirsh 1997, p.17).

Changing education is a hard task that goes beyond just planning new requirements or presenting a new method in a lecture or workshop; what is needed is change in the whole school culture and attitudes in the 'Learning School'.

In a learning school all staff members are engaged in sustained, intellectually rigorous study of what they teach and how they teach it. They replace the traditional model of isolated "adult pull-out programs" with an entire school focused on increasing learning collaboratively. Teachers learn better when they learn together and support one another in planning more advanced lessons, improving the quality of their students' work, and solving the day-to-day problems of teaching and learning. Such a school embeds staff development into all of its daily activities.

Sparks & Hirsh 2006, p. 4

A learning school allows more time for staff to work and plan together (Sparks & Hirsh, 2006). Each department can have common planning so teachers can share ideas, lessons, teaching methods, and solving problems related to individual students, lessons or personal issues. Teachers are expected to conduct research, plan and analyse students' work together to develop a mutual understanding of students' level of work. Teachers are expected to support each other's learning either by mentoring, peer-coaching, peer-observation session, or training each other.

In the learning school, teachers are expected to continue to learn and expand their knowledge of both content and teaching strategies, they should be able to adapt to growing challenges and changes in students and to higher standards. Professional development is not a one-shot workshop or a development program that is intended for a teacher, instead, it is a whole system that involves all the staff determining their own needs and deciding how they can be met. Those needs are added to the specific school improvement goals to form general development goals incorporated in everything the teachers do.

A school can be seen as a “learning community” in which the adults and pupils are learning and collaborating. These schools are seen to have positive impact on students’ learning, teachers’ work lives, classroom practice and schools’ performance in general (Earley & Hirsh, 2004).

Professional development can take many shapes and forms; school-based professional development, work-based and incidental working opportunities, teamwork, self evaluation and inquiry, partnership with people from local education authorities, external professional development opportunities, networking, critical leadership and collaboration or learning from each others (Earley & Bubb, 2004). However, no matter what form the professional development takes, researchers believe that it has to serve its purpose and accomplish its goals, and the only way to do so is by ensuring its effectiveness.

This study will focus on one of the most commonly used methods of professional development which is the training courses. It will be studied in terms of best practice models and theories. What applies to this method can easily be applied to other methods of professional development as well.

The first step toward developing professional development programs is to understand how people learn and conceptualise information. People have different learning styles; the professional provider needs to understand fully the concept of learning and how people learn in order to understand and cater for their professional development needs.

Learning: Its Theories and Styles

Professional developers are concerned about understanding how adults learn as much as what they learn. The accuracy of this understanding can affect the effectiveness of the learning provided as adults come from different backgrounds and experiences. ‘They vary in their experiences, knowledge, skills, interests and competencies. Some prefer informal learning situations others more formal ones’ (Earley & Bubb 2004, p.17).

Learning is not an automatic, unified process. People have different learning ways and styles. Understanding the different learning styles of learners can help trainers, professional developers or decision-makers in making choices among learning activities especially when planning for professional development. Professional developers 'need to understand the significance of the context of learning every bit as much as they think about the organisation of knowledge or the receptivity of individual learners' (Moon 2001, p.100).

Learning style has been defined as 'an individual's characteristic method of responding to and processing learning events as he or she experiences them' (Krahe, 1993, p. 17 in Stroot et.al 1998, p.1). It is important to understand that adults differ enormously in how they learn. No one theory on adult learning styles can sufficiently address the various needs, knowledge, experiences and background that adults bring to the learning setting (Elias and Marriam, 1995 in Stroot et.al. 1998).

The diverse nature of the adults' learning styles had been discussed by several researchers. According to Kolb (1985 in Stroot et.al. 1998) individuals exhibit a preference for certain learning behaviours that can be categorized as Convergers, Divergers, Assimilators and Accomodators.

Convergers: The converger acquires knowledge by thinking/analyzing and then practically applying the new ideas and/or concepts. The ability to practically apply ideas is this learner's greatest strength. Convergers organize information through hypothetical deductive reasoning. The emphasis for convergers is to think rationally and concretely while remaining relatively unemotional.

Divergers: The diverger acquires knowledge through intuition. Individuals with this preferred style of learning draw upon their imaginative aptitude and their ability to view complex situations from many perspectives. Divergers also possess the ability to effectively integrate information into meaningful wholes. However, the divergers imaginative ability is his or her greatest strength.

Assimilators: The ability to create theoretical models and reason inductively is the assimilator's greatest strength. Assimilators learn by thinking and analyzing and then planning and reflecting. Assimilators do not emphasize practical application; rather they focus on the development of theories, often discarding facts if they do not fit the theory.

Accommodators: Unlike the assimilators, accommodators will discard the theory if the facts do not fit. Accommodators excel in situations where they must apply theories to specific circumstances. Their greatest strength is their ability for getting things done and becoming fully involved in new experiences. Accommodators approach problems in an intuitive, trial-and-error manner and they obtain information from other people rather than through their own analytic abilities.

Stroot et.al 1998, p.3

Kolb's Model concentrates on the cognitive processing of information while other models, include the National Association of Secondary School Principals learning styles model (NASSP) and the Dunn and Dunn learning styles model (Stroot et.al 1998), find the adults learning style as multidimensional including some emotional, environmental, physical and social logics' dimensions.

Other researchers believe that adult learners are self-directed (Knowles, 1984). In order for the adults to learn effectively, they need to work in a climate of trust; openness, respect and collaboration. Adults have past experiences that they expect to be respected and never to be ignored. They need to choose what to learn in order to be able to learn. To gain their commitment, adults require practical applications. They are motivated when learning is important to them and out of their interest (Knowles, 1984).

The word Learning has been used to describe several situations:

- When learning refers to a product, the emphasis is on the outcome of an experience: the acquisition of a particular set of skills or knowledge.

- When learning describes a process, the emphasis is on what happens when a learning experience takes place: how learners seek to meet needs and reach goals.
- When learning describes a function, the emphasis is on aspects believed to help produce learning: how learners are motivated, what brings about change.

Smith 1982, p. 34-35

Learning is defined by the National Institute of Health (2008) as 'the acquisition of knowledge or skill. It occurs in, and may lead to changes in, the brain' (NIH, 2008, p.1). Learning through professional development, as a process, usually aims at change of knowledge, skills, behaviour and attitudes as a product. Although the process differs from one program to another, it usually comes in the form of training sessions, professional meetings, conferences, seminars etc. Teachers attend professional development programs seeking change. They have different reasons for change. Some of them want to be better teachers, some want to do better jobs, some want to feel better about themselves and some want to improve the learning skills of their students. The teachers in a science research project (Bell & Gilbert, 1996) commented that their main goal for continuing to change, was that it led them to feel better about themselves as teachers, and to achieve better learning outcomes in the classroom.

In order for learning to occur, researchers suggest different models of teaching and learning. They suggest that the learner undergoes several stages in learning: the surface, the deep and the strategic levels (Bell & Gilbert, 1996). In the surface level processing the learner attempts to meet the minimum requirement of the program by understanding the given materials, while in the deep-level approach the learner goes beyond the understanding to making sense and relating the knowledge given to his or her own personal experience. When the learner uses both the surface and the deep level in a flexible combination, depending on the nature of the task, then they are using the strategic approach (Bell & Gilbert 1996, p. 60).

There are several theories of learning. The behaviourist theory focuses on behaviour modification through stimulus and selective reinforcement (Banks &

Mayes, 2001). The cognitive theory focuses on internal cognitive structures and views learning as transformations in these cognitive structures. Their focus is in the processing and transmission of information through communication, explanation, recombination, contrast, inference and problem solving (Banks & Mayes, 2001).

The constructivist theory focuses on the process by which learners build their own mental structures when interacting with their environment (Crystal, 2007). This theory prefers hands-on, self-directed activities that focus on design and discovery. The social theory, however, accounts for social interactions. They stress the interpersonal relations involving imitations, and modelling (Kearsley, 2007)

Constructivists argue that learning involves changing, modification, and development of individuals' previous understanding of concepts; Learning is subjective and personal, depending on the individual's way of learning. Learning helps learners to solve problems. It involves interaction between learners, to share information and solve problems cooperatively. It works as a social arena for examining knowledge and increasing individuals' understanding. The extent and nature of learning is influenced by the learner's self-awareness and belief about her/his ability, clarity and strengths of learning goals, personal expectations, general state of mind and motivation to learn. Learning can be more effective if it is at the learners' stage of development, if it is challenging enough to require them to stretch, but attainable with effort (Joyce & Weil, 1980).

Mastery Learning (Warren, 2003) is an instructional strategy based on the belief that all learners can learn a set of realistic objectives with suitable instruction and enough time to learn. It uses methods of teaching and individualised instruction into a group learning situation and brings the learning strategies of successful students to nearly all the students of a given group. This theory is based on two important facts:

The aptitude is the length of time it takes a person to learn not how "bright" a person is, i.e., everyone can learn if given the right circumstances and time to learn must be adjusted to fit aptitude. No student is to proceed to new material until basic prerequisite material is mastered.

Warren, 2003, p.3

Mastery learning does not focus on content, but on the process of mastering it (Warren, 2003). Curriculum materials can either be prepared locally, by the teachers themselves, or purchased from commercial sources, however, they have to match the instructional objectives for a given course. The mastery learning model is closely aligned with the use of instructional objectives and the systematic design of instructional (ISD) programs (Gagne et al., 1992 in Warren 2003).

In addition, there are several other methods of learning that will be discussed later in this chapter, however, mastery learning theory is a particularly appropriate method for understanding learning of the senior teachers because it caters for adults learning whom require individualized attention, suitable instruction and enough time to acquire the knowledge or skill and because 'teaching adults requires the utilization of the process model rather than the content model (Cranton, 1989 in Stroot, 2007 p.1).

In order to understand and cater for the professional development needs of the learners, the professional providers need to fully understand how emotions are linked to the learning process.

Emotions and Learning

Until recently, emotion has been viewed as insignificant for the study of learning. It was believed that 'the emotional parts of the brain were considered to be irrational, monitored and held in check by the rational parts of the brain. It was even thought that when we are thinking logically and calmly there are no emotions present at all' (LTS, 2007, p.1).

However, in the light of advanced studies in neuroscience aimed at understanding the way the human brain works, 'most scientists believe that our emotions are intimately involved in the rational decisions and choices we make' (LTS, 2007, p.2) and there is growing proof that emotion has a greater impact on our ability to learn than was previously recognised.

The emotion process begins with a focal individual who is exposed to an eliciting stimulus, registers the stimulus for its meaning, and experiences a feeling state and physiological changes, with downstream consequences for attitudes, behaviours, and cognitions, as well as facial expressions and other emotionally expressive cues. These downstream consequences can result in externally visible behaviours and cues that become, in turn, eliciting stimuli for interaction partners.

Elfenbein, 2007, p.1

A stimulus can be an event; a condition (Brief & Weiss, 2002 in Elfenbein, 2007); a contact, with people or with a feature of the environment such as temperature, noise, and aromas (Isen & Baron, 1991 in Elfenbein, 2007); or physical artefacts such as colours and symbols (Rafaeli & Vilnai-Yavetz, 2004 in Elfenbein, 2007).

According to Dr. Paul Ekman (Lawson, 2008), the stimulus can inhibit one or a combination of the four core emotions: fear, anger, sadness and enjoyment. These emotions can have many dimensions that result from the 'myriad blends, variations and nuances that are possible. For example, sorrow, loneliness, grief, dejection and despair are associated with sadness while happiness, joy, delight, contentment and amusement are associated with enjoyment' (Lawson, 2008, p.1).

Researchers argue that emotion and cognition are intertwined. Emotion interferes with cognition, and it serves cognition (Fineman, 1996, cited in Elfenbein, 2007). Since both emotion and cognition occur in the brain, 'our thoughts influence how we feel and how we feel influences how we think' (Lawson, 2008, p.2). 'The connections between emotion and learning are bi-directional and complex' (Lawson, 2008, p.4).

Strong emotions can occupy cognitive capacity, including attention, reasoning and memory at the time of both encoding and retrieval (Clore *et al.*, 1994; Schwarz, 1990). This cognitive interruption is

adaptive to the extent that we need to be alerted of the need to pause and prioritize (Loewenstein & Lerner, 2003). However, it can be maladaptive to the extent that the evolutionary adaptation no longer matches our current decision making environment, to the extent that emotions are responsive to immediate influences that are not relevant to our cognitions, and to the extent that emotions can distort our evaluations of the probabilities and consequences of decisions (Loewenstein & Lerner, 2003) Emotion serves cognition 'Emotion orients and directs attention to solving problems, helps to distinguish relevant from irrelevant stimuli, and provides the motivation to reach decisions and implement them (Fineman, 1996; Loewenstein & Lerner, 2003). Extensive evidence demonstrates mood-congruent influences on learning, memory, associations, social judgments, and social interaction behaviours (Clore *et al.*, 1994; Forgas & George, 2001)

Elfenbein, 2007, p.35

Consequently, emotion is a factor that can intervene with the learning process in professional development. Researchers argue that learners 'who are anxious, angry, or depressed don't learn; people who are caught in these states do not take in information efficiently or deal with it well' (Goleman cited in Kort *et al.*, 2008, p.1). 'Negative emotions can be the cause or the effect of problems with learning. Anxiety, depression and anger or frustration can interfere with learning and can result from problems with learning' (Lawson, 2008, p.6).

When people are in a negative emotional state, their thinking becomes less flexible, original, and discerning. To put it bluntly, we are "dumbed down" by negative emotions. Also, at the simplest level, when a workforce is dispirited, they don't have the interest or the energy to create, to innovate, or to recognize new opportunities.

Lee, 2008, p.3

Conversely, when people feel happy, they perform better and generate better results. 'When people are feeling confident, secure, and passionate about their work, they are more likely to envision new possibilities, generate creative solutions, and make wise decisions' (Lee, 2008, p.3). 'Enjoyment colours our world in bright colours, motivates us to succeed and brings pleasure to life (Lawson, 2008, p.6).

The emotional brain 'has the power to open or close access to learning, memory, and the ability to make novel connections' (Vail, 2008, p.5). 'People's thoughts and emotions can strongly affect motivation' (Lawson, 2008, p.2). Emotion reveals attention, which in turn reveals learning and memory (LTS, 2007). Emotion motivates people to learn.

Emotion encourages people to accept and make changes. 'If people are feeling threatened, stressed out or just plain dispirited, they will resist change. They will cling to outdated behaviours and methods, even when such behaviours and methods are clearly not working' (Lee, 2008, p.2). 'If they don't feel valued or committed, they will withhold their knowledge and insights as a form of "payback"' (Lee, 2008, p.2). However, people who feel secure, committed, and passionate, find organizational changes stimulating (Lee, 2008, p.2).

For effective professional development, one of the keys is 'accurately identifying a learner's emotional/cognitive state which is a critical indicator of how to assist the learner in achieving an understanding of learning process' (Kort, *et al.*, 2008, p.1), followed by creating a learning environment that elicits and sustains positive emotional states in learners.

Vail suggests six principles of good practice to help educators reinforce positive emotions: Prompt motivation, Spark curiosity, Nourish intellect, talent, and power, Encourage connections, Monitor growth and Accept special considerations such as weaknesses (Vail, 2008, p.5). The researcher believes that these principals can work for adults in professional development as well as for children's learning.

In conclusion, emotions cannot be separated from learning; they work together and influence each other. Therefore, professional developers should care about the

learners' emotional wellbeing as much as they care about enhancing their knowledge, skills and attitudes.

Professional Development Best Practice

In any learning organisation, professional development should run through a specific cycle or procedures to be complete and effective. Earley & Bubb (2004) suggest a training cycle of 6 main stages: identification of training and development (T&D) needs; analysis of T&D need; planning and designing of T&D programmes; implementation of T&D; monitoring of T&D; and evaluation of T&D and its impact.

Wills (1993) training processes model, however, is in 10 stages: identification and evaluation of training needs; selection and development of training courses; selecting, recruiting, developing and certifying trainers; identifying training locations and resources; finalising the training budget and plan; pre- and post-training course administration; delivering the training course materials; validating the course; learning transfer; and training evaluation.

Before starting the training cycle, Wills (1993) suggests 'getting the basics right', which means that training has to be aligned with the business direction of the company; 'if the company has got its basics sorted out, and communicated them effectively, the training function should be in no doubt as to which business direction and values should be supported' (Wills, 1993, p.6).

From studying the above two models: Wills (1993) and Earley & Bubb (2004) and from her own experience, the researcher found that the training and development cycle can be of three main stages. The first stage is identifying and analysing or evaluating the training needs. The second stage is planning, designing and implementation of training and development programs and the last stage is monitoring and evaluating training and development programs.

First stage of the training and development cycle: Identifying and analysing training needs

Identifying the participants' training needs allows the discovery of each individual's needs for training, which can save a lot of time and energy and support the program effectiveness. 'The accurate identification of the training needs of an organisation is crucial to its success and development' (Bramley, 1996).

To identify the training needs, the professional developer needs to know the individual, the school or the organisational needs, demands, initiatives or agendas. 'The training needs of individual employees should be assessed within the context of the organisation's strategic goals to ensure employees' performance competency and development'; it should also be tied to the government performance and results (National Business Centre, 1998 b) .

Balancing all these is an important element in the success of the Professional Development (PD) program. It requires careful scrutiny of mission objectives, personnel, production, resources, costs, and other related factors (National Business Centre, 1998 b). It is also important to analyse the participants' needs according to their workload, well-being and age (Earley & Bubb, 2004).

Studying training needs can be done through questionnaires, interviews, performance management reviews and the monitoring of teaching through several methods such as observation (Earley & Bubb, 2004). However, studying the needs through the learners themselves might be misleading because:

The learner often thinks they know what they need/want - but are often misinformed. So, the training professional needs to keep the training needs questions focused on the need, as opposed to the perceived solution.

Collins, 2006, p.42

Some researchers argue that the training needs are to be studied at three levels: the organisation, the job and the person (Collins, 2005) while other

researchers believe that the individual needs are of three types: professional, personal and social development needs (Earley & Bubb, 2004).

To analyse the organisational needs, the professional developer needs to be concerned with the organisational objective, which means that the training plan should be constructed in context with the organisational plan. It also requires understanding of the manpower plan, the skills pool, the climate and the efficiency indices within the organisation. It requires interviewing managers within the organisation to conceptualise what kinds of changes are expected to reach organisational effectiveness and the training requirement to reach it (Collins, 2006).

To analyse the job needs, it is vital to understand what tasks are to be performed, how they are performed and what needs to be learned to do the job. Collins (2005) offers some techniques to do the job analysis. He suggests studying in detail job descriptions, job specifications, performance standards and the actual doing; performing observations of particular parts of the job; interviewing job holders and their supervisors about their performance and, when the training program already exists, it is possible to estimate the relevance of the various topics to that of the successful job performance.

At the individual level of analysis the intention is to assess performance levels against those required in the job. Theoretically, a training program can then be designed for each individual to close the gap between the present and desired level of performance.

Collins, 2006, p. 47

To do this, there are some techniques (Collins, 2005) such as studying performance appraisals, observing skills, testing knowledge, devising situations like role plays and case studies, and finally interviewing and questioning individuals to know their opinions and perceptions of their performance.

After analysing the organisation, the job and the individual training needs, it is required to integrate all of them together to form the training needs. This may necessitate a specific method of analysis such as the "System Approach", or the

“Total Quality Management” analysis of the various parts of the organisation (Collins, 2006).

Second stage of the training and development cycle: Planning, designing and implementation of training and development

After understanding the professional development needs of the participants and how they learn, the professional developers need to start planning, designing and implementing the training and development program. This is not a simple task due to the fact that there are varied training methods and activities to choose from when planning for professional development such as training courses, working with pupils, observing other practitioners, extending professional experiences, courses and sabbaticals (Earley & Bubb, 2004), workbooks, videotapes, small group discussions, computer-based instruction, and self studies (Mager, 1975).

This stage is about finding what professional development options are available and choosing the method(s) suitable to the training needs, budget and other related factors, such as the aims and objectives of the training and development. Depending on this analysis, the professional developer needs to select the most appropriate training method(s) which can be done through choosing existing courses, modifying existing courses or developing suitable courses (Wills, 1993). In choosing methods or media for training, the professional developers should ask several questions (Wills 1993, p.61) such as:

- Should courses be trainer-led or self-directed?
- Should students be told the facts or be encouraged to discover themselves?
- Should trainers use case studies or real life examples?
- Should trainers start from general to specific or vice versa?
- Should trainees choose their courses or modules?
- What are the learning tools or techniques to be used?

In fact, researchers indicate that there is no ‘best method or best medium’ to choose. However, there are choices which are the most appropriate for the specific training needs of the participants. The professional developer needs to know the participants’ learning styles: are they logical-people, people-people, task oriented-

people or intuitive-people? (Wills, 1993). S(he) also needs to understand the various learning models to choose from, and the different types of development to consider when planning for development.

After understanding the learning models and the stages of development, the professional developer designs the training course accordingly. The next stage is to select, recruit or develop and certify the trainers (Wills, 1993). Depending on the training workload, choices about trainers need to be taken (Wills, 1993). If there are enough trainers to cover the training courses required then the choices depend on their qualifications and their suitability for the course subject; the decision should also be taken if they need to be developed in the field. If there are not enough trainers within the organisation, then selection and recruitment needs to be considered.

After selecting the trainers, the professional developers make decisions about the training locations and resources (Wills, 1993). Prior to making these decisions, the course specifications should be identified. It should be clear what facilities, materials and equipments would be required? What is the budget? And what types of training methods should be used? The location of the training should also depend on the number of trainees, the residence of trainees and the type of learning required: is it home learning, open learning, conference or a meeting?

To plan for a training program, it requires finalising the training budget. There is a big debate about the training budget and how much it costs to train? Or instead analyse how much it costs not to train? However, usually it is not an easy task to estimate the cost of training due to the difficulty of deciding what to be included in the cost (Wills, 1993).

Following the professional development planning stage is the design and implementation of the training courses (Earley & Bubb, 2004) or “course administration” stage (Wills, 1993). This stage starts with preparation for delivery of courses such as preparing course lists, confirming training places, registering for courses, sending details to trainers and trainees, preparing materials, orienting

trainees, reviewing lesson plans, obtaining teaching equipments and materials and supplies and setting up the training room.

Delivering the training course is the main feature of this stage. There are several models of best practices for delivering and implementing the training course.

Models of teaching and learning as models of implementing the training courses

There are several learning models outlined by various researchers which, though different in name, share common elements. Joyce & Weil (1980), Hunter (1990) Bell & Gilbert (1996) (Figure 2-2), Wills (1993) and Mastery Learning (Warren, 2003) suggest models that provide basic best practice in learning. There are some other learning models that are discussed in the Learning Style section.

The Madeline Hunter Direct Instruction Model argues that before the lesson is prepared, the instructor should be oriented with the objective(s) of the lesson. S(he) needs to know what it is expected that the learners should know and the standard of performance that the learners need to reach, plus any other important related information to establish the framework of the session.

As part of the preparation stage, the mastery learning model suggests dividing the curriculum into relatively smaller learning units, each with their own objectives and assessment techniques; learning materials and instructional strategies should be identified at this stage. It also suggests that each unit be preceded by brief diagnostic tests whose results help to provide suitable instructional materials and strategies.

Mastery Learning suggests clearly stating the objectives representing the purposes of the course, and the Joyce & Weil model recommends orienting the learners. After establishing the framework for the lesson, the instructor presents the objective of lesson and level of performance required to the learners. S(he) describes the content of the lesson and relationship to prior knowledge/ experience and discusses the procedures of the lesson - the different parts of the lesson and learner's responsibility during each activity. For example, in this stage, teachers

clarify the problematic aspect of their teaching with the feeling that they are competent teachers who are developing through this program (Bell & Gilbert, 1994).

The next stage, in all the learning models, is the presentation stage in which the instructor explains the new concept(s) or skill(s), demonstrates and gives examples - orally and visually. The instructor relates the experiences of the learners to the objectives of learning, which can be done by focusing learners' attention on the lesson; creating an organising framework for the ideas, principles, or information that is to follow; extending the understanding and the application of abstract ideas through the use of example or analogy. During this stage teachers are encouraged to adopt the role of teachers as learners and teachers as researchers (Bell & Gilbert, 1996). The instructor provides the information needed for learners to gain the knowledge or skill through lecture, film, tape, video, pictures, etc.

After the presentation of the material, all models suggest the instructor asks learners to show them examples of what is expected as an end product of their work. The critical aspects are explained through labelling, categorising, comparing, problem-solving and summarising. After that, the instructor checks out for understanding to determine whether students have understood and are 'doing it right' before advancing to practice. If the instructor has any doubt that the learning is not done then s (he) should re-teach the concept or skill before practice begins.

The Joyce & Weil model calls this stage "structured practice" while mastery learning calls it "modelling" and Bell & Gilbert call it "support". At this stage, the instructor leads learners through practice examples, working in a lock-step fashion each step of the task as it appears in the VRT, (Visual Representation of Tasks) for example, using an overhead projector and doing practice examples on a transparency so that learners can see the generation of each step. Then a visual instructional plan (VIP) - in which each step is detailed - is provided to pupils to use when they get stuck in individual practice or independent practice and refer to the VRT while working practice examples as a group.

Bruce & Weil (1992) call this stage "information processing" where there is focus on inductive thinking, concept attainment, mnemonics, advance organisers,

scientific inquiry, inquiry training and synectics. These models focus on thinking skills such as: the ability to analyse information; learn and develop concepts; memorise and assimilate information; collect and analyse data, check out hypotheses and theories, and reflect on the nature of knowledge construction; make inferences and build and test hypotheses; and problem solving.

All the above models meet at this stage, which is the application of knowledge stage. The instructor allows learners to work through activities, under his/her direct instruction, supervision and guidance. The instructor is expected to check the level of mastery of learning and provide individual corrective action as needed to ensure mastery of learning. At the end of instruction, the instructor is to make an appropriate conclusion to help students bring things together and make sense of what has been learned, to organise their learning, to form a complete picture of what has been taught, to reinforce the major points and to help establish appropriate network for further learning.

In the fourth stage, the Joyce and Weil model recommends independent practice: additional class time or homework begins when students have achieved an 85 to 90 per cent accuracy level. To ensure retention and develop fluency, students practise on their own without assistance and with delayed feedback (e.g., comments on graded papers). Five or more brief practice activities distributed over a month or more may be required to "fix" the new concept/ skill.

The Mastery Learning model and the Hunter Model agree that once the learners master the knowledge or skill, the instructor will provide reinforcement practise by giving the learners a few activities or projects to practise what they learned in different relevant situations (Anon, 2006, p.3).

Bell & Gilbert (1994) suggest that teachers learn at different rates and different conditions. And Mastery Learning emphasises that time to learn must be adjusted to fit the learner's aptitude, and no learner is to move to new material until s(he) masters the pre-requisite material. To mastery theory, "each student will master at least 90 per cent of material" and not "90 per cent of students will master the material".

All the above models suggest that at the end of the learning session, the instructors monitor learners' work, providing reflection and corrective feedback as necessary, and assess the performance of the group in determining whether the class is ready for the next session. Additional time for those whose aptitude calls for a longer learning period can be provided by giving "extra credit" assignments, supplementary activities, etc.

In the designing stage, professional developers should be aware that in addition to the professional development of the participants there are two other important types to development; these are personal and social development (Bell & Gilbert, 1996 and Bruce & Weil, 1992) (Figure 2-2). Other researchers agree on the importance of the teacher's social development. They argue that the lower performance of American students relative to many of their international peers, is largely related to how Americans teach. This is related to the fact that the American teachers work largely alone (Stigler & Hiebert, 1999).

The above researchers believe that social development is a key part of the learning process. Social exchanges form continuous and crucial bases for advances in teachers' ways of thinking and acting. They argue that communication and shared problem-solving essentially bridge the gap between old and new knowledge, and between partners' various understanding of the values and tools of the culture, which itself is altered as they search for a common understanding.

Social development focuses on cooperative learning, group investigation, role playing and jurisprudential inquiry. These form a substantial part of a learners' education by using cooperative inquiry, investigation and case studies into important social and academic problems in an attempt to improve social skills and competence, develop self esteem and problem solving skills.

Social development involves the renegotiation and reconstruction of what it means to be a teacher of a specific subject. It also involves the cooperative working with others to establish a social interaction necessary for her/his professional identity.

In social development (Bell & Gilbert, 1994), initially, teachers declare that their isolation in the classroom is problematic and does not support their growth and development. During the professional development program, moving along with other teachers helps them to identify themselves with their counterparts and also to share their problems in common and discuss ways to overcome them.

As the program continues, teachers are evaluating the collaborative ways of working. In this second stage, usually teachers share anecdotes about their experiences in the classroom and accordingly they receive feedback from their facilitator and their peers. Teachers become more cooperative, responsive and contributing to the program as they feel the trust, support and credibility of the facilitator and the other teachers. In the third stage of social development, teachers begin to actively seek and initiate the activities and relationships with other teachers. Usually a network or support group is set up for teachers.

On the other hand, personal development involves each individual teacher constructing, evaluating and accepting or not accepting the newly formed knowledge about what it means to be a teacher of that specific subject and the feeling associated with it (Bell & Gilbert, 1994). The personal family model, however, focuses on enhancing self-esteem. It emphasises a partnership between teachers and students where teachers show students how to reach their own goals. It provides the essential part of the teaching repertoire that directly addresses the students' needs for self-esteem and self-understanding and for the support and respect of others (Bruce & Weil, 1992).

In the Bell & Gilbert model, personal development goes into three stages: Initial, second and third stage. In the initial personal development stage, teachers are aware of a specific personal problem that they are facing in their classroom for which they are looking for a solution through the professional development program. In the second personal development stage, teachers have to construct and evaluate for themselves an understanding of the socially reconstructed knowledge of what it means to be a science teacher. In this stage, teachers will also be dealing with their constraints like fear of losing control in the classroom, finishing the curriculum on

time, classroom management, knowing the subject, meeting assessment requirements and appraisal. They will be sharing their concerns with other teachers either in a specific workshop or as they arose in the telling of anecdotes in the sharing sessions.

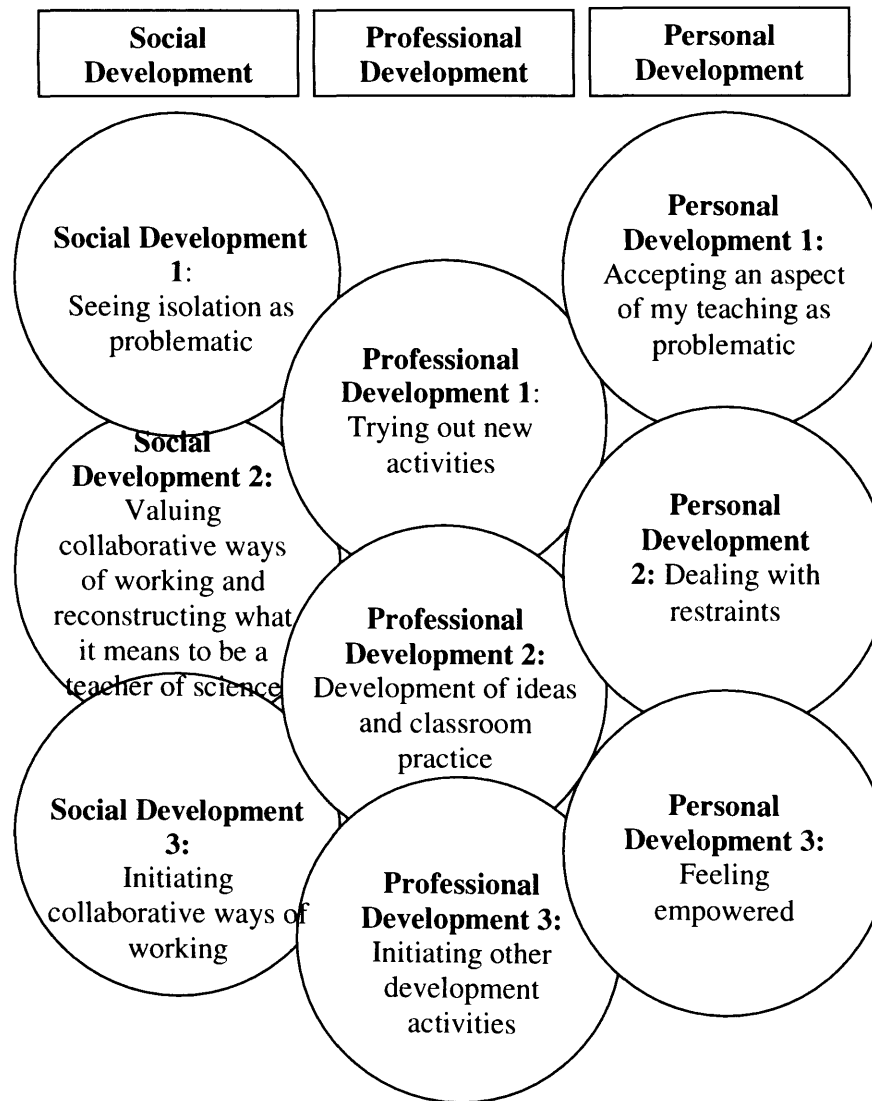


Figure 2-2: Bell & Gilbert's model of professional development

The researchers believe that addressing and resolving the above concerns has cognitive and affective aspects. Towards the end of the program, in the third personal development stage, teachers feel adequate, competent and empowered to be responsible for their own development. Professional, social, and personal development occurs only when learning occurs and change takes place. And development takes place only when learning is transferred and implemented in the workplace.

Transfer of Learning in Professional Development: from seminar to classroom

Students' learning will only be effective if the trainees' teachers are able to transfer learning to their schools, which is the ultimate goal of teachers' professional development. Transfer of learning is considered one of the most controversial concepts in learning. It is viewed as the ability to apply something learned in one situation to another setting. Transfer is defined operationally as 'improved performance on one task as a result of something acquired on a previous task' (Allen, 1998a, p.1).

Some researchers believe that transfer of learning does not occur automatically as a result of learning. Instead, it requires planning and enforcing afterwards, ensuring that the learner mastered the knowledge or skill required. The instructor provides for transfer of learning by exposing the learners to various activities or projects to practise what they learned on different relevant settings. Researchers believe that 'the failure to do this is responsible for most students' failure to be able to apply something learned' (Allen, 1998a, p.3).

Most things in math and science, especially skills, are taught in a context. For transfer to broader applicability it is necessary to decontextualize the learning. One way to do this is in guided practice by giving attention to decontextualizing the skill by providing lots of varied practice and spaced practice. [Ed.note: And to have students manipulate the ideas/skills, e.g., "Have you ever seen something like this down town?" or "How many ways can you think of to use this

concept/skill?" or "Can you explain how you arrived at that answer" (metacognition).]

(Allen, 1998a, p. 2)

Decontextualisation of learning is the most significant and least practised function of teaching, which is seen to be responsible for the poor performance of students in state and national tests (Allen, 1998a). Students fail to answer in the test because the questions come in different context than that in which it had previously been learned. 'It is important that we present and re-represent the material to be learned in as many different ways/contexts as we can ... and at the higher levels of Bloom's Taxonomy of Educational Objectives' (Allen, 1998b, p. 3).

Bloom's Taxonomy of Educational Objectives provides a structure for questioning that is hierarchical and cumulative. It provides guidance to the teacher in structuring questions at the level of proximal development, i.e., a level at which the pupil is prepared to cope. Questions progress from the lowest to the highest of the six levels of the cognitive domain of the Taxonomy of Educational Objectives: knowledge, comprehension, application, analysis, synthesis, and evaluation.

Allen, 1998b, p.1

'Unless students can be brought to the higher levels of analysis, synthesis, and evaluation, it is unlikely that transfer will take place' (Allen, 1998, p.1). There are three levels of learning that are responsible for transfer of learning (Allen, 1998b):

- In the analysis level, higher order questions are used that require students to think critically and in depth. In analysis questions, students are asked to engage in three kinds of cognitive processes: identify the motives, reasons, and/or causes for a specific occurrence; consider and analyse available information to reach a conclusion, inference, or generalisation based on this information. Words that are typically used include: identify motives/causes, draw conclusions, determine evidence, support, analyse, why, etc.

- In the synthesis level, the instructor uses higher order questions that encourage original and creative thinking. The learners will be asked to produce original communications, make predictions and solve problems. The type of questions asked are: predict, produce, write, design, develop, synthesise, construct, how can we improve, what would happen if? can you devise? how we can solve? etc.
- In the evaluation level, learners will be asked questions that do not have a single answer; such questions are to judge the merit of an idea, a solution to a problem, or an aesthetic work. The student may also be asked to offer an opinion on an issue. The evaluation questions often require the application of objective criteria or personal values.

Transfer of learning does not occur automatically. It needs to be planned from within the professional development program. To ensure the presence of effective professional development, researchers recommend the creation of a National Centre on Professional Development that will:

- Conduct and monitor research on effective staff development and the links between professional development and student learning;
- Determine the necessary conditions and resources required in states, school districts, and schools to use staff development to its full potential;
- Provide technical assistance to states;
- Evaluate the effectiveness of programs and inform "consumers" of those findings;
- Monitor, analyse, and disseminate policy modes that are effective in promoting quality staff development; and
- Function as a research and information dissemination clearinghouse to publicise the research findings.

(Sparks & Hirsh 2006, p.9)

National Centre on Professional Development can provide decision-makers with the necessary information to enable the growth and development of the teachers' practices and hence to reach the main goal of education: improving student learning. It helps in finding out the most effective way(s) to improve

teachers' practices and the link between teachers' practices and students' learning. It supports the state and district policy-makers with tools to determine staff development needs across subject areas and to assess the quality and effectiveness of the professional development programs. It works as a central information and support centre that unifies all efforts for coherent, systemic professional development. It also helps leaders and decision-makers in the development of more suitable, logical educational plans and policies.

Third stage of the training and development cycle: Monitoring and evaluation of training and development

Although different organisations have different motivations for implementing professional development programs, yet they share one main reason in common which is to achieve the organisation's goals through growth and development and transfer of learning. 'For years, companies have been operating under the assumption that they are reaping positive benefits from their training efforts. They train workers because they believe it strengthens the organisation and serves as a retention tool' (Lachnit, 2001 in Brown, 2001, p.1).

Since thousands of dollars and hours are invested in professional development to attain change and reform, organisations insist on gaining a return on their investment. Most researchers are aware that clients, whether they are those who have hired the trainer or the trainees, must be satisfied with that training. If clients do not recognise a return on their investment, whether measured in terms of time or dollars, they may not be willing to continue to invest in training (Boverie *et al.*, 1994).

They accept training as a given expense, showing human capital investments as expenditures on their corporate balance sheets, not as assets that are expected to generate income. However, because intuition and casual estimates have formed the basis of many of their training investment decisions, many companies have little evidence to verify that they are realizing positive returns on these investments.

Brown, 2001, p.1

Evaluating professional development poses a problem for many trainers, managers, executives, and other professionals with an interest in professional development (Nickols, 2000). In education, researchers believe that the evaluation process needs to shift from counting how many staff members participate and whether they really enjoyed the session to determining the needs of the school and seeking the evidence that the program meets these needs and improves student achievement.

Educators emphasise the importance of requiring accountability and concentrating professional development funding on increasing teachers' subject-matter knowledge and mastery of teaching methods. All States in USA are urged to establish an accountability test for teacher professional development. 'American education needs a way of evaluating and certifying quality staff development programs much as the "Good Housekeeping" seal of approval validates home care products and the Department of Agriculture approves food products' (Starks & Hirsh 2006, p.9) .

To evaluate the effectiveness of a professional development program, an effective evaluation system is required. Many other researchers believe that one of the most comprehensive and widely referenced models of evaluation is that of Donald Kirkpatrick (Boverie *et al.*, 1994). However, there are several other researchers who developed and refined his model to apply more specifically to education, such as Guskey (2000) and Frost & Durrant (2003).

Kirkpatrick's model (Boverie *et al.*, 1994) consists of four levels of evaluation: reaction, learning behaviour and results. However Guskey's model (Guskey, 2000) is of five levels: reactions, learning, organisation support and change, participants' use of knowledge and pupil learning outcome. The Frost & Durrant model (Frost & Durrant, 2003), on the other hand, is somehow different because it focuses on the impact of professional development: not only on the individuals, students and organisational learning, but rather on the impact beyond the school.

Both Kirkpatrick's (Boverie *et al.*, 1994) and Guskey's models (Guskey, 2000) agree on measuring participants' reaction as the first level of evaluation. This level measures the participants' feelings and reaction to the program, their perceptions and how they liked the program and to what degree the program was suited to their work needs. It measures how well the participants liked the training program (Kirkpatrick, 1979) and how they feel about the trainers and the training environment (Earley & Bubb, 2004). However, it does not measure the actual learning, therefore should not be considered as proof of learning (Antheil & Casper, 1986). Kirkpatrick suggests making the answer sheet anonymous and to allow for additional comments, in which it is usually 'difficult to discern any patterns or trends' (Boverie *et al.* 1994, p.2).

Some researchers feel that measurements of participant reactions are inaccurate and counterproductive because trainees tend to underestimate their pre-training skills and overestimate their post-training skills in an attempt to justify participating in the training program (Conway & Ross, 1984). If researchers depend solely on participants' reaction as an evaluation method, the outcome can be very misleading and extremely costly (Boverie *et al.*, 1994).

Kirkpatrick's (Boverie *et al.*, 1994) and Guskey's models (Guskey, 2000) also agree on measuring participants' learning as the second level of evaluation. This level is considered a higher and more difficult level of assessment which measures learning. At this stage, evaluation attempts to assess the extent participants have advanced in skills, knowledge, or attitude. Evaluating the impact on teachers' learning is shared with them by Frost & Durrant (Frost & Durrant, 2003), who suggest measuring changes in participants' personal capacities, interpersonal capacities and classroom practices (Earley & Bubb, 2004),

Methods used in this level range from formal and informal testing to team assessment and self-assessment (Winfrey, 1999). According to Kirkpatrick (1979) learning is the 'principles, facts and techniques that were understood and absorbed by the participants' (p. 82). A participant's learning should be measured quantitatively by pre-testing and post-testing, so that any change can be attributed to the training program (Endres & Kleiner 1990).

Learning should also be measured objectively by using a control group against the actual training group and the evaluation results 'should undergo statistical analysis so that learning can be viewed in terms of correlation and/or levels of confidence' (Boverie *et al.*, 1994). Therefore this requires a good knowledge of statistical procedures (Kirkpatrick, 1979).

In addition, all the models (Kirkpatrick (Boverie *et al.*, 1994), Guskey (Guskey, 2000) and Frost & Durrant (Frost & Durrant, 2003) agree on the subject of measuring the participants' use of new skills and knowledge in school (transfer of knowledge). This level of evaluation measures the transfer that has occurred in learners' behaviour due to the training program. It attempts to examine the newly acquired skills, knowledge, or attitudes being used in the everyday environment of the learner.

This level represents the truest assessment of a program's effectiveness (Winfrey, 1999). However, measuring at this level is difficult because it is often impossible to foresee when the change in behaviour will occur, which requires important decisions in terms of when, how often, and how to evaluate. Kirkpatrick (1979) warns that 'evaluation of training programs in terms of on-the-job behaviour is more difficult than the reaction and learning evaluations. As a result, much training is delivered without a plan for measuring the transfer of training' (p.86).

The fourth level of evaluation is measuring the results or impact of the professional development program. Kirkpatrick 'is concerned to determine if the training has affected school results or contribute to the achievement of an objective' (Earley & Bubb, 2004, p. 80). Guskey's (Guskey, 2000) and Frost & Durrant's models (Frost & Durrant, 2003), in addition, emphasise the impact on students' learning outcomes, and the Frost & Durrant model goes as far as measuring the impact on the school and beyond the school, such as the community as a whole.

This level of evaluation is considered as a bottom-line because it measures the success of the program in terms of fulfilling the main objectives of the organisation. The results of this level of evaluation, however, are not typically addressed because

determining results is hard to link directly with training (Winfrey, 1999). Kirkpatrick (1979) points out that 'there are ... so many complicating factors that it is extremely difficult if not impossible to evaluate certain kinds of programs in terms of results' (p. 89). The separation of variables to measure how much of the improvement is due to training is extremely difficult (Boverie *et al.*, 1994, p.3).

There is one level that is unique to the Guskey model of evaluation (Guskey, 2000), which is organisational support and change (Earley & Bubb, 2004). At this level, the researcher evaluates to what degree the schools are effective in their support of the professional development programs and of the participants' development, and how much they extend their resources to support the development process.

One of the problems with measuring training influence on worker productivity is that there are many areas of productivity that are intangible and difficult to quantify, such as ideas, abilities, experience, insight, motivation, so on and so forth (Brown, 2001, p.3). The 'impact evaluation is not a science' (Trapnell, 1984 in Boverie *et al.* 1994, p.92) because of the number of variables other than training that may affect long-term results.

Researchers conclude that although documentation of learning, behavioural changes, and transfer of learning is critical to the success of the professional development program, most trials to measure their impact does not exceed the reaction level (Boverie *et al.*, 1994). This situation is due to many factors related to the complexity of the evaluation process; lack of previous planning; difficulty in selecting a control comparison group; results may be effected by the pre-test (practice and sensitising effect) (Killion, 2000 b) and the goals of professional development do not always lend themselves to quantitative or measurable evaluation (Kelly, 1995).

However, if proof is not possible, evaluators of staff development should try to collect evidence about the impact of staff development (Guskey, 1998). NCREL (1997) argues that evaluation should be drawn from stakeholders such as administrators, counsellors, principals, and other instructional staff, in addition to the

participants. They suggest using both quantitative (measurement-driven) and qualitative (narrative-based) data to provide valuable information from all stakeholders, specifically, the information related to participant outcomes, organisational outcomes, and student outcomes.

Researchers should stop trying to select the ideal method of academic evaluation of staff development efforts. It is likely that new forms of evidence and approaches to evaluation will need to be applied to demonstrate the link between staff development and student achievement.

The evaluation should not be rigidly tied to teacher or student performance on multiple-choice tests but also should look for evidence that the staff development program has met the standards of the NSDC and other groups, changed teacher attitudes, affected what teachers do in the classroom, and helped prepare teachers to meet the rigorous standards of the National Board for Professional Teaching Standards. Above all else, staff development programs and policies need to present evidence of how they benefit students.

Sparks & Hirsh 2006, p.9

Some researchers consider that especially in a program designed to develop the affective quality of teaching, effectiveness must be observed rather than statistically measured. Forms of evaluation may include both written and verbal participant feedback. Observation, visual evidence, curriculum change, continued collaboration with resource organisations, and ongoing interests on the part of staff and students constitute the most telling evidence of success.

In all cases, professional development programs' evaluation can be a positive learning experience that provides policy-makers and program managers with an opportunity to assess performance and find solutions to recognised challenges. Especially, it enables them to: explore the outputs, outcomes and impacts of the program; to test return on investment; to explore possible improvements of the program's design and delivery; to learn from past experience for future planning and to identify the success of the program in reaching its goals.

In this study, one level of evaluation will be emphasised, which is the impact of the professional development program on students' learning. In education, the bottom line of teachers' professional development is the essential role it plays in the improvement of student learning. Educators, therefore, must pay attention to the influence of professional development on job performance, organisational effectiveness, and most importantly, on the success of all students (NCREL, 1997).

However, to collect evidence about the impact of staff development on student achievement is not an easy task. It is not a straightforward procedure because there may be unintended or unexpected results, which might be important and would need to be uncovered in any evaluation of the impact of professional development on students. To overcome this limitation, evaluators should choose the most appropriate research method and collect the necessary data for assessment. But what represents a good measure of student achievement is another issue that needs to be solved. The National Advisory Panel posed some related questions:

Are standardized achievement tests with a standard error often exceeding five months powerful enough to measure increases in student learning? Or, what forms of assessment will measure increases in student achievement that result from changes in teacher content knowledge and instructional practice.

Killion, 2000b, p. 15

In one staff development study, the evidence of student achievement was what students know and what they are able to do (Killion, 2000b). Indicators of student achievement include measures such as norm-referenced tests, student portfolios, performance tasks, state assessments, local criterion-referenced tests, and increased enrolment and success in advanced-level courses.

This study was initiated to identify the types of staff development program that improve, or have an impact on, student learning (Killion, 2000b, p.13). It explores the challenges of evaluating staff development and summarises the

evaluation methods used by the programs. In addition, it discusses the difficulties of attempting to prove that staff development increases student achievement.

This study used Results-Based Staff Development to demonstrate the link between staff development and student achievement. The study used experimental evaluation (pre-post test with randomly assigned control/comparison and treatment groups); quasi-experimental evaluation (post-test only with non-equivalent/matched control/comparison and treatment group, post-test only with equivalent/matched control/comparison and treatment groups, pre-post test with no control/comparison group, pre-post test with non-equivalent/ matched treatment and control/comparison and pre-post test with equivalent/matched control/ comparison and treatment groups; and qualitative evaluation methods.

To measure the impact of professional development on student learning, the research evaluation designs is preferably to be quasi-experimental or qualitative rather than experimental (Killion, 2000b), because experimental designs require the control of extraneous (subject and environmental) factors that may influence changes in student achievement. It also requires random assignment of subjects to control and treatment groups, which is not feasible in the case of staff development (Killion, 2000b).

However Ban & Faerman (1990) who failed to study the impact of an intensive, 24-day advanced supervisory-training program using an experimental design with a control group, concluded that 'the literature on training evaluation may be too optimistic in recommending experimental or quasi-experimental design for many field situations' (Ban & Faerman 1990, p. 278).

Researchers believe that although there is no doubt that professional development can raise student achievement,

Rigorous experimental research to provide proof that staff development causes increases in student achievement is not possible in the complex social environment of schools. Too many intervening

variables occur simultaneously, especially in schools engaged in systemic reform.

Killion, 2000 b, p.4

Conclusion

This literature review investigated the importance of professional development. It has shown that education and training are given special attention and priority all over the world, at all levels of policy and practice. Many organisations nowadays consider staff development as their priority because they realise its significance to business development. Although it is difficult to relate business development directly to staff professional development, however, studies have shown that there is a definite positive relationship between the two.

Researchers vary in their assumption to the degree of professional development that is related to training. Some estimate that training accounts for about 10 per cent of development (Wills, 1993) while others claim that it can reach much higher or much lower than this. But the bottom line is that training does have an impact on the professional development of the employees.

In education, developing the teachers' and principals' knowledge and skills as leaders and those responsible for the students' achievements has proved its significance between policy-makers and practitioners to the extent that policies, procedures, frameworks, plans and models of professional development programs were established to offer best practice in this field.

After studying the importance of professional development, the learning process, the learning models, the professional development models and the models of evaluation, the author has constructed a new model that can be used as a guide in the Directorate of Training to provide best practice in the field of professional development within the Ministry of Education in Bahrain.

Chapter 3: Methodology

Purpose and Objectives of the Research

This study evaluates the effectiveness of the 'Senior Teachers' and Acting Senior Teachers' Professional Development Program' offered by the Training Directorate in the Ministry of Education in Bahrain, in order to understand its impact on the knowledge and skills of the participants.

The researcher believes that studying the effectiveness of this program will offer a positive learning experience that provides an opportunity to demonstrate teachers' performance and also identify solutions to recognised challenges. She contends that it can also be used as a management information tool within the planning process; decisions can be made based on strong research evidence. It can offer policy-makers and program designers a chance to view the impacts of the training program and provide them with necessary guidance for developing future practices. It was therefore important to choose the most appropriate research method(s) to provide with sound, unbiased results.

Key Research Questions

This research investigates the impacts and outcomes of the 'Senior Teachers' and Acting Senior Teachers' Professional Development Program' that is offered by the Training Directorate in the Ministry of Education in Bahrain. It attempts to answer the following key questions:

1. To what extent does the program develop the personal and functional skills of the senior teachers?
2. What are the changes in the senior teachers' and acting senior teachers' skills and practices as a result of the training program?
3. What are the most and least effective components of the program? And what are their characteristics?
4. What factors encourage senior teachers to transfer their learning to the workplace, or discourage them from doing so?

Research Design / Methodology

This research study is evaluative in nature. It is a 'process of assessing the degree to which, and how efficiently and economically, policy, project or programme objectives have been achieved and highlighting the lessons that can be learnt for the future' (ELWA, 2002, p.3).

Evaluation can also be defined as:

the process of assessing progress against a series of performance criteria in order to determine: a) the extent to which objectives have been met; b) what outputs, outcomes and impacts project or program activities have produced; and c) at what cost. Evaluation should explore the effectiveness of procedures and delivery as well as the achievement of outcomes and impacts.

ELWA, 2002, p.3

Understanding the phenomenon is important in identifying the focus of the study and eventually, deciding upon the research methodology.

Any serious methodological consideration in the framework of any science should, however, regard the nature of the investigated phenomenon first, and thereafter address the question which method may be adequate to describe, explain or understand this phenomenon'.

Kelle, 2001, p.2

The choice of research strategy, design and method depends on the philosophical, social, political and practical influences on the researcher's conceptualisation of the research problem (Gill & Johnson, 2002). Researchers are influenced by their code of ethics, their philosophical assumptions regarding both human behaviour and what constitutes warranted knowledge. In addition, researchers are also influenced by their understanding of the political context of the

research and its contingencies and their understanding of resource constraints upon their research.

In studying the effectiveness of the Senior Teacher's Professional Development Program, the researcher will be dealing with a program that is partially her product (for program details see chapter 4). She was involved in developing it and also teaching part of it. She was also part of the training system that she will be investigating. Therefore, this involvement could work both ways. It can work positively, as she is acquainted with the whole system, she knows its social context and its politics, and how the system works. Or it can work negatively, as she may sympathise with the situation or colour the outcome according to her previous understanding.

The Senior Teacher's Professional Development Program was constructed by the Directorate of training (see program background, chapter 4) and attended by the senior teachers and acting senior teachers in the Bahrain government secondary schools. In her quantitative study, the researcher took the program participants' view before and after the program to measure the changes in their personal and functional skills as a result of the program. And in her qualitative study, she involved all individuals who are related to the trainees and the program such as: teachers and school principals who would witness and detect the changes in the trainees' skills; the trainers and training officials.

The nature of the research; the purpose of doing it, who would be the beneficiaries of the outcome, and how the results will be utilised were considered before deciding on the appropriate research method(s). Studying the effectiveness of the training program is evaluative in nature, and any evaluation trial is a sensitive issue in so many parts of the world, including Bahrain, because it can bring to light defects or inadequacies.

It may involve criticism of the Professional Development Program in particular and of the Ministry's training system in general. Taking criticism can be difficult. 'It's like a horse pill - good for you but very hard to swallow' (Lewis, 2006, p1). Although the ability to accept constructive criticism is one of the most important traits of any

system, it is the most difficult to do. It requires courage, self confidence and openness. It requires an awareness of the importance of finding out the weaknesses as much as the strengths to improve any situation.

The researcher chose the positivist approach in order to test the presence of relationships between variables of interest (based on hypotheses derived from theory), or to draw conclusions about the quantity of specific qualities in a population, based on measurements extracted from a sample. Usually the hypotheses, questions, or relationships are rooted in specific previous understanding, and results are drawn to make a specific law (Alberta Consultative Health Research Network, 2005).

In this study, the researcher needed to find the relationship between the variables based on her research questions. She needed to know if the senior teachers' personal and functional skills have been developed as a result of the training program. She needed to investigate the changes in their practice and the factors responsible for those changes. The researcher needed to point out the most and the least effective components of the program, and their relationship to changes in the skills and practice of the senior teachers.

The aim was to determine the relationship between the program as an independent variable and the changes in the senior teachers' personal and functional skills and practices as a dependent or outcome variable. The relationship between variables was determined by using effective statistics such as correlations, relative frequencies, or differences between means.

'Quantitative research designs are either descriptive (subjects usually measured once) or experimental (subjects measured before and after a treatment)' (Hopkins. 2000, p.1). As a matter of convenience, in studying the effectiveness of the Senior Teachers' Professional Development Program, a non-experimental, descriptive case study was used. It is non-experimental because there was no testing of the level of knowledge or skills before and after the training. The senior teachers (trainees) were studied as one case in order to understand the phenomenon in depth.

The information regarding their personal and functional gain was collected directly from the sample group after attending the training program. A questionnaire was designed and administered to track the changes in the trainees' knowledge and skills as a result of the training program, from their own point of view.

Through the quantitative approach, the researcher studied the extent to which the trainees were aware of, sensitive to, believe that, think this, or tend to behave in a certain way in relation to the program. Answers were sought to questions related to how many, how far, how much or to what extent the training has an effect on the knowledge and skills of the trainees. This approach provided a quantified relationship between the change in knowledge and skills as a dependent variable and the training program, as an independent variable.

However, it is acknowledged that there may be some other factors that might have influenced the changes in the trainees' skills or behaviours, such as the learning and training process, the training environment, the training system's laws and regulations, the school expectations, the trainees' motivations and other related variables. These variables could not be detected through the questionnaire.

Quantitative inquiry has its limitations. It takes little or no consideration of the individuals, groups, societies or cultures, it tends to form generalisations which might not apply to individual cases, it focuses on specific theories neglecting other important ones, the facts involved are considered value free, it does not value the effect of the interaction between inquirer and phenomenon (Lincoln & Guba 1985 in Denzin & Lincoln, 1994). For these reasons, qualitative data was used as well to give more consideration to the individuals' values and other variables.

The qualitative data was used to give emphasis to processes and meanings that are not thoroughly examined or measured by the quantitative data, and to describe meanings and the understanding gained through words or pictures. Qualitative research was used to explore the training effect or the trainees' behaviour and the perception behind it. It was also used to stress the socially

constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape the inquiry.

Qualitative data was gained through interviews, group discussions, written records, documents and observational reports. These methods were combined to get the best results (Silverman, 2002). Using interviews and observation provided valid data (see validity and reliability of research) that was collected closely and solely from the training scenario. Interviews helped in understanding the trainees' feelings, principles, morals, philosophy, ethics, and motivations behind the changes in their skills and behaviour. It also helped in identifying opinions about the program and related issues, such as the training system, the training program, and the training environment.

The fieldwork for the study was an expensive method in terms of time and energy in administering it and also in analysing its data. It required the researcher to approach trainees, trainers, training department staff, school teachers and principals (see research sample in chapter 4). The researcher visited schools, training settings and places to observe and record observations from which were eventually built concepts, hypothesis and theories.

Validity and Reliability of Research

One of the main challenges that face any researcher is the issue of validity and reliability of the research instruments. To minimize threats to validity at different stages of the research, Cohen (2000) suggests 'choosing an appropriate time scale, ensuring that there are adequate resources for the required research, selecting an appropriate methodology, selecting appropriate instrumentation for gathering the type of data required, using an appropriate sample, demonstrating validity, ensuring reliability, selecting appropriate foci to answer the research questions, and avoiding a biased choice of researcher' (p. 115-116).

It is important to diversify and use appropriate instruments to ensure that the readability level is appropriate not to avoid any ambiguity in instructions, terms and questions (Morris and Gibson (1987 in Cohen et.al. 2000). Instruments should

define the complexity of issues, and insist on avoiding leading questions or making the instruments inappropriate for the issues by being too long or too short, too many or too few (Morris and Gibson (1987 in Cohen et.al. 2000)..

According to Cohen (2000), Aboutaleb and others, there are different types of validity:

Content Validity: when research questions provide the researcher with the data needed for the research.

Criterion Validity: when there is consistency in the responses even though the questions are worded differently.

Internal Validity: a questionnaire is considered to have high internal validity when the respondents provide consistent answers to a series of similar questions.

External Validity: when the sample is truly representative of all the research population.

Dependent Variable: when there are no extraneous factors at play which can influence the study's outcomes.

An attempt was made to improve the validity and reliability of the quantitative data through careful sampling, appropriate instrumentation and appropriate statistical treatment of the data (for more details see section on quantitative research). In qualitative data, validity was addressed through honesty, depth, richness and scope of the data achieved, the participants approached, the extent of triangulation and disinterestedness or objectivity (for more details see section on qualitative research).

Triangulation:

It is understood that exclusive reliance on one research method may bias or distort the researcher's picture of the exact reality under investigation. It has been argued (SUNYIT, 2005) that triangulation can be employed in quantitative and qualitative studies for the purpose of reaching credibility and reliability in the research.

Some researchers suggest that qualitative and quantitative methods should be used together to provide complementary findings. Qualitative and quantitative methods had to be combined to produce adequate explanations of the studied phenomena. 'Qualitative and quantitative methods often have been used together in the same research project and in many cases such an integration has resulted in illuminating insights about the investigated social phenomena' (Kelle, 2001, p.2) Using triangulation, 'reduces the risk of systematic distortions inherent in the use of only one method' (Maxwell, 1998 in Kelle, 2001, p.93). In fact the collection of data from different sources and their analysis with different strategies will improve the validity of results (Webb *et al.*, 1966 in Kelle, 2001, p.35).

There are three meanings or models of triangulation: (1) triangulation as the mutual validation of results obtained on the basis of different methods, (2) triangulation as a means of obtaining a larger, more complete picture of the phenomenon under study, and (3) triangulation as a way of gaining any (not necessarily a fuller) picture of the relevant phenomenon (Kelle, 2001, p.2).

In this research, "between-method triangulation" was used, whereby qualitative and quantitative data were collected and analysed separately and the results were related to each other to answer the research questions, to supplement each other or to provide different complementary perspectives.

Triangulation was used in this research as a solution to validate the research results because it was realised that if solely quantitative data was used, some important factors such as the trainees' feelings, motivations and other related issues

would be neglected. The use of qualitative data only posed the risk of the study being influenced by the researcher's own perceptions and values.

However, no matter which research method(s) are used, studied variables in a relationship depend on the sample of the research.

Research Sample

The sample, extracted from a population, varies in relation to the nature of the research, its purpose and the population studied. For trustworthy conclusions to be extracted, the sample used in the research has not only to be identified but has to be well selected in terms of size and characteristics. It must be well representative of the population, preferably chosen randomly to give better and more reliable results (Borg & Gall 1983, p.90)

In an attempt to select the best, most suitable representative sample of the research's population, the original population was investigated first. The size of the research sample, the proportion of the original population, the location of the research sample and how can they be reached, were all crucial to the selection. The descriptive nature of this study required a large sample. Therefore it was decided to involve the whole research population as a sample. The estimate of the relationship is less likely to be biased if there is a high participation rate in a sample selected randomly from a population. (Hopkins, 2000, p.1).

There are several types of sampling (Fridah, 2005): Extreme and deviant case sampling, Intensity sampling, Maximum variation sampling, Homogeneous sampling, Typical case sampling, Stratified purposeful sampling, Critical case sampling, Snowball or chain sampling, Criterion sampling, Theory based or operational construct sampling, Opportunistic sampling, Random purposeful sampling, Convenience sampling, Combination or mixed purposeful sampling.

There is also a probability sampling (Galloway, 1997) in which each member of the population has a known chance of being selected and purposive sampling (Galloway, 1997) in which the sample is selected by the researcher subjectively. The researcher attempts to obtain sample that appears to him/her to be

representative of the population and will usually try to ensure that a range from one extreme to the other is included.

In this research, purposive sampling was selected. All four groups of senior teachers of different subject specialisations (Arabic, English, Maths and Science) were involved. They are all either senior teachers or acting senior teachers with considerable experience and who have held the posts for several years. They totalled 100 male and female trainees (Arabic - 25, English - 24, Maths - 27 and Science - 24) who attended the Senior Teachers' Professional Development Program as a partial requirement for their job.

Since interview was used as a triangulation method, the researcher was able to conduct interviews with as many respondents as necessary in order to gain the information sought. 'There is no simple rule of thumb' (Kvale, 1996, p.101). The interview sample was chosen randomly from the following categories:

- 23 per cent of the senior teachers who attended the training program and participated in the questionnaire, which is a total of 23 participants. (Eleven males from three boys' schools and 12 females from three girls' schools. Samples of each school consisted of one senior teacher in each subject speciality: Math, Sciences, Arabic and English)
- One teacher for each senior teacher who participated in the interviews, which makes a total of 23 teachers (the sample was chosen randomly and upon availability by the head teachers at the presence of the researcher)
- One head teacher/ school principal for each senior teacher or group of senior teachers in the same school who participated in the interviews, which makes a total of 6 head teachers (3 females from 3 females' schools and 3 males from 3 males' schools).
- 25 per cent of trainers, which makes a total of 4 trainers.
- 25 per cent of the Training Directorate officers, which makes a total of 5 officers.

Ethical Issues and Constructing Trustworthiness in the Research

Since the researcher was required to interpret data according to her perception and understanding, she was aware of the possibility that her biases, values, and judgments might become stated as objective fact in the research report. Although some researchers view the researcher's involvement as an area of criticism, others view it as positive and useful. 'The biases, values, and judgment of the researcher become stated explicitly in the research report. Such openness is considered to be useful and positive' (Creswell, 1994, p.147). On the other hand, 'using data rather than getting data is the more critical and more difficult task in qualitative research' (Wolcott, 1994, p.397).

It was understood that sole reliance on one research method may bias or distort the researcher's picture of the exact reality under investigation (Lin, 1976 in Cohen et al., 2000, p.112). More than one research method was used, to be confident that the data gathered were not simply artefacts of one specific method of collection, and to ensure the validity and trustworthiness of the results produced by the study. 'Overlapping different types of evidence can help assure that your judgments are based on the strengths of all of your assessments rather than one tool's limitations' (Willner, 2005, p.1).

Another ethical issue that should be raised is that this program was partially a product of the researcher. She participated in constructing it, following it up as a member of its committee and eventually, for the purpose of this study, evaluated its effectiveness. This issue could have threatened its trustworthiness; however, the researcher was fully aware of the situation and its consequences. For this reason the researcher was very alert and objective in collecting, recording and analysing all the research data.

Ethical Issues

There are three problematical areas of ethical issues related to questionnaires and interviews (Kvale, 1996): informed consent; confidentiality; and data generated consequences. Such consequences concern the nature of the consent and who should give it to whom. They also concern: the amount of information that should be

given, and to whom; what is legitimately private and public knowledge; how the research can help or harm interviewees; and whether the interviewers have a duty to point out the possible harmful consequences of the research data, or whether this would change the course of the interview.

In order to protect the subjects' privacy and ensure that no harm came to them, the following actions were taken:

- Permission was gained from the Training Department to use the documents available related to this program and the training policies.
- The researcher met the participants, explained to them the purpose of the research and gave them the choice of participating in filling out the questionnaire or doing the interview.
- The questionnaire explained the purpose of the study on the front page.
- For the interviews, verbal permission was gained from participants, both for the interview itself and for the recording.
- The researcher explained the purpose of the interview to the participants.
- The participants were given the opportunity to remain anonymous.
- To ensure the trustworthiness of the research, the researcher tried to be as objective as possible, to avoid any bias or previous understandings, especially arising from the fact that the researcher was part of the training team in the Training Directorate.
- All questionnaires and interviews were done after the trainees received their completion certificate, so participants were not influenced by fear of being penalised as a result.

It was apparent that interviewees were usually interested in knowing how and for what purpose their comments would be used. They wanted to know whether they would be quoted or not. The interviewees were therefore told that they would be quoted, and that they should state when they wanted to say things "off the record". When the interviews were recorded, the interviewees were assured that the information would be used for research purposes only and that no one else would have access to the tapes (College, 2006).

Data Collection and Analysis Methods

Researchers suggest that the two methods, qualitative and quantitative, can be used together to validate the results of the research, or to gain better insight into the phenomena. Trochim (2002 a) recommended that to do good research, both qualitative and the quantitative methods should be used. An explanation that is solely based on one method data may only tell part of the story. 'Quantitative data provide knowledge about the relation between two aspects. Qualitative interviews yield additional information which then helped to develop adequate sociological explanations for the phenomena ... qualitative and quantitative methods serve to provide complementary findings' (Kelle, 2001, p.5).

In this research between methods triangulation was used, which involved a range of research methods. It was intended to involve a combination of a large-scale quantitative survey with in-depth interviews, because of their suitability to the research objective. 'This would allow generalisations from a large sample to be made in addition to an in-depth picture of the workings of the project/ programme and the context within which it is operating to be gained' (ELWA, 2002, p.39).

This case study focused on evaluating the effectiveness of the Senior Teacher's Professional Development Program. It used both quantitative and qualitative methods for collecting and analysing data. For this purpose two categories of investigation were used: gathering data and analysing data.

Quantitative Methods Used

The first method was gathering data (such as information and opinions) from the key partners of the training (trainers, senior teachers, teachers who work with them, school principals, and the Training Directorate officers). This was done through questionnaire, interviews and observation.

Questionnaires are the most widely used instrument in research, especially in the educational, psychological, and social fields. Researchers use questionnaires to study the individuals' perception of and beliefs about themselves and their

immediate situation, and the relationship of these perceptions and beliefs to behaviour (Van Dalen, 1962).

In constructing the questionnaire (Appendix 3-1) and the interview questions (Appendix 3-2) the researcher first stated the goals and objectives of the survey and defined the research questions (Goddard, 1996). Based on this, the questionnaire was developed. The first section of the questionnaire enquired about participants' personal details such as: sex, qualifications, present job, number of years of teaching experience, subject speciality and previous training experience in order to study the participants' profile (Goddard, 1996).

The questionnaire items and response formats should give information most compatible with the aims of the study (Goddard, 1996). Therefore, the following sections of the questionnaire primarily focused on answering the research questions. Item 1 of the questionnaire is studying the effect of the program on the personal and functional skills of the participants (key research questions no 1 and 2). The participants were asked to rate their skills with regard to different skills before training and after training.

As proof of learning, participants were asked, in item 4 of the questionnaire, to specify changes that had occurred in their schools as a result of the training program in specific areas such as: teaching methods, teachers' attitudes towards students' learning, administrative skills, and technical skills. This part was to answer the key research question no 4.

Item 2, 3 and 6 of the questionnaire answers the research key question no 3 which enquires about the most effective components of the program and the reasons for being effective. Item 6 enquires about the areas of the training that the trainees received and taught to their teachers. To answer the last key research question, item 3 and 5 of the questionnaire enquires about the reasons that might have encouraged or hindered the transfer of learning from the training program

The questionnaire was designed specifically to suit the senior teachers who just completed the professional development program. The terminology and level of

questions used were suitable for the participants' level of understanding. When listing the program components in the questionnaires, the same names were written as they appeared in the program, and in the same sequence to ensure consistency and coherence (Gendall, 1998).

The aim was to design questions to gather qualitative and quantitative data through a mixture of closed and open questions (Goddard, 1996). Closed questions such as "scaled", tick the appropriate box were used to rate the respondents' skills and choose the reasons for the positive or negative effects of the program. The open-ended questions such as "fill in" responses were used to supply, rather than to choose, a response (Tuckman, 1972), to list areas most effective in the program that brought out positive changes at schools, lists of changes in different areas as a result of the program, and express reasons why. However, so that the context was the same for all respondents, more closed questions were used (Gendall, 1998).

Questions were designed to produce answers that are reliable and valid measures of the effect of training. The questions were clear, simple, and within the trainees' knowledge and understanding, they were not biased but rather they led to free answers. To ensure the validity of the questionnaires (Content Validity, Criterion Validity Internal Validity and External Validity) (Goddard & Villanova, 1996), the questionnaire was submitted to a group of 12 participants and resubmitted to the same group after 20 days. The result scored a coherence coefficient of 0.97 which was acceptable as a valid questionnaire.

To avoid any ambiguity in the instructions, terms and questions, leading questions or making the instruments inappropriate for the issues by being too long or too short, too many or too few, after completing the questionnaire, the researcher submitted it for examination by two types of experts (Van Dalen, 1962): an expert in methodology, to evaluate it from that perspective (framework, headings, types of questions, and their logical sequence), and an expert in the research subject to evaluate its content. Accordingly, their suggested changes were included in the questionnaires.

To ensure reliability, the questionnaire was first administered to 8 people from different fields in research methodology or training. All questions were agreed by all the participants that they were good except one question which was refused by 2 participants (75 per cent agreement). That only one question t was excluded from the questionnaire.

Secondly, the questionnaires were piloted on 6 trainees from the total population of the survey (100) prior to administration to the survey sample. The purpose of piloting is to check for wording and clarity which helped checking types of responses and confounding variables. The piloting of the questionnaire suggested some changes such as: unification of the titles of the program content to state them exactly as in program with the same order; item 4 needed to be replaced with a semi-open question, to give participants more chance to list the changes that occurred at their school as a result of the training program in relation to specific areas such as administrative skills, technical skills, teaching methods and teachers' attitudes toward students.

The total population of the questionnaire was 100 senior teachers and acting senior teachers who attended the Senior Teachers' Professional Development Program. Since 18 trainees were used for piloting and validating the questionnaires, the research sample was only 82 senior teachers who attended the four areas of the training program.

The questionnaires were administered by the researcher, who handed the questionnaire to the respondents directly and personally, in a confidential atmosphere. The researcher explained the purpose of the survey, answered the participants' questions about the survey's items and administrative procedures, and ensured that proper survey procedures were followed.

Data collected by this questionnaire remained insufficient because the extent and depth of the answers given by the respondent could have been limited by the question wording, and the commitment and willingness of that person to tell the truth. Sole reliance on one research method may bias or distort the researcher's

picture of the exact reality under investigation (Lin, 1976 in Cohen *et al.*, 2000, p.112).

Questionnaires can be complemented with interviews attended by a sub-sample chosen from among the sample group. The main purpose of the proposed interviews is to go through the information given by the interviewees in depth and debate with them, their ideas and assumptions. 'Overlapping different types of evidence can help assure that your judgments are based on the strengths of all of your assessments rather than one tool's limitations' (Willner, 2005, p.1)

The questionnaire response rate was 99 per cent. To analyse the data collected by questionnaire, SPSS (statistical research software package) was used as an analysis tool. For categorical data, the researcher looked at the frequencies and reported the percentage giving a certain response. Sometimes the mode for the most common response was used. For continuous data with an approximately normal distribution, the mean and standard deviation were used, as were the median, minimum and maximum for non-normal data.

Qualitative Methods Used

There are substantial validity limitations on data gathered through questionnaires alone; therefore, in order to compensate for such a deficiency, the researcher complemented the questionnaire by interviews that were held with a sub-sample chosen among the main one.

Interviews were used mainly to increase the validity of the research. They were used in conjunction with the questionnaires to follow up unexpected results and to go deeper into the motivations of the senior teachers and the reasons for responding the way they do. The interview was used to gather more detailed information, to know what was in the participants' minds and to measure their values, preferences, attitudes and beliefs.

The interviews were formal, and identical sets of questions were used for participants (Appendix 3-2), and the answers were recorded after obtaining the

participants' authorisation. They were unstructured interviews because the researcher injected her own questions to ask for more elaboration on the subject matter, depending on how the participants were responding. The researcher should try to be as objective as possible so when s (he) asks for clarification s (he) does it without influencing the interviewees' statements (Suler, 2006).

The interview questions (Appendix 3-2), were mostly linked to the key research questions (see research key questions). The senior teachers, teachers and school principals were asked several questions related to the development of the personal and functional skills and the changes in the senior teachers' and acting senior teachers' skills and practices as a result of the training program (research question 1). They were asked about the effect of the program on the senior teachers' current practices, their teaching styles, their support to students' learning, their relationship with the teachers at work, their relationship with the administrators, and the overall students' learning (research question 2).

To know the most and least effective components of the program (research question 3), the participants were asked to list the activities and methods that the senior teachers used to transfer the knowledge and skills to the their teachers at schools.

To find answer to the research question 5, the senior teachers were asked to explain the factors responsible for encouraging or discouraging their personal and functional development. And at the end of the research questions all the participants were asked to give their comments on the program.

However, the interview questions for the trainers were mostly related to their training methods and the program itself. The trainers were asked to give their opinion on the organisation of the program, the atmosphere of the program, the time, their training activities, if provide senior teachers with feedback and tools to apply in the schools and their overall views of the program.

In addition to all of the above questions, the training officials were asked more questions related to the policies and procedures used in developing and

implementing training at the Directorate of Training. They were asked about studying the trainees' training needs, trainees' and trainers' selection procedures, the trainees' follow up, the evaluation of the program and the effect of its results.

Open-ended questions were used for interviews in the belief that they have advantages in that they are flexible; they allow the researcher to probe answers and clear up any misunderstandings; enable the researcher to test the limits of the respondents' knowledge; encourage co-operation and help establish rapport; and allow a true assessment of what the respondents really believe (Kerlinger, 1970).

The interview questions were all direct, dealing with specific issues related to the professional development program, the training system or the rules and regulations of the Ministry of Education. The questions were sequenced from general to more specific ones. They were a mix of factual questions and questions that asked for opinions, and started with unthreatening questions to put the respondents at ease.

The researcher validated her interview questions by submitting it for examination by two experts: one in methodology to check its framework, headings, types of questions, and their logical sequence; and an expert in the research subject to evaluate its content. The result of this examination lead the researcher to change questions to more specific ones such as: to specify areas of change in teaching styles and methods, students' learning, relationship with the teachers, relationship with the administrators and ask the participants to give real examples. Accordingly, she changed her interview questions. In addition, she piloted her questions on 8 senior teachers from the same group who were not in the interview sample group to check if there were any bad questions. The questions were clear therefore she did not make any further changes.

Appointments for the interview were made at least one month in advance, to ensure the availability of the respondents, and the interview timings were chosen with care. Interviews were scheduled during times when senior teachers, teachers and school principals were relatively less busy, towards the end of the academic year when the students finished school and went home for their summer holidays.

The trainees were interviewed for about 45 minutes, individually in the researcher's office; the school principals and the teachers were interviewed individually for about 25 minutes in their schools; and the trainers and the training directorate officials for about 30 minutes in their offices.

The interview setting was chosen carefully to establish an appropriate atmosphere in which the participant would feel safe to talk freely, with no interruptions or distractions. The participants were briefed on the purpose of the interview in order to make him/her feel at ease; the recording of the responses was explained, and the respondent's consent for recording obtained.

To generating meaning from interview data, the resources have shown several stages in analysis. Several methods were used, such as:

- Counting frequencies of occurrence of ideas, theme, words;
- Noting patterns (repeated themes, causes, or explanations);
- Clustering – categorising ;
- Making metaphors – connecting data with theory;
- Splitting variables to elaborate, differentiate, and “unpack” ideas;
- Submitting the particular to the general in order to clarify the key concepts;
- Factoring – bringing a large number of variables under a smaller number of unobserved hypothetical variables;
- Noting relationship between variables;
- Finding intervening variables;
- Building a logical chain of evidence – noting causality and making inferences;
- Making conceptual/theoretical coherence.

Observation-based Data: Training Session Observations

Questionnaires and interviews are not supposed to report the full truth of the state of affairs because they are normally used to scan opinions and are representations of the minds of people. The images of the training programs developed and carried in people's minds are essentially drawn with prejudices, cultural stereotypes, academic background and professional experience. Thus, on

the one hand, the data collected by questionnaires and interviews could be suspected of suffering from eclecticism and partiality and risk not to cover the whole issue of training transfer. On the other hand, questionnaire and interview, being designed to give an account of what was done, or what it is going to be done, cannot show the process of training actions in the workshop or in the classroom. That is why the researcher went to into the field to observe workshop training practices and record observations.

Observation can help the observer to see things that might be unconsciously missed, to discover data that the participants might not freely talk about in questionnaire or interview situations and to look at what is actually taking place in situation rather than at second hand.

Patton, 1990, p.203-205

Observation can provide a better understanding of a situation because researchers have found that what people say they do is not necessarily what they actually do (Patton, 1990). In the present research, observation was used as an appropriate cross-referenced method to support the findings of the questionnaire and interviews that were used in the study.

The researcher had to be selective, observing a few activities, events or phenomena that were central to her research questions; this limited the focus of the observation considerably. Observation gathered data on the physical setting of training sessions (the training rooms physical environment and its organisation), the human setting (the characteristics of trainers and trainees); the interactional setting (the interactions that are taking place, formal, informal, planned, unplanned, verbal, nonverbal, etc.) and the program setting (the resources and their organisation, pedagogic styles, curricula and their organisation). The researcher did her observation in the training rooms where training took place and also made observations of different trainers.

The researcher used a semi-structured observation. Although she was clear on what she was looking for, she actually observed the trainers, the trainees and the training activities as they actually happen and recorded what could be related to her

research. This type of observation provided her with qualitative data that helped her to find some explanation for some unresolved issues. The questions that the researcher had in mind when she went for session observations are shown in Figure (3-1). The questions were based on three main areas: the training techniques, the communication during training sessions and the physical atmosphere of training.

Type of questions	Questions
Related to training techniques	How does the trainer start the session?
	What is the subject of the session?
	What activities does the trainer use?
	How long does each activity take place?
	How the session stops for the break?
Related to communication	How does the trainer motivate and encourage the trainees?
	How do participants behave toward each other?
	How are participants connected with each other?
	What are the main roles and functions of the participants?
	Who is doing the talking and who is doing the listening?
Related to physical setting of training	Where does the training take place?
	What is the physical setting of the training room?
	What does the break area look like?
	What do they have for break?

Figure 3-1: Observation questions

For the purpose of sampling, it was decided to observe one session for each trainer, 16 sessions in all. All observations were carried out on one of the four groups only (the English specialty group). The same program, with the same trainers in the same training room was chosen, using the same training tools in order to get a continuous monitoring and eliminate the risk that trainees might react to the researcher's presence, leading to a change of behaviour. This was eliminated by a long-term observational study which gave a glimpse of the natural behaviour.

There are different types of observations that require different roles of the observers. Although all observers are some kind of participants (Adler and Adler 1994), since we cannot study the world without being part of it, Gold (1958)

classifies the observer's role at one end as a complete participant, moving to a participant-as-observer, then to an observer-as-participant, and finally to a complete observer. The complete participation involves observers taking on membership roles (Slavin, 1992). A participant observer is more likely to build rapport with the observation's subject and is more likely to see their point of view. S (he) is more likely to be accepted as a partner to share secrets with which might reduce her/his objectivity. The participant observation also runs the risk of significantly influencing the events being observed; and observed subjects often "mask" what is really going on from the observer (Smith, 1978).

The role of the complete observer, however, is demonstrated in the one way mirror, the video cassette, and the audio cassette recording in which the observer cannot be viewed by the studied subjects. The observer tries not to alter the situation being observed in any way but simply records whatever s (he) sees (Slavin, 1992). This type of observation is also viewed as a naturalistic observation (Borg and Gall, 1983). The naturalistic observation occurs when the researcher intervenes in a natural situation in a manner that cannot be detected by the subjects.

The use of recordings such as videotape or audiotape permits both qualitative and quantitative analysis (Smith, 1978). It has many advantages one of which is that it allows the observer to replay the tapes as often as necessary. It also has some disadvantages (Borg and Gall, 1983). It can be expensive and technical competence is required in order to obtain satisfactory video/audio recordings. Audiotape recording is limited to recording verbal behaviour, and it can be hard to identify speakers when listening to audiotapes. Video recording, if done by other than the researcher, requires a trained, well informed person who knows the research hypothesis, design and expectations in order to know what to record and how to do it right. Furthermore, the researcher needs to seek the participants' permission before audio or video recording, especially when it might interfere with a culture or a belief.

In this research, the observation was carried out as a participant observer, a role which was more likely to build rapport with the trainees and the trainers and

was more likely to represent their point of view. The researcher was aware of the danger of being accepted as a confidante, which might dilute her objectivity. She was also aware that her presence might run the risk of influencing the training session; and might “mask” what is really going on. To reduce the observer effect (Borg and Gall, 1983), however, the researcher did not record any observation for at the first ten minutes, and she made more than one visit prior to the real observation so the trainees and the trainers were used to her presence.

Observations’ data recording and analysis was done manually, as the researcher observed and recorded the targeted behaviour as it occurred. To eliminate any observation errors, the researcher did the observation and the recording herself. When recording observational data, there are three types of observational variables to be considered (Brown, 2000): descriptive recording, low-inference recording and high-inferential recording. When writing field notes, ‘the researcher should include descriptive as well as inferential data. It is important to describe the setting and the mood in a detailed manner. All such things that may change behaviour need to be noted’ (Brown, 2000, p. 4). Therefore, the researcher used both descriptive and inferential data.

The descriptive recording required no inference on the part of the observer. The observer saw something and wrote it down. This low-inference recording required little inference on the part of the observer, which yielded reliable data. The high-inference recording required the observer to make inferences before a variable was recorded. Some examples of inferential variables were: uncertainty, confidence, anxiety, confusion, etc. which were detected through some trainees’ behaviour. For example if the trainees were not actively participating in the session, the researcher inferred that they were bored. The high-inference variables allowed the observer to make an evaluative judgment when used as evaluative variables. For example, if the observer needed to obtain a rating of the quality of relationship that the trainee had with the trainer, she needed to do some evaluative inferences of a set of behaviours that the trainee was exhibiting while communicating with the trainer.

There are four major categories of techniques in recording observational data (Borg & Gall, 1983): duration recording, frequency-count recording, interval

recording, and continuous recording. The researcher used continuous recording. She recorded all interactions, verbal and non-verbal communications, activities and comments used by trainees and trainers. A brief narrative was written, in chronological order, of everything that occurred during the training session.

After recording the data, coding procedures were developed for analysing the data collected by observation. Simple data from closed-ended questions from observation forms were analysed by using statistical software (SPSS). For data from open-ended questions, the researcher used content analysis (see the section on qualitative data analysis).

These analysis tools can provide a scientific relationship between types of interactions and training methods used in training sessions by different trainers, with the degree of effectiveness of this session that the trainees expressed through the questionnaire and in depth interviews.

Although 'observation has been characterised as non-interventionist' (Adler and Adler, 1994, p.378) where researchers do not seek to manipulate the situation, the subjects, or deliberately create new provocations, the observation method is still surrounded with some ethical issues. The issue of non-interventionism is itself problematic. It is not as clean as it sounds because observers inhibit the world that they are researching, and their influence may not be neutral (the Hawthorn and Halo effects). The observer effect cannot be neglected because it can be significant.

In addition, there are numerous ethical dilemmas surrounding the observation method (Cohen, *et al.*, 2000) swinging between invasion and protection of privacy and the public's legitimate "right to know", between observation as a superficial tool and as important social research. There is a dilemma surrounding overt and covert observation (Mitchell, 1993). The researcher preferred to use overt observation so the subjects know that they are being observed unlike in covert observation, where the subjects do not. The researcher used overt observation to follow the principle of informed consent, protracts the privacy of subjects and private space and treats the participants as humans.

Complete participation, although sometimes the best way to collect accurate information, involves many problems. The most serious is the ethical problem of deception and the reaction that will occur if it is discovered (Borg & Gall, 1983). The other important problem that cannot be neglected is that the observer's participation may significantly modify the phenomenon being studied.

The credibility of the data collected by the researcher was questioned because the researcher is the same person who is in charge of the training program. Could the position of the researcher interfere with the validity of the data gathered or analysed? This was an important question that the researcher needed to address. For that purpose, she made sure that she was not manipulating the situation or the subjects. Furthermore, she protected the right of the senior teachers by informing them that they were observed and that the main objective of the research is to understand and improve the training activities and to improve the training in the best interest of the field of training.

Observation data was basically used to cross reference the data collected by questionnaire and interviews.

Document Research

In order to analyse the senior teachers' professional development program's content, the training policies, the rules and regulations surrounding the training, the researcher used document research technique. Through classification, comparisons and crossing of collected data, this study expected to reach a reliable interpretation of the non-occurrence of training effects.

'Documents and records (e.g. archival records private records) have the attraction of being always available, often at low cost and being factual. On the other hand they maybe unrepresentative, selective, lack objectivity, be of unknown validity, and may possibly be deliberately deceptive' (Cohen et.al. 2000, p.147)

The researcher chose to use the document research because she had good accessibility to the program documents due to the fact that she was a Training

specialist at the Directorate of Training in the Ministry of Education. A second reason was that document research offered her an inexpensive way of cross-referencing evidence. The researcher looked at all the program documents without being selective in order to be objective and avoid miss-representation. She tried to find evidence required from documents which are original, relevant, neutral, unbiased, and credible in order to serve the purpose of her study.

Qualitative Data Analysis

Qualitative research may offer the researcher with in depth investigations that may lead to richer, more diversified data (Bell, 2003); however, researchers find that qualitative data analysis as more complicated and problematic than quantitative data (Bell 2003). To make it simpler, some researchers use quantitative approach to analyse qualitative data, which involves content analysis (Esterby- Smith, 1994 in Bell, 2003).

The main purpose of content analysis is 'to take a verbal, non-quantitative document and transform it into quantitative data' (Cohen et al. 1985, in Bell 2003, p.4). 'It involves certain key phrases or words being counted and the frequencies analysed. The selection of these would depend on the hypothesis the researcher wished to approve or disapprove'. (Esterby- Smith, 1994 in Bell 2003, p.4).

The researcher used content analysis in her documentary research interview transcripts and observation data along with other research methods to provide methodological triangulation (Robson, 1994 in Bell, 2003). The researcher followed Robson method (1994 in Bell, 2003) to conduct content analysis:

1. The researcher used the research questions as a focus for the analysis
2. She decided on the sampling strategy from the beginning. In the document analysis, the researcher identified the program's documents, minutes of meetings, Ministry of Education policies, yearly reports and plans, Directorate of Training yearly reports and plans, Training Manuals and policies. However, in the analysis of interview scripts, she identified the interview sample.
3. The researcher has done preliminary analysis to the collected qualitative data.

4. She put all collected data in index form.
5. She defined the recording units in forms of phrases and constructed categories for analysis (See appendix 5-10 and 5-11 as examples).
6. The researcher tried to conceptualize the data rather than mechanically use them
7. She Sorted, resorted and played with the data
8. To gain understanding, the researcher compared and contrasted between data.
9. To test the reliability of the process, the researcher extended her analysis to her colleague to check it.

Although some researchers (Bell, 2003) believe that it is sometimes appropriate to apply quantitative approaches to the analysis of qualitative data such as documents, Esterby- Smith et al. (1994 in Bell, 2003) argue that this might ruin the richness of the data and falls short to give the total view which is important in qualitative research.

Conclusion

Although this evaluation was intended to feed into the development and improvement of the professional development program, it is also a summative evaluation because it is intended to look at the program's outcomes and impacts. This research aimed at gaining an overall evaluation of the professional development program's effectiveness and its impacts on its beneficiaries and partners.

It is a case study which drew out open-ended responses and resulted in rich, in-depth understanding of participants' experiences of the training program, individual variation, process and quality issues and the effect of context on outcomes. In this research, the researcher aimed to gain a detailed understanding of a specific case, the Senior Teachers' Professional Development program. She intended to gain an understanding of perceptions, views, circumstances and effects of the program.

The researcher decided to use quantitative research looking for non-interactive position to ensure that values and other biases did not influence the outcome. 'Scientific research designs involve the collection of quantitative data from larger samples and these designs generally allow more robust generalisations about the population being researched to be made' (ELWA, 2002, p.4). The main research instrument used was the survey questionnaire.

The researcher also used qualitative methods to ensure that human experiences were not neglected in the context of the study, to avoid the problem of relating to humans as objects without any considerations to the meanings and purposes of their behaviour. The inquiry involved considers little or no view of the individuals, groups, societies or cultures (Denzin & Lincoln, 1994); it tends to form generalisations which might not apply to individual cases; it focuses on specific theories neglecting other important ones; the facts involved are considered value-free; it does not value the effect of interaction between inquirer and phenomenon. For this reason this researcher called for the use of qualitative inquiry (constructivism) which has more consideration of the individuals' values and other variables.

The researcher used interviews to gather data on areas that were not easily quantifiable, such as perceptions, attitudes and motivation, in addition to process issues.

While the questionnaire and interviews present the opinion and reaction of the training partners (trainers, trainees, training specialists, teachers and school principals) related to the training program which can be biased with a mixture of prejudices, cultural stereotypes, academic background and professional experience, the researcher used observation to scan the whole picture by showing the actual process of the training action in the training room to evaluate an event or verify a reaction expressed by the training partners.

In studying the effectiveness of the Senior Teachers' Professional Development Program, observation was used to study the physical setting, which includes the physical environment of training (training room) and its organisation,

and the training aids (materials and equipments) that are available or used for training. It should also be used to study the interactional setting, which includes the interactions that are taking place (formal, informal, planned, unplanned, verbal, nonverbal, etc.) between the trainer and trainees or between trainees themselves. To observe the physical setting, a highly structured observation should be used. The researcher is required to design an observational form or use a standard observational schedule in order to evaluate the training physical setting against criteria of a good, supportive training environment to check its availability in the actual training room.

The researcher preferred to go to the training area to record her observations on workshops and training sessions, in order to gain an accurate picture of the training environment, training methods and trainers' classroom management techniques.

In a culture like that of Bahrain, where people are not usually asked to judge situations or give their opinions about matters, observation is a necessary tool for researchers to see things that the subjects are not able to speak about or express. Observation gives the flexibility to gain insight into situations which cannot be studied through other research methods. In fact, the unobtrusive observation which can be done through video – audio recording, where there is no direct contact with subjects, can allow for hard evidence, especially when it is verified by what subjects talked about or expressed.

Chapter 4: Findings

Introduction

In 2002 the Training Directorate in the Ministry of Education, Bahrain conducted a mandatory professional development program for all senior and acting senior teachers in Bahrain government secondary schools which was aimed to develop their knowledge, skills, attitude and practices (DoT, 1999-2000).

The purpose of this study was to gauge the effectiveness of the senior teachers' professional development program in meeting its objectives and to understand its impact on the knowledge and skills (personal and functional) of the participants. It also needed to identify the most and least effective components of the program and their relationship to the changes in the participants' skills. In addition, factors that encouraged or discouraged the senior teachers to transfer their learning to their schools were also to be explored (research key questions - chapter 3).

To find answers to the research questions, Data collection was achieved using several methods of investigation. The researcher used questionnaire, interviews, observation of training sessions and analysed program documents that included reports, minutes of meetings, manuals etc.

The Questionnaire Sample of 82 senior teachers was selected from four subject specialities: Arabic, English, Maths and Science. The following is the breakdown of the sample of responses achieved.

	Number	Percentage		
Total number of participants	82	100%		
Male	38	46%		
Female	44	54%		
			Male	female
Diploma/Bachelor	61	74%	31	30
Master	21	26%	8	13
Acting senior teachers	16	20%	12	4
Senior teachers	66	80%	27	39
Received previous training	48	59%	25	23
Had not received training	30	37%	11	19
Up to 15 years' experience	18	22%		
15 to 20 years' experience	28	34%		
Over 20 years' experience	35	43%		
Years' experience as senior teachers	8.2			
Years' experience as acting senior teachers	2.9			
Years' experience as teachers	13.5			

The interview sample was as follows:

	Number
Male senior and acting senior teachers	11
Female senior and acting senior teachers	12
Male Secondary School Teachers	11
Female Secondary School Teachers	12
Male Secondary School Head Teachers	3
Female Secondary School Head Teachers	3
Trainers	4
Directorate of Training Specialists	5

Figure 4-1: Summary of questionnaire and interview participants' profile

Program Background

Using document analysis, the researcher studied the background of the program and all its details through program reports, annual reports, minutes of meetings and manuals. The Scholarship and Training Committee at the Bahrain Ministry of Education at its meeting no. 206 dated 2/3/1998 decided to assign the Training Directorate, the Curriculum Directorate and the General Education Directorate to design a suitable professional development program for senior teachers and acting senior teachers in Bahrain government secondary schools. Accordingly, a committee was formed which changed several times as did the design of the program. In 1999, the program was finally appointed to the Training Directorate in the Ministry of Education (DoT, 1999-2000).

To plan and carry out the program, the Training Directorate assigned itself a set of roles and responsibilities stated as follows (DoT, 1999-2000):

- Develop a proposed professional development program
- Propose a system for administering the program
- Prepare needed materials and equipment
- Assign the session leaders, contact them and follow up with them
- Type, copy and publish the session leaders' papers or any other related documents
- Evaluate the program and write a report on it.

The Training Directorate also formed a committee of six members to follow up the program (STPDP Report, 2000). It consisted of two training specialists from the Training Directorate, a curriculum specialist from the Curriculum Department, two specialists from Secondary Education Directorate and a senior teacher from a Bahrain Government Secondary School. The Training Directorate defined the purpose of this committee as follows (STPDP Report, 2000):

- Study the proposed professional development program, finalise and approve it
- Study the proposed program administration system
- Agree on grouping of trainees, dates and time of program

- Prepare needed materials
- Follow up with speakers and session leaders
- Study and approve proposed papers
- Follow up the flow of the program
- Report on the level of trainees and the extent of their improvement

The committee had 11 consecutive meetings between 28/5/2000 and 11/11/2000 (STPDP committee minutes, 2000-2002). The program committee arrived at the following decisions (STPDP committee minutes, 2000-2002):

- The training specialists were asked to arrange for materials and equipments, printing of papers and documents, calling for meetings and writing agendas and minutes, coordinating with trainers and trainees, proposing and conducting needs assessments, assessment tests and questionnaires, program evaluation;
- The curriculum specialists were asked to give their opinion on the proposed program, find suitable session leaders from the Curriculum Department, and review the proposed documents.
- The secondary education specialists were asked to give their views about the program, give details about trainees, officially inform the schools and find suitable session leaders from the Secondary Education Department.
- The senior teachers were asked to give their opinion on the proposed program

Program Philosophy

To evaluate the effectiveness of the Senior Teachers' Professional Development Program, the researcher first chose to study the philosophy and objectives of the program, as its effectiveness should be in tandem with its goals.

The program aims to prepare senior and acting senior teachers to be the cornerstone in the educational development process by perfecting their roles and responsibilities in (DoT, 1999-2000):

- Following teachers' performance in their teaching, evaluation and teaching activities;
- Developing teachers' teaching skills, knowledge and performance
- Supervising, advising and evaluating teachers effectively;
- Recognising and solving problems efficiently;
- Designing and implementing remedial programs and enriching learning programs for low performing students and
- Acquiring technical and administrative skills as permanent educational supervisors in schools.

Program Goals and Objectives

The main objectives of the program (DoT, 1999-2000) are aimed at facilitating the professional development of senior and acting senior teachers and enable them to carry out their roles and responsibilities as permanent educational advisors in schools through:

- Awareness of the secondary school philosophy, current status and future vision
- Understanding senior teacher's roles and responsibilities, competencies, skills, and their relationship with the school administration and the other school staff members
- Understanding the supervision process, techniques and ways of planning and implementing them
- Identifying the secondary school students' developmental needs and the appropriateness of the curriculum and teaching methods to meet those needs
- Knowing up-to-date classroom management methods
- Acquiring computer and internet skills and their application in education and supervision
- Mastering their specialist subject matter and effective strategies for teaching and learning.

Although there was a correlation between the program objectives and its philosophy, it was difficult to see how the objectives fulfilled it. The philosophy of the program was to develop the teachers to be fundamentally the important figures of the educational development process, which requires development of specific skills.

However, the goals of the program mainly entail the acquisition of knowledge, not the acquisition of skills.

In addition, the program objectives were general and multifaceted and this complex nature made it difficult to measure its success. Furthermore, some of the objectives did not come from the senior teachers' training needs or interests, for instance, 'Identifying the secondary school students' developmental needs and knowing the up-to-date classroom management methods'.

Groups Targeted by the Program

This program targeted all senior and acting senior teachers in Bahrain's public secondary schools. The trainees were divided into groups depending on their specialist teaching subject (DoT, 2001). This survey focused only on four groups: Senior and acting senior teachers of Maths, Science, English and Arabic.

Program Content

The content of the program was a result of two years' input from several committees (DoT, 1999-2000). By end of 2000 it was approved by the final program committee, headed by the Training Directorate. The program consists of 196 hours over three terms (one and a half years). The sessions were held twice a week for each group - three hours in the morning and one and a half hours in the evening (DoT, 2001).

The program consists of four basic modules (DoT, 2001). The modules' content and their link to the program objectives can be summarised as follows:

Module 1: The Secondary School System (27 hours) is related to objectives 1, 4 and 5 of the program. It contains:

- | | |
|--|---------|
| • Opening ceremony | 3 hours |
| • Ministry's vision for secondary school development | 3 hours |
| • Secondary school teacher competencies | 3 hours |
| • Understanding and dealing with secondary school students | 3 hours |
| • Implementing cooperative learning | 6 hours |
| • Implementing self-learning in the classroom | 3 hours |
| • Bahrain government secondary schools' evaluation system | 6 hours |

Module 2: Technical Skills for Senior Teachers (21 hours) is related to objectives 2 and 3 of the program. It contains:

- | | |
|--|---------|
| • Leadership skills | 3 hours |
| • Cognitive coaching and conferencing skills | 6 hours |
| • Teachers' professional development | 6 hours |
| • Evaluating teachers' performance | 6 hours |

Module 3: Administrative Skills for Senior Teachers (30 hours) is related to objective 2 of the program. It contains:

- | | |
|--|---------|
| • Carrying out educational research | 6 hours |
| • Managing classrooms | 6 hours |
| • Writing reports | 6 hours |
| • Communication skills and managing meetings | 6 hours |
| • The integrated relationship between the senior teacher and school staff and administration | 6 hours |

Module 4: Using Technology in Teaching and Learning (*70 hours) is related to objective 6 of the program. It contains:

- | | |
|--------------|----------|
| • Windows | 10 hours |
| • Word | 20 hours |
| • Excel | 20 hours |
| • Internet | 10 hours |
| • PowerPoint | 10 hours |

*The number of hours required for each trainee depended on previous knowledge of the subject and training in this field (DoT, 2001).

Module 5: Subject Speciality and its Teaching Strategies (42 hours)

- | | |
|--|----------|
| • Teaching strategies | 9 hours |
| • Using educational technology | 9 hours |
| • Analysing and developing the curriculum | 12 hours |
| • Test building and analysing test results | 12 hours |

The effect of Module 5 was not measured in this study due to the variations in the program related to subject matter and its irrelevance to the research questions.

An analysis of the program documents (DoT 1999, 2001 and 2002) showed that the modules were initially designed with more hours, extensive content and in different order (Figure 4-2). For example: Module 1 (The secondary school system) was originally designed to cover 30 hours. Some items like “Cooperative learning” and “Use of technology” were later removed due to the unavailability of trainers. The same applied to the “Educational planning” and “Supervision in secondary schools” topics, which were removed from the program, only to be restored two years later for another group.

Some subjects like Evaluating teachers’ performance and Writing reports were originally designed for 9 hours, but were reduced to 6 hours for the first group and then increased to 9 hours again for the next group. According to the program coordinator the reasoning for this was, ‘We are following the participants’ recommendations’.

Figure 4-2: Difference in number of hours allocated for each module from 1999 to 2002

Module	Content	Planned in 1999	Number of hours for First Group in 2000	Number of hours for Second Group in 2002
Module 1 Secondary School System	Opening ceremony	Not planned for	3	0
	The Ministry's vision for secondary school development	2	3	3
	Secondary school teachers' competencies	2	3	3
	Understanding and dealing with secondary school students	2	3	3
	Implementing cooperative learning	2	6	6
	Implementing self-learning in the classroom	2	3	3
	The evaluation system in Bahrain government s. schools	2	6	6
	Dealing with gifted and less advantaged students		Cancelled due to unavailability of trainers	
	Remedial teaching			
	Emotional intelligence			
	Classroom management	2	Moved to Administrative Skills Module 3	Removed
	Time management	2	Removed	Removed
	The integrated relationship between the senior teacher, school staff and administration	2	Moved to Administrative Skills Module 3	0
Module 2 Technical Skills for Senior Teachers	Leadership skills	0	3	Removed
	Cognitive coaching and conferencing skills	9	6	6
	Teachers' professional development	6	6	6
	Evaluating teachers' performance	9	6	9
	Supervision in s. schools	6	0	6
Module 3 Administrative Skills for Senior Teachers	Carrying out educational research	9	6	12
	Managing classrooms	0	6	0
	Writing reports	9	6	9
	Communication skills and managing meetings	0	6	0
	The integrated relationship between the senior teacher and school staff and administration	0	6	0
	Educational planning	6	0	6
	Leadership skills	6	Moved to Technical Skills Module 2	6

(Appendix 5-1) shows that participants require at least 9 hours for the sessions on “Educational research”, “Writing reports” and “Communication skills” however, they had allocated only 6 hours in the program. The program coordinator explained that she had to take this decision because session leaders were not available for the longer period.

Skill Sets by Category	
Personal skills: Skills that improve the performance of the participant as an individual	<ul style="list-style-type: none"> • Communication skills. • Conferencing skills. • Leadership skills. • Managing meetings. • Using computers. • Writing reports.
Functional skills: Skills that improve the performance of the participant in his/her capacity as a senior teacher	<ul style="list-style-type: none"> • Understanding the Ministry's vision for the development of secondary education. • Understanding the roles and responsibilities of the senior teacher. • Understanding the competencies required by secondary school teachers. • Evaluating teachers' performance. • Planning teachers' professional development. • Using cognitive coaching. • Carrying out educational research. • Understanding the evaluation system in secondary schools. • Understanding adolescence. • Dealing positively with secondary school students. • Using technology in teaching and learning. • Implementing cooperative learning in the classroom. • Implementing self-learning in the classroom. • Managing the classroom.

Figure 4-3: Skills set by category

For the purpose of this study, the researcher identified a list of 20 skills within the senior teachers' professional development program (DoT 1999-2000) and broadly classified them into two categories: Personal and Functional skills based on their functions (Figure 4-3). Personal skills those are responsible to improve the senior teachers as persons while functional skills those are to help senior teachers improve their performance as senior teachers.

Training Methods

Although the program documents suggest the use of several training methods (DoT, 1999-2000 in reality, some variation in the use of these methods were observed (Appendix 5-10). These differences can be summarised as follows:

Self-study: This method was not used much due to technical reasons. One of the senior teachers explained, 'First of all, we did not receive the training materials on time and hence we did not have time to read '.

Presentation and discussion: This was the most widely used method in the program. Almost all trainers used it. Some, in subjects like 'The Evaluation System in Secondary School Education', used it exclusively.

Study and analysis: This method was used more often. Trainers usually gave out documents during the sessions and asked the trainees to study and analyse them.

Workshops: this method was used for four subjects: Cooperative learning, Cognitive coaching, Report writing, Conferencing skills and Managing meetings.

Report writing: In addition to the report writing sessions, trainees were asked to use this skill in reporting their research.

Research: The program taught research skills and required all trainees to submit a piece of research; however, this research was never evaluated. The program requirements were satisfied by submission of the work.

Projects: The trainees were encouraged to do several projects, however, most of them were not turned in and follow up was not done by the trainers either. Trainees expressed their inability to meet the requirements of the projects. However, one successful project was done as a requirement for the 'Use of technology' element.

Modelling teaching: Not used as modelling teaching, however, modelling and role-playing were used repeatedly and effectively in 'Cooperative learning' and 'Conferencing skills', which were taught by the same trainer.

Professional visits: No professional visits were assigned in the program. However, teachers were encouraged to visit each other.

Use of technology: Technology had been introduced and encouraged throughout the program. Almost all trainers used data projectors or overhead projectors. Trainees also used PowerPoint presentations.

Almost all program sessions had planned activities for before, during and/ or after each session (Appendix 5-11). There was a standard requirement set by the program (Appendix 5-2) that each trainer should follow while preparing for the session. As the program coordinator explained, 'They should follow specific criteria'. Though almost all trainers planned for activities in their worksheet, all of them did not follow the plan.

Trainers

The program trainers were selected from different professions, such as curriculum specialists, training specialists, educational advisors, university teachers, school principals and senior teachers (DoT 1999-2000). The main criterion in the selection process is the suitability of the trainer, in terms of subject knowledge and background, according to the training specialists. However, 'this ideal level could not always be achieved' according to the program coordinator.

Finding trainers was often a difficult task for the program coordinators in the Training Directorate (DoT 2001). The interviewed training specialist had listed some reasons for this: one being the training sessions were conducted in the morning during which most professionals were working elsewhere. Another was that there was little cooperation between the Training Directorate and other departments within the Ministry of Education seen as a bottleneck achieve training goals. The third and very important reason observed by the interviewed trainers was that participating in the training was not an attractive proposition to many professionals: it did not add

value to their career records and were also poorly paid: the maximum fee paid was less than US \$13 per hour.

For training specialists, it was a different scenario they were not even paid a fee for working outside their official working hours, since it was considered part of their duties, according to the training policies.

Program Evaluation Techniques

There were two types of evaluation in the program. One was the program evaluation; the second was the trainees' evaluation (DoT, 2001). For the former, the program coordinator made arrangements with the Evaluation division in the Training Directorate to carry out their evaluation after each module of the program. The latter evaluation (Appendix 5-3) is a reaction type, which measures the reaction of the trainees related to training objectives, strategies, the trainers and atmosphere where training is given.

Usually the training department publishes the evaluation report after its results are reported to the director of training and shown to the staff of the Training Directorate. This was more of a mechanical process than a technical one. The Evaluation Department at the Directorate of Training performs evaluation and leaves it to the program coordinator or any division to deal with the results. According to the training specialists, no follow up is done from the division to establish if the recommendations had been incorporated in the subsequent plans to improve the training programs.

Trainees' Evaluation System

The program listed several ways to evaluate the trainees' performance, such as attendance and participation, tests, projects, research, fieldwork and final assessment (DoT, 1999-2000), however; only few of these were used. Eight out of 18 trainers had asked the trainees to work on after-program application activities or projects, but only 5 of these followed up with some kind of feedback (Appendix 5-11).

No final assessment was required but, at the end of the program, the trainees were asked to hand in a piece of research, which was collected but was not evaluated for the sake of formality. It did not specify any standards required to be met said the program coordinator. However, a test was conducted for computer skills alone (Appendix 5-4) but no fieldwork was actually requested from the trainees.

Upon the completion of the program the trainees received a certificate of attendance (Appendix 5-12) without declaration of trainees' level of achievement or performance. This was because attendance requirement should not be less than 60 per cent which was the reason for only one senior teacher not to receive the program certificate.

Although this situation reduced administration work for the program coordinators some trainees felt it was unsatisfactory and unfair as there was no differentiation between the hard working participants and those who just attended. .On the other hand, participants with 100 per cent attendance found themselves in the same position as those who attended only 60 per cent of the program.

Program Budget

The budget allocated for the program was BHD 7,000 (£8750) to cover the following (Dot, 1999-2000):

• Session leaders' fees	BHD 4,200 (£5250)
• Supervision fees	BHD 400 (£500)
• Worksheets	BHD 370 (£462)
• Stationery	BHD 930 (£1162)
• Refreshments	BHD 1,100 (£1375)

This budget does not include the expenses for transport, supply teaching, electricity, utilities and other related services.

Program Requirements

The criterion for eligibility to attend the program was to be a senior teacher or acting senior teacher in any of the Bahrain government secondary schools (Dot, 1999-2000). The candidates needed to fill a registration form (Appendix 5-9), which consists of personal data, including: qualifications and length of experience, a list of

Subject taught, training attended during the past five years, the activities participated in during the current academic year and signature.

Training Needs Assessment

Training needs assessment was never part of the cycle of the program. Prior to the implementation of the program, no training need assessment was conducted. The justification by the program coordinator was that, 'They [the participants] have been represented by two senior teachers in the program committee who know what their training needs are'. Two senior teachers were on the program management committee, which was satisfied that this representation, though low, was adequate to identify the senior teachers' training needs.

However, the trainees underwent a practical assessment on the use of technology (Appendix 5-6). They had taken a placement test to measure their level of understanding and use of technology (Appendix 5-7). Accordingly, some trainees were exempted from part of Module 4 "Using Technology in Teaching and Learning".

The Survey

For the purpose of this study, the researcher studied the trainees' needs by a questionnaire (Appendix 5-8) which was distributed to all participants before the program. Trainees were asked to select, from their point of view, what best expressed the extent of their need to be trained in each topic of the program (to a great extent, to some extent, to a little extent or don't need it at all). The results are shown in Tables (4-1, 4-2) and Figures (4-4, 4-5 and 4-6)

	Personal skills	Functional skills	All Skills
All skills			

To great extent	39	40	39
To some extent	34	34	34

	Managing classrooms	Dealing Adolescents	Ministry's Vision	Evaluation System	Using technology	Teachers' Performance	Teachers' Competencies	Educational Research	Self-Learning	Cooperative learning	Average
Functional skills											
To great extent	20	31	36	36	40	42	43	44	53	53	40
To some extent	23	40	36	40	30	37	34	34	31	31	34
I do not need it	57	29	28	24	30	21	23	22	13	16	26

	Communication skills and Managing meetings	Writing reports	Average
Personal skills			
To great extent	32	45	39
To some extent	38	30	34
I do not need it	30	25	27

Table 4-1 Training Needs Analysis

* I do not need it: is a sum of: "I need it to a little extent" and "I don't need it"

Criticality of training needs per subject									
SUBJECTS	calculated				Criticality of Subject	percentage of respondents			
	a*1	b*0.75	c*.05	d*0		a	b	c	d
	to a great extent	to some extent	to a little extent	I don't need it		to a great extent	to some extent	to a little extent	I don't need it
Ministry's vision for secondary school	0.36	0.27	0.12	0	0.78	36%	36%	24%	
Secondary school teachers competencies	0.43	0.26	0.11	0	0.81	43%	34%	21%	
Understanding and dealing with secondary school students	0.31	0.30	0.12	0	0.77	31%	40%	24%	
Cooperative learning	0.53	0.23	0.07	0	0.85	53%	31%	13%	
Implementing self-learning in the classroom	0.53	0.23	0.07	0	0.85	53%	31%	13%	
The evaluation system in Bahrain government secondary schools	0.36	0.30	0.10	0	0.79	36%	40%	20%	
Evaluating teachers' performance	0.42	0.28	0.09	0	0.81	42%	37%	17%	1%
Carrying out educational research	0.44	0.26	0.09	0	0.81	44%	34%	18%	1%
Managing classrooms	0.20	0.17	0.25	0	0.65	20%	23%	49%	3%
Writing reports	0.45	0.23	0.11	0	0.80	45%	30%	22%	1%
Communication skills and Managing meetings	0.32	0.29	0.14	0	0.75	32%	38%	28%	1%
The integrated relationship between the senior teachers and the school administrative and academic staff	0.34	0.24	0.16	0	0.76	34%	32%	31%	
using technology	0.52	0.23	0.07	0	0.86	52%	31%	14%	

Table 4-2: Criticality of Training Needs

Senior teachers and acting senior teachers attending this program had been in post for an average of 10 years, while their average teaching experience was around 25 years. In fact, 43 per cent of them had more than 20 years' teaching experience; almost 60 per cent had received previous training; 80 per cent were senior teachers who had been in this job position for at least two years and 74 per cent of them held at least a diploma in education (Figure 4-1).

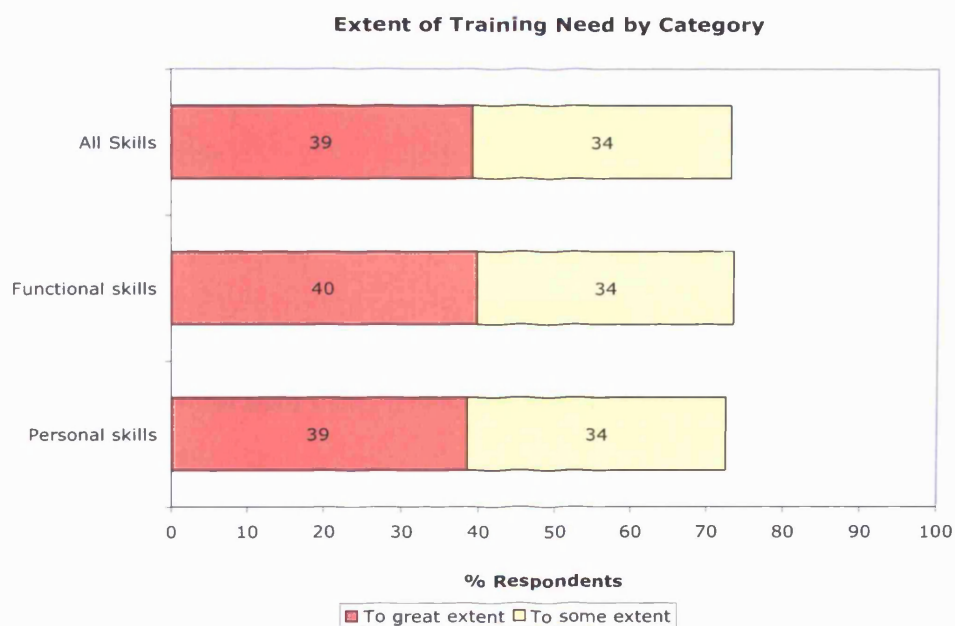


Figure 4-4: Extent of training needs by category

As the above figure illustrates, there are no significant differences in the participants' responses for functional and personal skills.

Given this professional background, it is not surprising that almost 27 per cent of the participants felt they do not need many elements of the functional and personal skills. Only 39 per cent said they need them to a great extent and 34 per cent to some extent (Figure 4-4). One senior teacher explained that 'Most of the material is not new; we have learned it either in our teaching preparation or in previous training'.

Results of Training Needs Assessments by Subject - Personal Skills

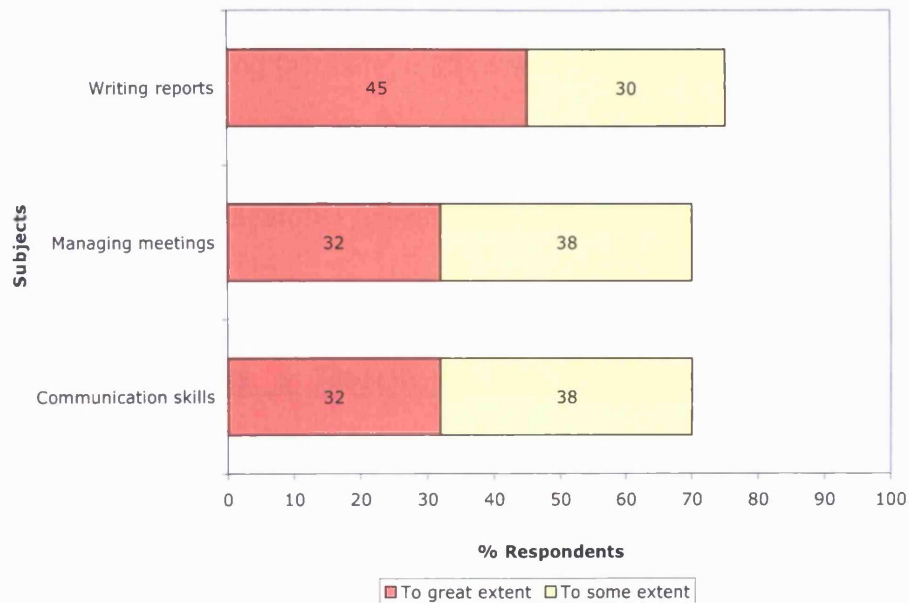


Figure 4-5: Personal skills training needs by topic (subject)

However, Personal skills like writing reports had increased demand compared with training to improve communication skills and for managing meetings (Figure 4-5).

Results of Training Needs Assessments by Subject-Functional Skills

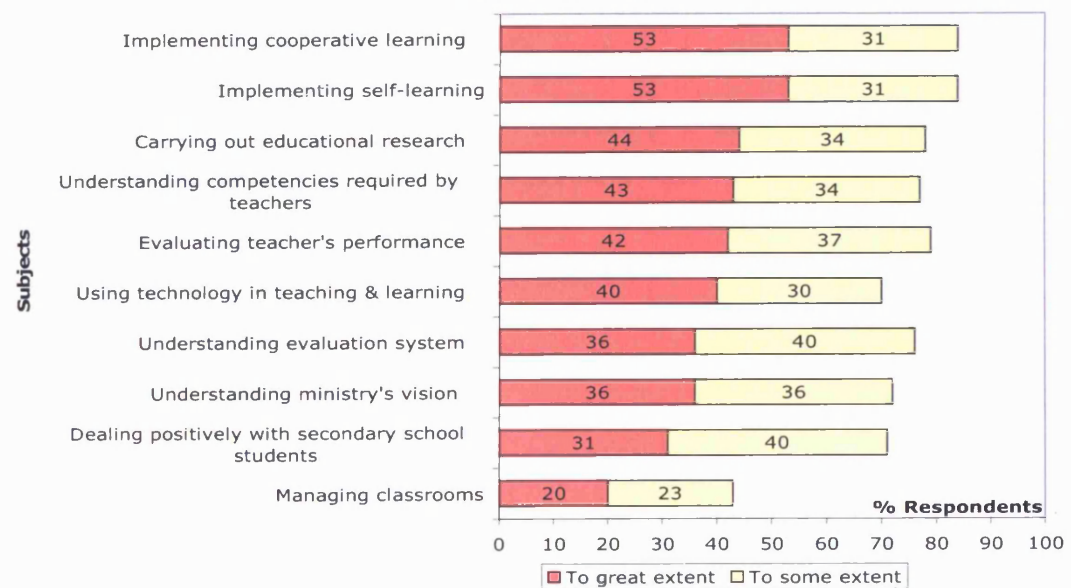


Figure 4-6: Functional skills training needs by topic (subject)

Cooperative learning and self-learning were the functional skills that seemed to be the most in demand among senior teachers, followed by carrying out educational research, understanding the competencies required by secondary school teachers, evaluating teachers' performance and using technology in teaching and learning (Figure 4-6).

In the next section the researcher answers the research questions:

One: Extent of the Improvement of the Participants' Personal and Functional Skills as a Result of the Professional Development Program.

To answer the first research question: To what extent does the program develop the personal and functional skills of the senior teachers? The researcher analysed data gathered by the questionnaire to evaluate the development from the point of view of the participants.

Using the questionnaire (Appendix 3-1) the participants were asked to rate their level of competence - both before and after professional development program- for a range of skills. This was measured using a 5-point scale where 5 means 'excellent' and 1 means 'very poor'.

The results show that the program was successful in advancing the level of participants' skills by 20 per cent. The improvement was more pronounced for personal skills than for functional skills (Figure 4-7).

Table 4-3: Percentage of Improvement of All Skills by Participants' Profile

Percentage of improvement of all skills by participants' profile													
Mean % change in rating due to training(5 = Excellent/1 = Poor)													
	Mean 82	Mean 38	Mean 44	Mean 61	Mean 21	Mean 16	Mean 64	Mean 21	Mean 19	Mean 23	Mean 19	Mean 48	Mean 30
	All response	Male	Female	Diploma or	Master	Acting Ser	Senior Tez	Arabic	English	Math	Science	Trained	Untrained
Implementing cooperative learning	29.7%	32.2%	27.2%	30.9%	26.1%	26.2%	30.2%	28.8%	22.0%	34.7%	31.6%	26.7%	33.6%
Cognitive coaching	25.4%	23.0%	27.6%	27.2%	20.1%	25.0%	25.5%	28.9%	23.8%	23.9%	25.0%	23.0%	30.4%
Planning teachers development	23.7%	24.3%	23.1%	25.3%	19.2%	30.0%	22.2%	24.5%	24.4%	25.8%	19.7%	21.8%	25.6%
Evaluating teachers performance	17.8%	20.4%	15.3%	19.9%	11.0%	30.0%	14.6%	19.7%	17.6%	14.4%	19.7%	17.0%	16.4%
Understanding Ministry's vision	17.7%	23.6%	12.6%	20.4%	10.7%	25.0%	16.1%	11.8%	25.0%	15.2%	19.7%	17.2%	15.8%
ST role & responsibility	17.6%	19.6%	15.7%	20.7%	8.6%	26.7%	15.6%	17.1%	16.4%	16.8%	19.7%	16.6%	18.1%
Competencies required by teachers	16.9%	18.9%	15.0%	16.9%	17.0%	21.7%	15.9%	15.4%	14.5%	19.0%	18.4%	16.8%	15.9%
Carrying out research	15.6%	22.2%	9.7%	20.5%	3.0%	16.7%	15.5%	16.7%	11.3%	18.3%	15.3%	13.3%	18.5%
Implementing self learning	14.6%	22.3%	7.3%	18.3%	4.6%	23.3%	12.5%	16.7%	9.4%	11.9%	21.1%	12.9%	14.3%
Understanding evaluation systems	12.0%	14.6%	9.8%	12.1%	11.9%	23.2%	9.4%	6.6%	17.1%	10.7%	13.9%	10.6%	12.9%
Understanding adolescence	10.8%	15.1%	7.0%	11.9%	7.9%	13.3%	10.6%	18.4%	7.5%	9.8%	7.9%	11.6%	8.6%
Positive attitude to students	9.9%	15.1%	5.2%	10.6%	7.8%	11.7%	9.4%	13.2%	7.5%	13.0%	5.3%	11.0%	7.8%
Managing classrooms	9.6%	11.2%	8.1%	10.2%	7.7%	11.7%	9.4%	10.0%	10.2%	11.1%	6.6%	9.5%	9.5%
Functional skills	17%	20%	14%	19%	12%	22%	16%	18%	16%	17%	17%	16%	17%
Using computers	33.4%	31.4%	35.1%	33.8%	32.1%	18.3%	36.9%	35.4%	19.7%	36.4%	42.1%	25.5%	47.9%
Using technology in teaching	32.5%	28.9%	35.7%	32.2%	33.3%	18.3%	35.7%	40.0%	21.1%	29.5%	39.5%	25.0%	44.8%
Conferencing skills	31.3%	29.5%	32.7%	32.5%	27.7%	35.7%	30.0%	32.4%	32.2%	26.3%	34.7%	27.6%	37.2%
Writing reports	25.2%	27.6%	22.9%	28.0%	17.2%	26.7%	24.8%	15.0%	21.1%	31.2%	32.9%	21.6%	28.4%
Managing meetings	23.7%	24.1%	23.3%	25.7%	17.5%	30.0%	21.8%	19.6%	28.5%	17.7%	30.3%	21.4%	27.2%
Leadership skills	18.4%	21.6%	15.3%	21.0%	11.1%	23.3%	16.9%	22.4%	19.2%	17.9%	14.1%	17.1%	18.8%
Communication skills	18.1%	23.0%	13.5%	20.3%	11.6%	21.7%	17.1%	16.3%	17.6%	16.6%	22.4%	15.0%	20.7%
Personal skills	26%	27%	26%	28%	22%	25%	26%	26%	23%	25%	31%	22%	32%
All skills	20%	22%	18%	22%	15%	23%	20%	20%	18%	20%	22%	18%	23%
	All response	Male	Female	Diploma or	Master	Acting ST	ST	Arabic	English	Math	Science	Trained	Untrained

Figure 4-7: Improvement in All Skills by Category

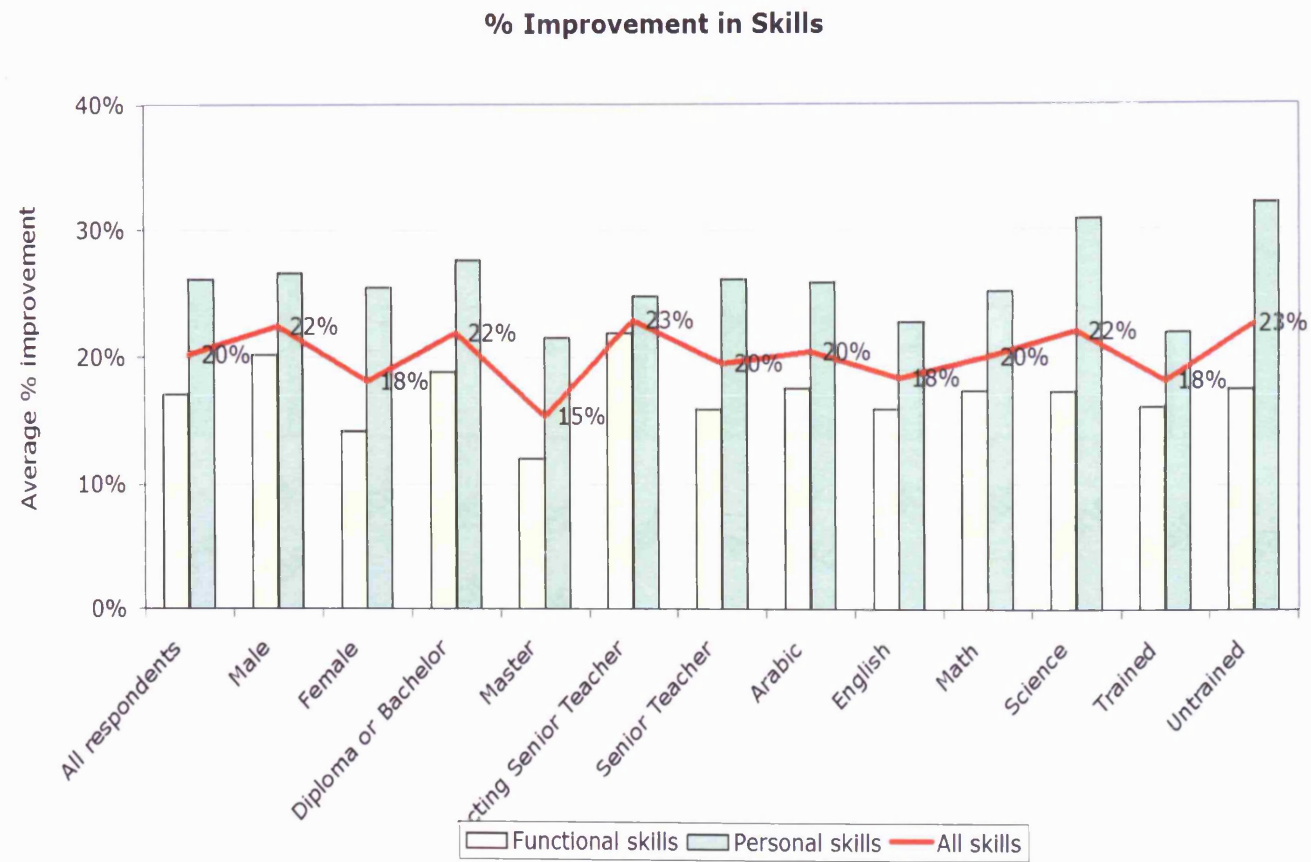
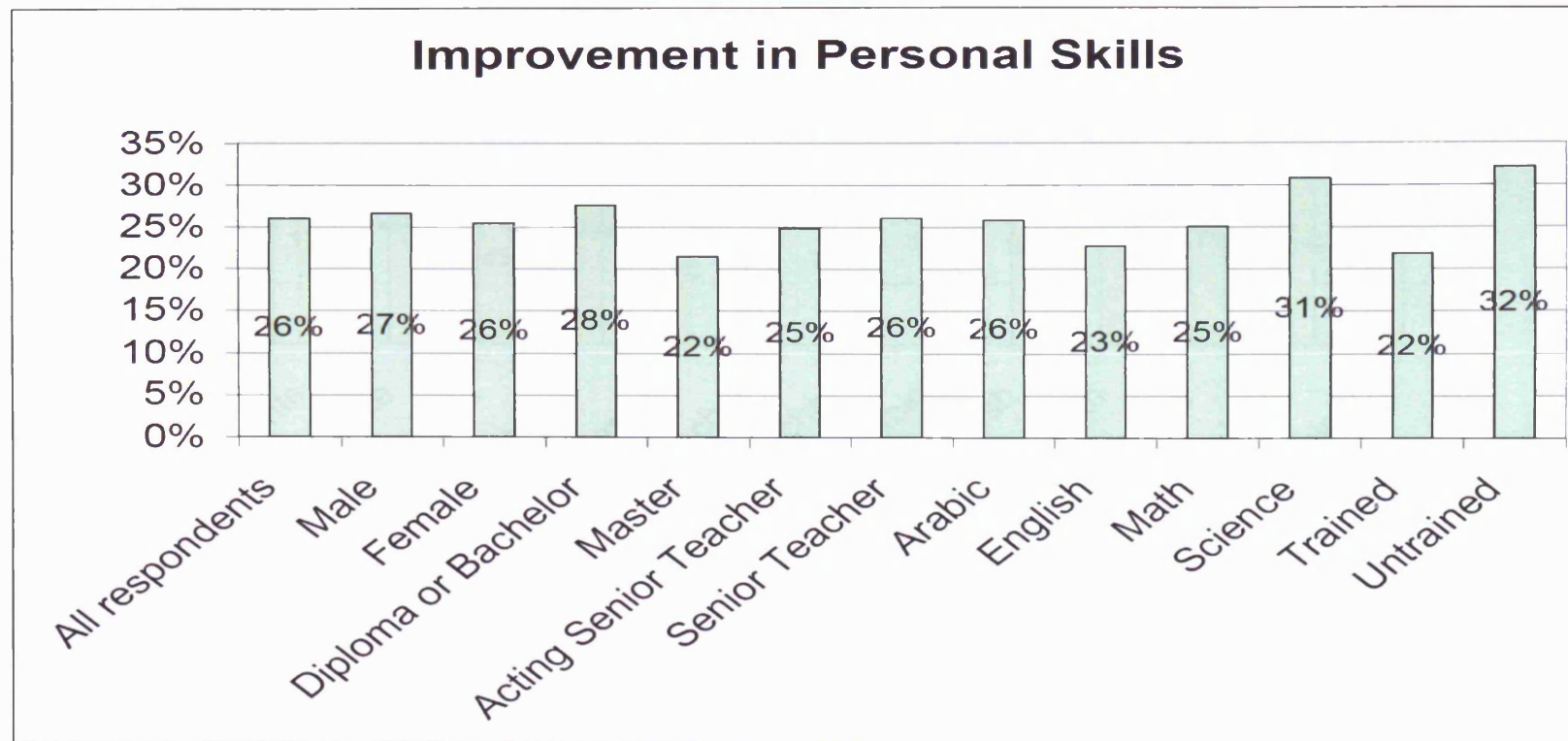


Figure 4-8: Improvement in Personal Skills by Category



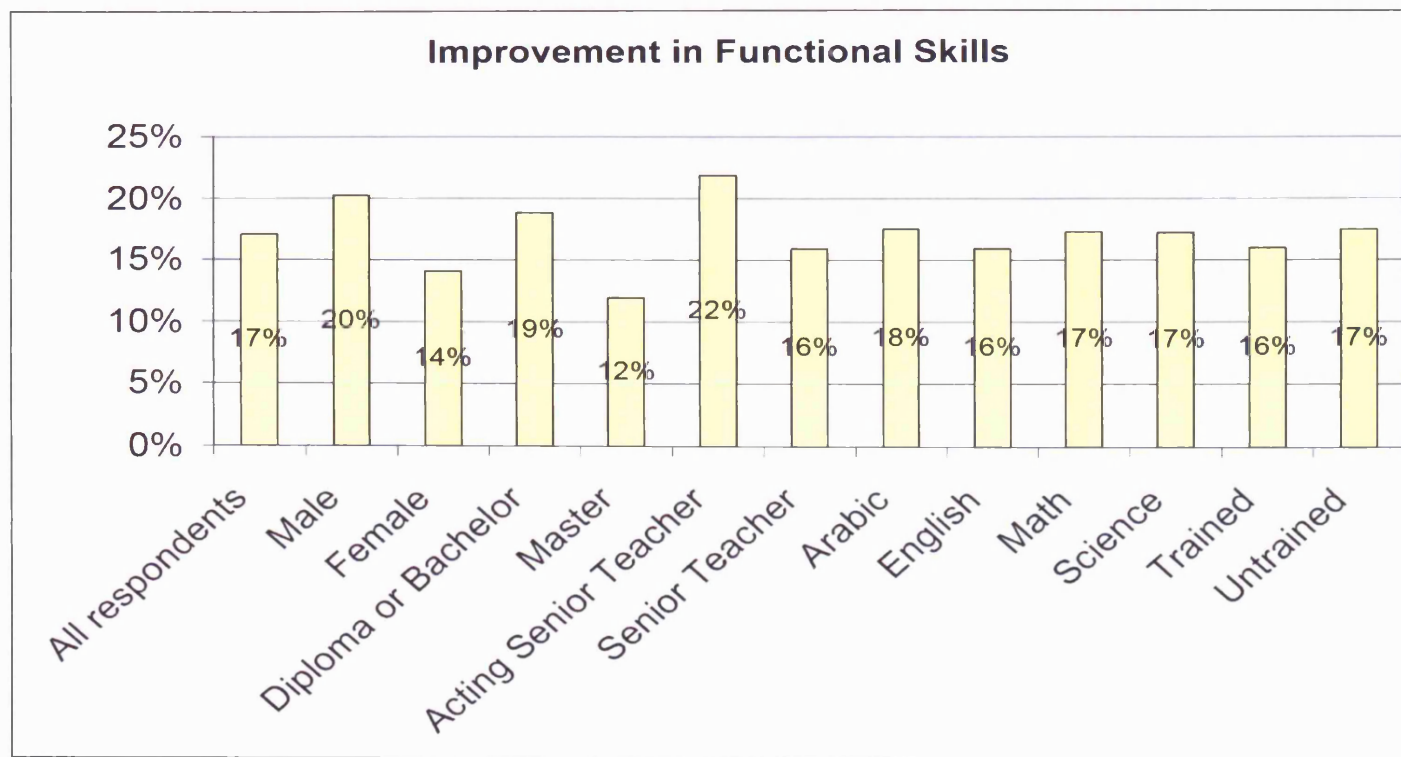


Figure 4-9: Improvement in Functional Skills

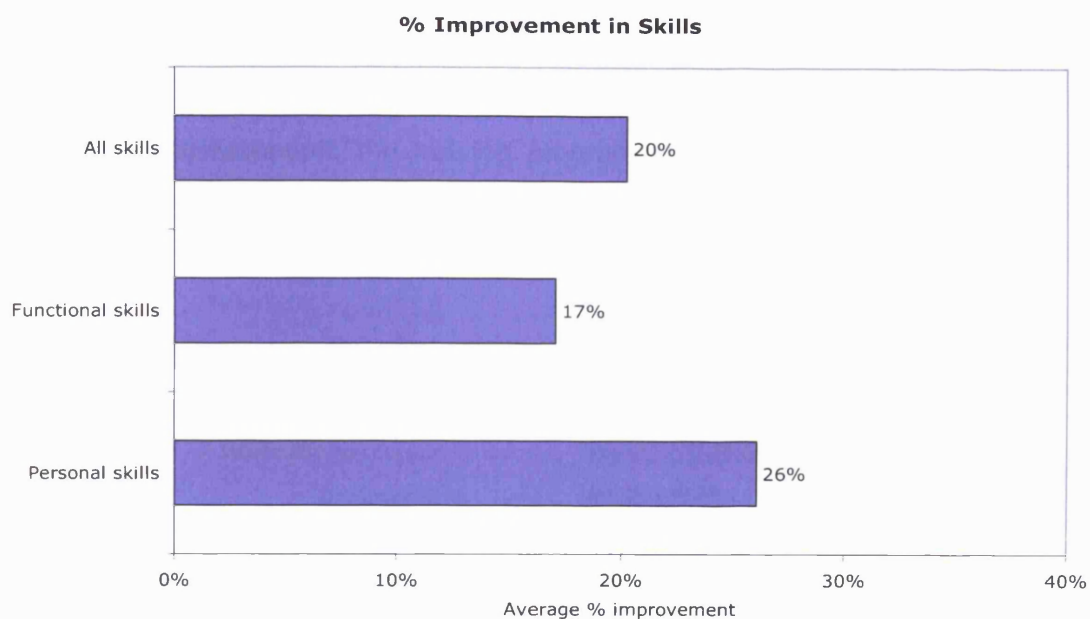


Figure 4-10: Percentage improvement in skills

Improvement in Personal Skills

Within the personal skills category, the greatest learning has been in Using computers, Conferencing skills, Writing reports and Managing meetings (Figure 4-11).

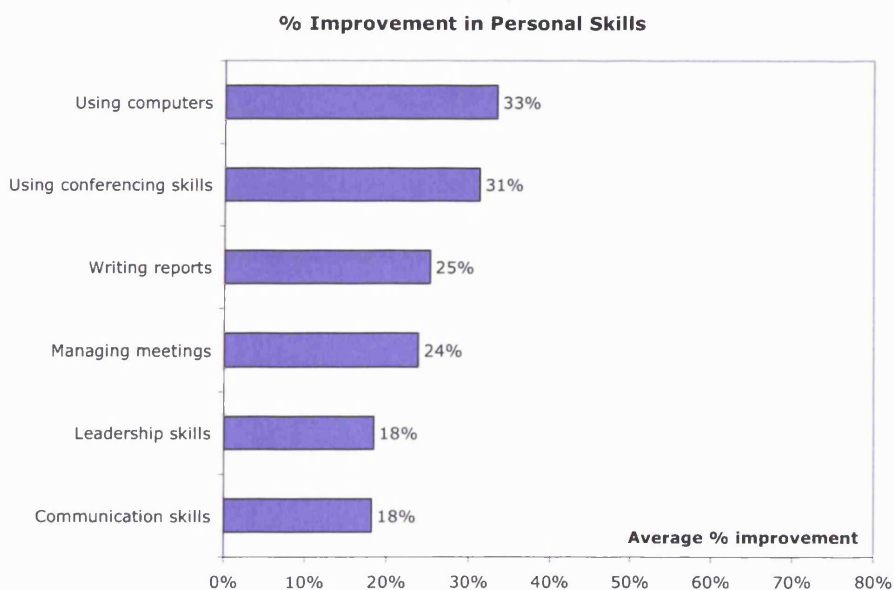


Figure 4-11: Percentage improvement in personal skills

Improvement in Functional Skills

The degree of improvement in functional skills is significantly less than the personal skills. With the exception of Using technology in teaching and learning, Implementing cooperative learning, Using cognitive coaching and Planning teachers professional development, the training program did not really have much of an impact in developing the senior teachers' expertise in other areas (Figure 4-12).

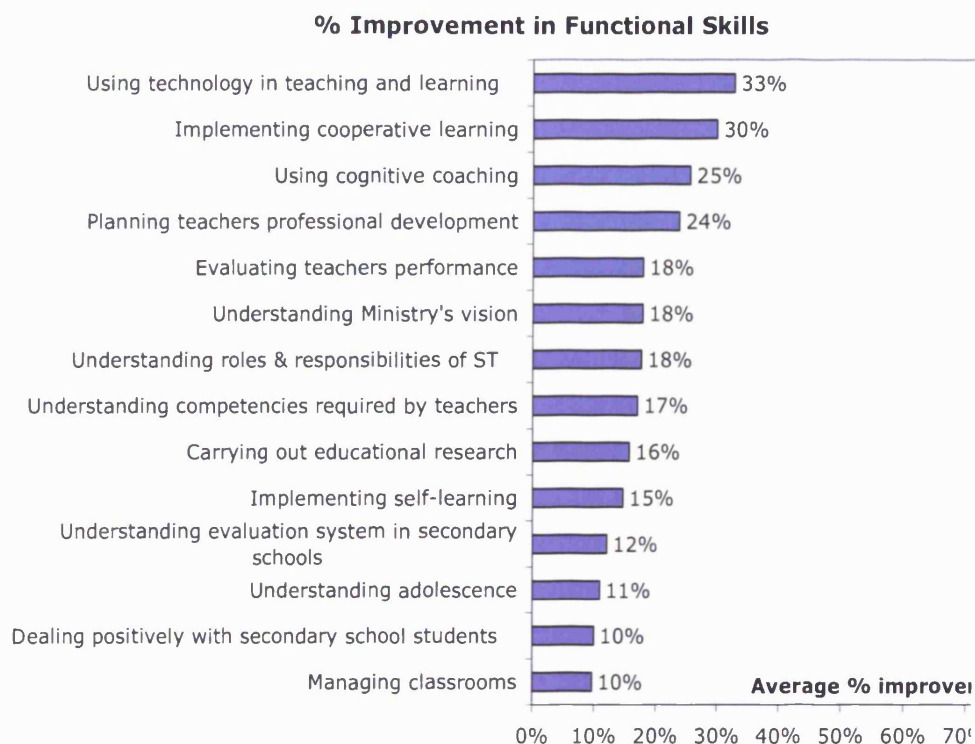


Figure 4-12: Percentage improvement in functional skills

Improvement by Participant Profile

The following figures examine the scores for improvement across various participants' profiles like gender, academic qualification, previous training experience and job title.

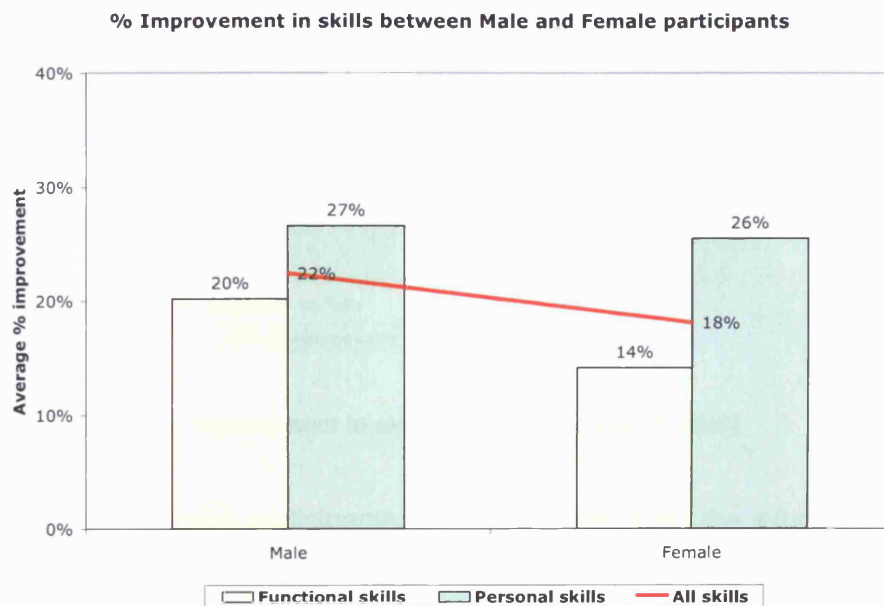


Figure 4-13: Percentage improvement in skills according to gender

Male participants report slightly higher improvement in all skills compared with their female counterparts. Both male and female participants indicate a significantly higher improvement in their personal skills rather than functional skills (Figure 4-13).

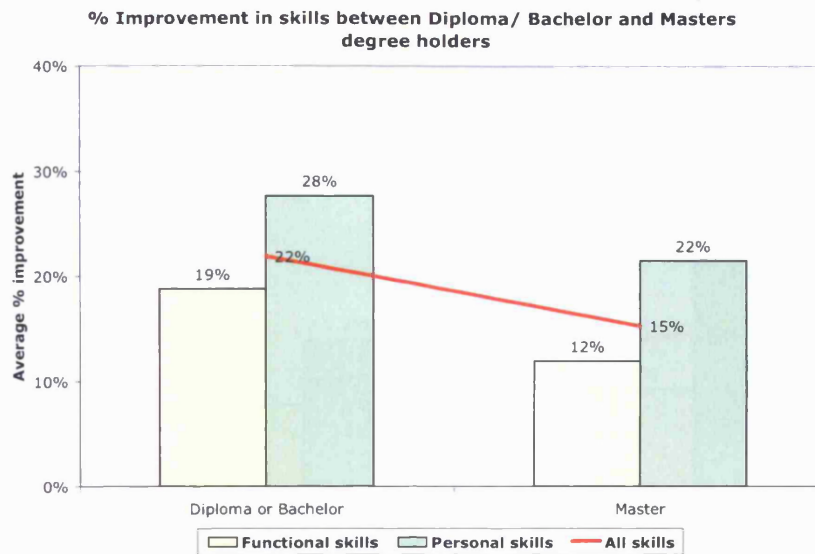


Figure 4-14: Percentage improvement in skills according to qualification

The less qualified participants benefited more from the program than the more qualified ones. The Diploma and Bachelor's holders scored a 28 per cent improvement in personal skills and 16 per cent in functional skills while participants with masters' degrees scored only 22 per cent of improvement in their personal skills and 12 per cent in their functional skills (Figure 4-14).

Although there were only 38 males out of 82 participants, they were responsible for most of the improvement in functional skills. 75 per cent of acting senior teachers were male and the less qualified participants were mostly male acting senior teachers. Only 18 per cent of male participants had a Master's degree; the rest held first degrees or even below. 34 per cent of female participants, however, had at least Master's degree (Figure 4-1).

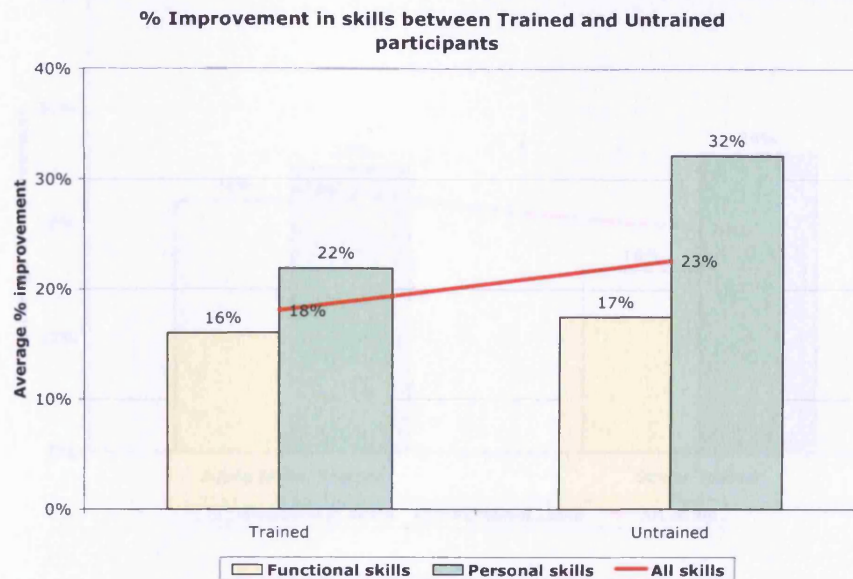


Figure 4-15: Percentage improvement in skills according to training

The untrained participants scored more improvement in personal and functional skills (Figure 4-15) than the trained ones. The untrained participants scored 32 per cent improvement while the trained scored only 22 per cent improvement in their personal skills while the trained participants scored 22 per cent in personal skills and 16 per cent in functional skills.

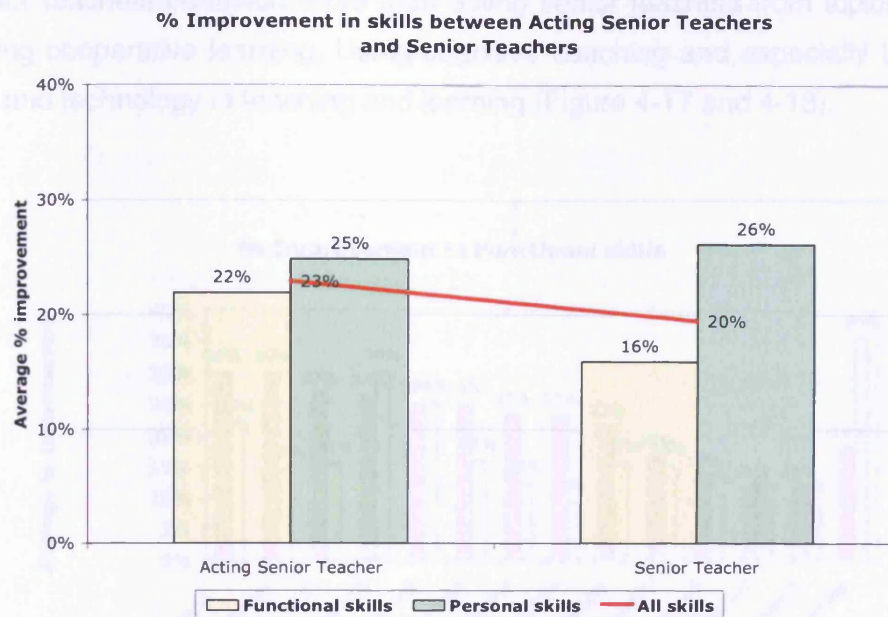


Figure 4-16: Percentage improvement in skill according to post

Acting senior teachers benefited more than the senior teachers on the functional skills while the senior teachers benefited slightly more on the personal skills (Figure 4-16).

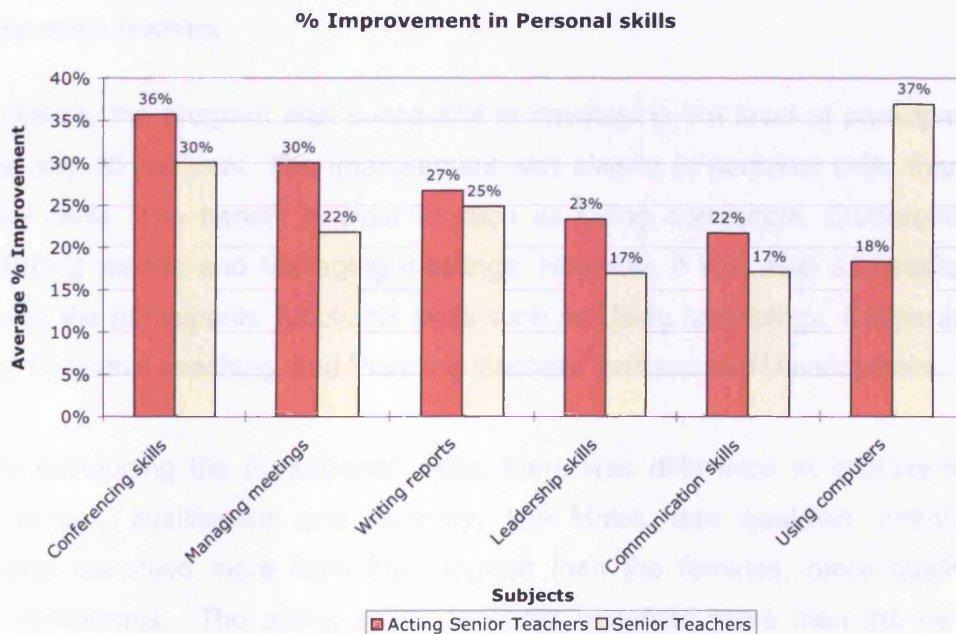


Figure 4-17: Percentage improvement in personal skills- A comparison view between senior and acting senior teachers

Senior teachers benefited more than acting senior teachers from topics like Implementing cooperative learning, Using cognitive coaching and especially Using computers and technology in teaching and learning (Figure 4-17 and 4-18).

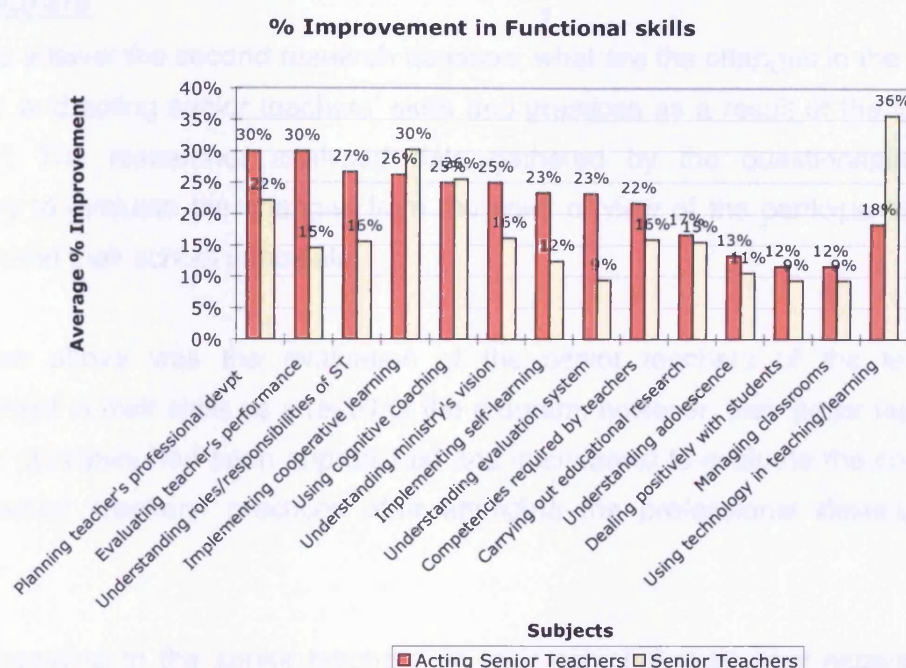


Figure 4-18: Percentage improvement in functional skills- A comparison view between senior and acting senior teachers

Overall, the program was successful in developing the level of participants' skills by only 20 per cent. The improvement was clearer in personal skills than in functional skills. The benefit is clear in such as Using computers, Conferencing skills, Writing reports and Managing meetings. However, it was also successful in developing the participants' functional skills such as Using technology, Cooperative learning, Cognitive coaching, and Planning teachers' professional Development.

In developing the participants' skills, there was difference in improvement related to sex, qualification and seniority, The Males, less qualified, untrained participants benefited more from the program than the females, more qualified trained participants. The acting senior teachers benefited more than the senior teachers in all of the personal skills except in Using computers however the senior

teachers, in spite of their seniority, scored more in benefiting from the personal skills such as Cooperative learning, Cognitive coaching, and Using technology.

Two: The Changes in the Senior Teachers' Practices as a Result of the Program

To answer the second research question: what are the changes in the senior teachers' and acting senior teachers' skills and practices as a result of the training program? The researcher analysed data gathered by the questionnaire and interviews to evaluate the changes from the point of view of the participants, their teachers and their school principals.

The above was the evaluation of the senior teachers of the level of improvement in their skills as a result of the program; however, their junior teachers and their principals had been approached and interviewed to evaluate the changes in the senior teachers' practices after attending the professional development program.

According to the senior teachers, in their personal skills they experienced most improvement in Writing reports, Using technology, Conferencing skills and Managing meetings and in their functional skills most improvement was in Using technology, Implementing cooperative learning in the classroom, Cognitive coaching and Planning teachers' professional development (Figure 4-11, 4-12).

In addition, about 75 per cent of the interviewed senior teachers believed that their report writing skills had improved, 75 per cent of them said they were managing their meetings better, 44 per cent argued that their cooperative learning skills had improved and 63 per cent said their use of computers improved after attending the professional development program (Figure 4-17). They also improved their understanding of their own roles and responsibilities and developed better relationship with others. They became better at evaluating and following their teachers' performance.

Figure 4-19: Differences in perception between senior teachers and teachers on the effect of the program (interviews' results)

Total Number of Participants		23	23
Effect	Skills	Senior Teachers	Teachers
Became more effective	Teachers became more effective	20%	22%
Effect of training on the practice of the senior teacher	Better relationship with others (teachers and students)	44%	52%
	Better at evaluating teachers' performance	63%	70%
	Managing meetings better	75%	35%
	Using cooperative learning	44%	35%
	Writing reports	75%	No comment
	Using computers better	63%	
Effect of training on teachers' performance	Cooperative learning	69%	50%
	Difficult to change	38%	No comment
Training activities provided for teachers	Cooperative learning	69%	35%
	Using computers	50%	17%
Improvement in teachers' relationship with students	No effect	44%	26%
Improvement in relationship with teachers	Always have good relationships	50%	52%
	Better relations with colleagues	44%	0%
Did teachers noticed the difference?	No	44%	No comment
	Yes	75%	22%
Effect on students' performance	Difficult to measure the effect	38%	26%
	Necessarily, there is an effect	56%	26%
Relationship with school admin	Same relationship - always good	69%	No comment
	No change	38%	
Did school admin notice change?	no / very busy	63%	No comment
	I don't know	34%	

Although 44 per cent of the interviewed senior teachers said that their junior teaching colleagues did not notice the improvement, most of their teachers did (Figure 4-19). 70 per cent of their teachers believed that their senior teachers became better in their evaluation system. Several teachers explained that 'they are doing more announced visits that are followed by meeting to review the visit's outcome' (referring to Cognitive coaching).

22 per cent of the junior teachers thought that their senior teachers became more effective because of the program (Figure 4-19). These teachers believed that they witnessed more training (professional development), a more understanding relationship, better communications and a much better supervision system.

Around 75 per cent of the interviewed senior teachers believed that their meetings became more meaningful. In addition, 35 per cent of their teachers believed that their divisional meetings became better planned and better performed, while 26 per cent of the teachers agreed that their meetings became good learning experiences, in which there were more discussions of fundamental subjects. Teachers described their meetings as 'organised', 'focused' and 'informative'.

While the teachers and senior teachers believed that their relationship with each other was usually good, 44 per cent of the interviewed senior teachers believed that it became even better, and 52 per cent of their teachers believed that their seniors developed better relationships with them (Figure 4-19). Teachers believed that their voices were heard now and the senior teachers were involving them more in decision-making with regard to their professional development. Some teachers believed that their senior teachers had become 'more friendly', 'more understanding' and 'more accepting of criticism'.

On the other hand, school principals showed a rather negative perception of the training program. They felt that it was not effective. They also added that it came too late and did not change the skills of the senior teachers. They perceive the program as being too long, too demanding and not matching the senior teachers' training needs. They believed that the acting senior teachers benefited more than the senior teachers did. The school principals also blamed the senior teachers for

not benefiting from the program. They believe that some senior teachers were not serious about it, and others were not capable of making any improvement.

The response of the principals varied between extremes of negative and positive. One principal said 'It was a waste of time, money and energy' another said that 'all what I saw was their movement in and out of school, there was no effect of the program' and a third principal claimed that senior teachers' role was 'paralysed because of their involvement in the program'.

However, one principal said that 'the school had received a merit or recognition because of the senior teacher performance'. Some principals admitted that there were some changes in report writing and using technology, others acknowledged the improvement in meetings and in the training of their teachers.

When interviewed senior teachers were asked if the school administration noticed the improvement: 63 per cent of them said 'no' because 'the administration is busy with other priorities'. The rest replied as 'not sure' or 'do not know' if the administration ever noticed the difference. Senior teachers believed that supporting the senior teachers' learning was not within the administration's priorities and they listed this factor as one of the main reasons hindering the transfer of learning to the workplace.

When asked about the effect of the program on the students' performance and the teachers' relationship with the students, which should be the end result and the ultimate aim of the learning process, only 56 per cent of the senior teachers and 26 per cent of the teachers said 'better' or 'necessarily better' respectively. This response was not based on scientific analysis, but primarily on general feelings and intelligent guessing. The rest of both the groups concluded that 'they do not know', 'they could not see the relation' or 'they are not sure'. Principals, on the other hand, did not believe that there was any difference in students' performance because of the training program. They also did not believe that there was any effect of the program on the relationship between the teachers and their students.

Over all, the participants and their teachers agreed that there were some positive changes in the senior teachers' and acting senior teachers' practices as a result of attending the professional development program. These changes were related to the use of technology, writing reports, managing meetings, evaluating, coaching and following their teachers' performance as well as implementing cooperative learning in the classrooms.

Three: The Most and Least Effective Components of the Program and Their Characteristics

To answer the third research question: What are the most and least effective components of the program? And what are their characteristics? The researcher analysed the questionnaire and interviews' data. The researcher considered the program content is effective if it is valued by the participants as such, if it is transferred to the junior colleagues and if it brought significant changes at school as an end result.

From the participants' view and their teachers', the most effective program components include Using computers (technology), Conferencing skills, Report writing, Managing meetings, Cooperative learning, Cognitive Coaching and Planning professional development for teachers, while the least effective components included Understanding the evaluation system, Understanding and Dealing with secondary school students, Managing classrooms and Implementing self learning in the classrooms (Figures 4-17 and 4-18).

Transfer of Skills from Participants to Junior Teachers

As a sign of effectiveness, participants were expected to transfer the skills to their teachers. With the exception of cooperative learning strategies, Classroom management, Use of technology and report writing, participants have not had much success in passing on skills they gained from the training program to junior teachers at their schools (Table 4-4)..

Transfer of skills from senior teachers to junior teachers

	All respon dents 82 Col %	Male 38 Col %	Female 44 Col %	Diploma / Bachelo r 61 Col %	Master 21 Col %	Acting ST 16 Col %	ST 64 Col %	Arabic 21 Col %	English 19 Col %	Math 23 Col %	Science 19 Col %	Training 48 Col %	No training 30 Col %
Cooperative learning strategy	69.5	84.2	56.8	72.1	61.9	81.3	65.6	76.2	47.4	65.2	89.5	72.9	60.0
Classroom management	35.4	36.8	34.1	37.7	28.6	18.8	39.1	38.1	15.8	43.5	42.1	37.5	36.7
Use of Internet technology in searching for subjects	34.1	31.6	36.4	34.4	33.3	50.0	29.7	28.6	47.4	21.7	42.1	25.0	40.0
Report writing	30.5	26.3	34.1	32.8	23.8	31.3	31.3	47.6	10.5	21.7	42.1	22.9	40.0
Dealing with different types of students	19.5	26.3	13.6	21.3	14.3	18.8	20.3	23.8	26.3	13.0	15.8	18.8	23.3
Evaluating teachers performance; competencies	19.5	18.4	20.5	21.3	14.3	12.5	20.3	28.6	21.1	21.7	5.3	18.8	23.3
Use of self learning in learning; self learning	17.1	28.9	6.8	18.0	14.3	25.0	15.6	23.8	26.3	4.3	15.8	18.8	16.7
Cooperative learning	13.4	7.9	18.2	11.5	19.0	6.3	15.6		36.8	13.0	5.3	14.6	13.3
Conferencing skills	8.5	7.9	9.1	8.2	9.5	18.8	6.3		36.8			10.4	6.7
Communication skills	8.5	7.9	9.1	9.8	4.8	18.8	6.3	9.5	15.8	4.3	5.3	10.4	6.7
Developing research	8.5	10.5	6.8	9.8	4.8	12.5	7.8	14.3	5.3		15.8	10.4	6.7
Managing meetings	6.1	5.3	6.8	6.6	4.8	6.3	4.7	4.8	5.3	4.3	10.5	8.3	3.3
Leadership skills	6.1	7.9	4.5	6.6	4.8	6.3	6.3	9.5		4.3	10.5	6.3	6.7
Use of computer, use of excel in result analysis	4.9	7.9	2.3	3.3	9.5		6.3		5.3	13.0		6.3	3.3
Brain storming	4.9	10.5		6.6		18.8	1.6		21.1			8.3	
Ministry's vision	4.9	7.9	2.3	3.3	9.5		6.3	19.0				6.3	3.3
Portfolios	3.7		6.8	3.3	4.8	6.3	3.1		15.8			4.2	
Planning for teachers professional development	3.7	5.3	2.3	3.3	4.8		4.7	4.8		4.3	5.3	4.2	3.3
Training need analysis	2.4		4.5	1.6	4.8		3.1	4.8			5.3	2.1	3.3
Result analysis	2.4	2.6	2.3	1.6	4.8		3.1	9.5				2.1	3.3
Literature	2.4	5.3		1.6	4.8		3.1	9.5				4.2	
Using variety of teaching method	1.2		2.3	1.6			1.6			4.3		2.1	
Understanding students	1.2	2.6		1.6			1.6			4.3		2.1	

Table 4-4: Transfer of Skills from Senior Teachers to Junior Teachers

* Cooperative Learning is counted in Row 1 + 8

Areas of the training program that have been very effective in bringing out positive changes

	All respon 82 Col %	Male 38 Col %	Female 44 Col %	Diploma / 61 Col %	Master 21 Col %	Acting ST 16 Col %	ST 64 Col %	Arabic 21 Col %	English 19 Col %	Math 23 Col %	Science 19 Col %	Training 48 Col %	No training 30 Col %
Cooperative learning strategies	54.9	55.3	54.5	54.1	57.1	50.0	54.7	61.9	52.6	39.1	68.4	56.3	56.7
Use of technology in teaching and learning; use of the internet	51.2	44.7	56.8	54.1	42.9	50.0	51.6	42.9	57.9	56.5	47.4	43.8	60.0
Report writing	32.9	39.5	27.3	37.7	19.0	43.8	31.3	28.6	21.1	39.1	42.1	31.3	30.0
Managing meetings	24.4	15.8	31.8	24.6	23.8	12.5	26.6	9.5	26.3	26.1	36.8	22.9	30.0
Leadership skills	15.9	21.1	11.4	18.0	9.5	6.3	17.2	23.8	15.8	8.7	15.8	16.7	16.7
Research; research methodology	14.6	18.4	11.4	18.0	4.8	6.3	15.6	19.0	10.5	21.7	5.3	14.6	16.7
Plan for teachers professional developments	14.6	13.2	15.9	14.8	14.3	12.5	15.6	23.8	15.8	13.0	5.3	14.6	13.3
Conferencing skills	14.6	10.5	18.2	9.8	28.6	31.3	10.9		42.1	4.3	15.8	16.7	10.0
Teacher evaluation	9.8	10.5	9.1	11.5	4.8	12.5	9.4		15.8	13.0	10.5	12.5	3.3
Classroom management	6.1	10.5	2.3	8.2			7.8		5.3	13.0	5.3	6.3	6.7
Communication skills	6.1	2.6	9.1	4.9	9.5	12.5	4.7	4.8	15.8		5.3	6.3	6.7
Self learning strategy	4.9	5.3	4.5	3.3	9.5	6.3	4.7	14.3			5.3	2.1	6.7
Classroom supervision	3.7	7.9		4.9		12.5	1.6				15.8	4.2	3.3
Cognitive coaching	3.7	2.6	4.5	1.6	9.5	6.3	3.1		10.5		5.3	6.3	
Literature; analysis of literature articles	2.4	5.3			9.5	6.3	1.6	9.5				4.2	
Understanding the evaluation system	1.2	2.6		1.6			1.6			4.3		2.1	
Dealing with teachers	1.2	2.6		1.6			1.6			4.3		2.1	
Planning for meetings	1.2		2.3		4.8		1.6			4.3		2.1	
Secondary school teachers competencies	1.2	2.6		1.6			1.6			4.3			3.3
Develop a new evaluation form	1.2	2.6		1.6		6.3					5.3	2.1	
Classroom visits	1.2	2.6		1.6		6.3					5.3	2.1	
Subject specialty	1.2		2.3	1.6		6.3		4.8				2.1	
Understanding secondary students	1.2		2.3	1.6			1.6	4.8					3.3
Mental training	1.2		2.3	1.6			1.6	4.8				2.1	
Mentoring	1.2		2.3	1.6		6.3			5.3				
Practicing the roles and responsibilities of the senior	1.2	2.6			4.8		1.6		5.3			2.1	
All respon dents	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 4-5: Areas of the Training that have been Very Effective in Bringing out Changes at Schools

Changes that have occurred as a result of the program

Changes that have occurred in the area of ...

	All respon dents 82 Col %	Male 38 Col %	Female 44 Col %	Diploma / Bachelo r 61 Col %	Master 21 Col %	Acting ST 16 Col %	ST 64 Col %	Arabic 21 Col %	English 19 Col %	Math 23 Col %	Science 19 Col %	Training 48 Col %	No training 30 Col %
More accurate and objective evaluation of teachers performance	53.7	52.6	54.5	52.5	57.1	75.0	46.9	38.1	57.9	43.5	78.9	50.0	53.3
Supervision skill	26.8	39.5	15.9	27.9	23.8	37.5	23.4	28.6	15.8	26.1	36.8	27.1	23.3
Teacher training skills	18.3	18.4	18.2	16.4	23.8	18.8	18.8	19.0	5.3	21.7	26.3	20.8	13.3
Encouraged teachers to do workshop	3.7	5.3	2.3	3.3	4.8		4.7	4.8	10.5			4.2	3.3
No change	3.7	2.6	4.5	1.6	9.5		4.7	9.5		4.3		2.1	6.7
Conferencing skills	2.4		4.5	1.6	4.8		3.1		5.3	4.3		2.1	3.3
Communication skill	2.4	2.6	2.3	3.3			3.1	4.8		4.3			6.7
Managing workshop became easier	2.4	2.6	2.3	3.3		6.3	1.6	4.8	5.3			4.2	
Enhanced my understanding	2.4	2.6	2.3	1.6	4.8		3.1	4.8			5.3	4.2	
Use more democratic way in dealing with teachers and gain trust	2.4	2.6	2.3	1.6	4.8		3.1			4.3	5.3	2.1	3.3
Learnt how to advice teachers	1.2		2.3	1.6						4.3			3.3
Accepting new ideas	1.2		2.3	1.6			1.6	4.8					3.3
How to meet with teachers before and after the evaluation session (class visit)	1.2	2.6			4.8		1.6		5.3			2.1	
More awareness of the needs of the teachers	1.2		2.3		4.8		1.6		5.3				3.3
Have the necessary tools in dealing with teachers	1.2	2.6		1.6		6.3			5.3			2.1	
Train teachers in report writing	1.2		2.3	1.6			1.6	4.8					3.3
Skills in using technology	1.2		2.3	1.6			1.6				5.3		3.3
Learned a lot from the training materials received	1.2		2.3	1.6			1.6	4.8				2.1	
Able to convince teachers about their weaknesses	1.2		2.3		4.8		1.6				5.3		3.3

Table 4-6: Changes that Occurred as a result of the Program

Almost 83 percent of senior teachers passed the cooperative learning strategy to their junior teachers and some 35 per cent of the interviewed teachers confirmed that they received training in Cooperative learning (Table 4-4) (Figure 4-20). In addition, 34 percent of the senior teachers trained their teachers on use of technology and 22 percent of their interviewed teachers also confirmed that (Figure 4-20).

Although classroom management was considered the least effective components of the program, the improvement of the participants' skill was only 10 percent (figure 4-9); however, about 37 percent of senior teachers trained their teachers how to manage classrooms and 22 percent of their teachers confirmed that (Figure 4-20).

Transfer of Skills from Participants to Junior Teachers	
% All Respondents	
82.9	Cooperative learning strategy
36.6	Classroom management
34.1	Use of technology
30.5	Report writing
20.7	Dealing with different types of students
19.5	Evaluating teachers performance; competencies
17.1	Use of self learning in learning; self learning
11.0	Developing research

Figure 4-20: Transfer of skills from participants to junior teachers

Changes at school as a result of the program

When the program participants were asked to judge the training components to have been most effective in bringing about positive changes at their schools, barring senior teachers from the Maths department, all participants judge the Cooperative learning, Use of technology, Report writing, and Managing meetings to have made a valuable contribution to their profession (Table 4-5) (Figure 4-21).

Effective Training Program Components	
% All Respondents	
54.9	Cooperative learning strategies
51.2	Use of technology in teaching and learning
32.9	Report writing
24.4	Managing meetings
17.1	Leadership skills
15.9	Conducting (educational) research
15.9	Planning for teachers' professional development
14.6	Conferencing skills

Figure 4-21: training program components that were effective in bringing out positive changes at school

In addition, participants were challenged more to identify specific changes that have occurred at their schools because of the training program (Table 4-6). These have been grouped under the following categories: Teaching methods, Teacher's attitudes, Senior Teachers' Technical skills and Senior Teachers Administrative skills (Figure 4-22).

The most significant changes were (Figure 4-22) as follows: Cooperative learning was introduced and used as a new teaching strategy, teachers developed more programs and activities for students, senior teachers have improved in writing reports, leadership skills, supervision skills and evaluating and improving the performance of their teachers.

Effects of Training in Schools		
	% All Respondents	Changes
Teaching methods	57.3 30.5	Cooperative learning was implemented Started using different teaching strategies
Teachers attitudes towards students' learning	28.0	Developed programs and activities for students
Technical skills	56.1 26.8	Improvement in writing reports Improvement in leadership skills
Administrative skills	53.7 26.8 18.3	More accurate and objective evaluation of teachers performance Improvement in supervision skills Improvement in the way teachers are trained

Figure 4-22: specific changes at schools as a result of the program

The interviewed senior teachers believed that although it was difficult to judge, there was, because of the program, a significant effect in implementing cooperative learning as a teaching method in the classroom. Around 50 per cent of the teachers interviewed had introduced cooperative learning techniques into their teaching and 17 per cent said that they had introduced using technology in teaching (Figure 4-19). In addition, teachers trusted that they are now using more classroom activities, especially remedial activities and follow up with the low-performing students.

When studied the relationship between level of skill improvement and perception of program's component effectiveness (Table 4-7), the researcher found a relatively high correlation coefficient of 0.55 confirms that participants rightly judge those programs as most effective which have made the biggest impact in improving their skills (Figure 4-23).

**Relationship Between Percentage Improvement in Skills and:
Skill Transfer and Perception of Being Effective Programme Components**

	Effective training programme components	Skill transfer	Level of improvements in skills
	% Respondents	% Respondents	% Improvement
Cooperative learning	55	83	30
Use of technology in teaching and learning	51	34	33
Report writing	33	31	25
Managing meetings	24	6	21
Leadership skills	17	6	18
Carrying out educational research	16	11	16
Planning for teachers' professional development	16	4	24
Conferencing skills	15	9	31
Managing classroom	10	37	10
Evaluating teachers performance	10	20	18
Self-learning strategy	5	17	15

Table 4-7: Relationship between Improvement in Skills, Skills Transfer, and Effective Program Components

**Relationship Between % Improvement in Skills and Perception of
Being an Effective Training Programme Component**

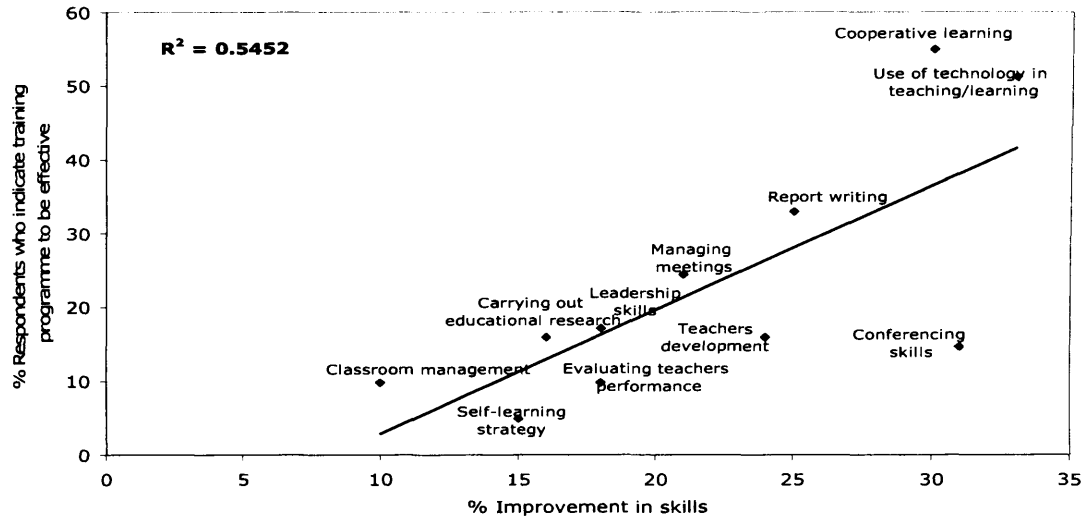


Figure 4-23: Relationship between improvement and perception of program effectiveness

And when studied the relationship between the training programs most effective in raising skills, those judged effective by participants and the level of transfer of corresponding skills to the junior teachers (Table 4-7), the researcher found that their was relatively high correlation coefficient of 0.5 confirms that the

maximum amount of skill transfer occurred for training programs that were, in the first instance, most effective in raising the skills level of the senior teachers themselves (Figure 4-24).

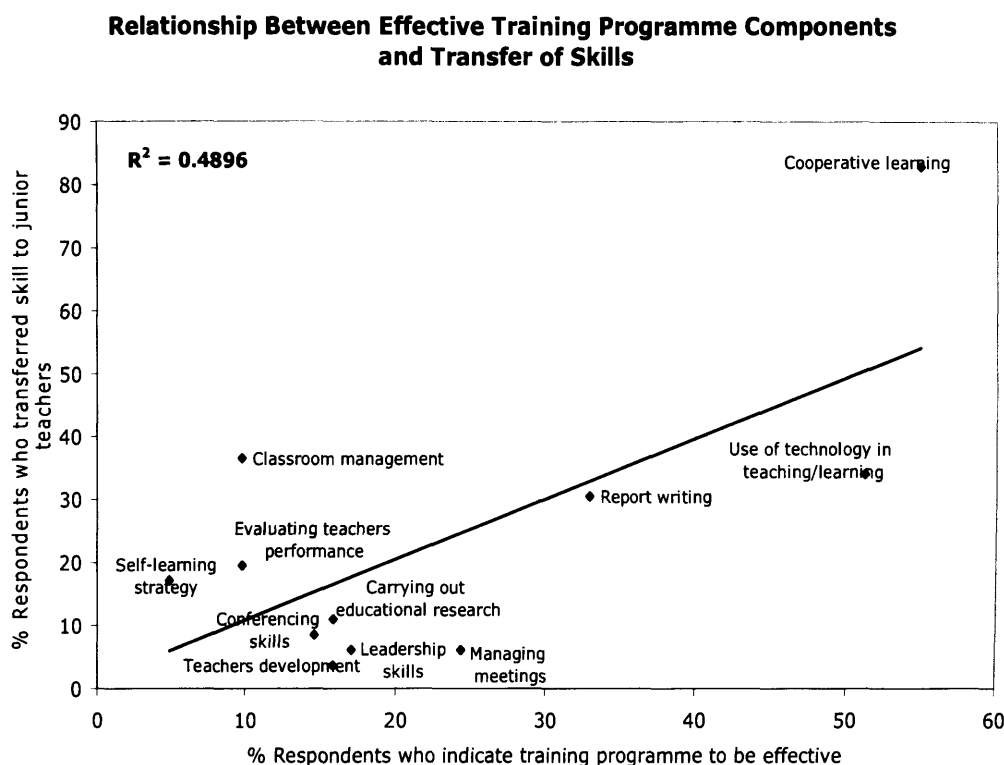


Figure 4-24: Relationship between effectiveness and transfer of skills

In conclusion, the most effective components of the program those that were judged as effective, proved to bring about positive changes at school and were transferred to the junior teachers. Those components such as Cooperative learning, Report writing, Managing meetings and Use of technology (Figure 4-17 and 4-19). However, the least effective components of the program those that proved to be less effective, proved not to bring about positive changes at school and were not transferred to the junior teachers as well. Such components as Implementing self-learning and Carrying out educational research (Figure 4-17 and 4-19).

Reasons why areas of the training program found to be more effective

	All respon dents	Male	Female	Diploma / Bachelo r	Master	Acting ST	ST	Arabic	English	Math	Science	Training	No training
	82 Col %	38 Col %	44 Col %	61 Col %	21 Col %	16 Col %	64 Col %	21 Col %	19 Col %	23 Col %	19 Col %	48 Col %	30 Col %
Area was related to my training needs	84.1	84.2	84.1	86.9	76.2	93.8	81.3	66.7	100.0	78.3	94.7	85.4	80.0
The trainer provided me with valuable knowledge	80.5	76.3	84.1	83.6	71.4	93.8	76.6	57.1	94.7	82.6	89.5	87.5	66.7
Personal interest to upgrade my professional skills in education	78.0	73.7	81.8	78.7	76.2	87.5	75.0	85.7	84.2	69.6	73.7	87.5	66.7
The trainer conducted practical sessions to show me how to implement what I learned	72.0	68.4	75.0	63.9	95.2	87.5	67.2	76.2	89.5	60.9	63.2	77.1	60.0
The trainer provided me with the tools necessary for implementation	59.8	55.3	63.6	54.1	76.2	62.5	60.9	57.1	73.7	60.9	47.4	68.8	43.3
Area was new and interesting	52.4	55.3	50.0	50.8	57.1	56.3	53.1	38.1	73.7	47.8	52.6	54.2	53.3
The trainer provided feedback on my implementation	25.6	23.7	27.3	23.0	33.3	25.0	25.0	33.3	21.1	21.7	26.3	31.3	20.0
The timing of the session; at the beginning of the training program when I was fresh	15.9	21.1	11.4	13.1	23.8	12.5	17.2	4.8	15.8	21.7	21.1	20.8	10.0
I have personal interest in learning and implementing what I learn in my practical classes	1.2		2.3		4.8		1.6		5.3			2.1	
Good teaching style	1.2		2.3	1.6			1.6				5.3	2.1	
All respon dents	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 4-8: Reasons For the Program Components that Found to be More Effective

Factors impacting on the program's effectiveness

	Traini ng Need	Relevan ce to work	Focus on modern educational trends	Relevan ce to training objectiv es	Effectiv eness on professi onal perform ance	Appropri ateness of training hours	Explaine d objectiv es	Good underst anding of subject	Ability to transfe r knowle dge	Trainin g techniq ues	Motivat ional skills	Comm itment to time	Providi ng feedba ck	% Improve ment
Cooperative learning	74	92	92	92	85	94	100	97	96	80	94	97	80	30
Implementing self-learning in the classroom	74	86	80	85	71	88	85	83	79	39	74	92	45	15
Ministry's vision for secondary school development	63	91	90	91	81	91	97	96	95	54	85	85	51	18
Secondary school teachers competencies	67	90	90	92	82	98	100	95	97	63	89	99	65	17
The evaluation system in Bahrain government secondary schools	64	94	91	92	80	90	97	95	92	59	91	87	59	12
Understanding and dealing with secondary school students	60	86	87	90	77	96	98	98	96	59	88	97	60	11
cognitive coaching		91	91	92	81	86	93	86	81	46	73	96	53	25
conferencing skills		91	92	93	83	87	100	97	94	76	91	100	72	31
Evaluating teachers' performance	67	93	87	92	77	81	93	90	88	57	82	92	64	18
Leadership skills		89	86	90	77	89	97	90	88	45	81	97	55	18
Teachers' professional development		90	91	92	82	84	93	96	91	55	86	93	68	24
Carrying out educational research	68	90	83	89	68	79	89	87	78	49	72	83	41	16
Communication skills and Managing meetings	59	94	90	94	82	94	97	92	90	65	83	96	58	21
Managing classrooms	46	89	90	92	77	95	97	97	95	66	87	96	58	10
Writing reports	67	97	93	96	84	82	99	92	91	63	83	89	63	25
Using Computers		96	95	99	89	76	90	93	83	67	86	91	66	33
Average		91	89	92	80	88	95	93	90	59	84	93	60	20

Table 4-9: Factors Impacting on the Program's Effectiveness

The characteristics of the most and least effective components of the program

The participants have clear opinion about the characteristics of the most effective components of the program (Table 4-8). They identified them as topics that were related to their training needs and interests, and had been taught by knowledgeable trainers who run practical sessions and provided them with tools necessary for implementing what they learned (Figure 4-25).

Senior Teachers' Reasons for Training Program Effectiveness	
% All Respondents	
84.1	Area was related to my training needs
80.5	The trainer was knowledgeable
78.0	Personal interest to upgrade my skills
72.0	The trainer conducted practical sessions on implementing what I had learned
59.8	The trainer provided me with feedback and tools necessary for implementation
52.4	The area was new and interesting

Figure 4-25: Characteristics of the effective program components

Furthermore, for the purpose, of identifying the characteristics distinguishing the most and least effective components of the program, the researcher examined the average satisfaction scores for the various factors influencing the efficacy of the professional development program (Table 4-9)).

Across all the program components (Figure 4-26) apparently, the surveyed senior teachers and acting senior teachers generally satisfied with the training time, the training number of hours, the topic relevance to work and training objectives and the topic focus on modern trends (training techniques). They were also satisfied with aspects related to the trainers such as the trainer's subject knowledge and his/her ability to pass on the understanding to them, his/her commitment to time and his/her motivational skills. However, the participants were not satisfied with two aspects

related to the components of the program such as training techniques and the feedback provided by the trainers

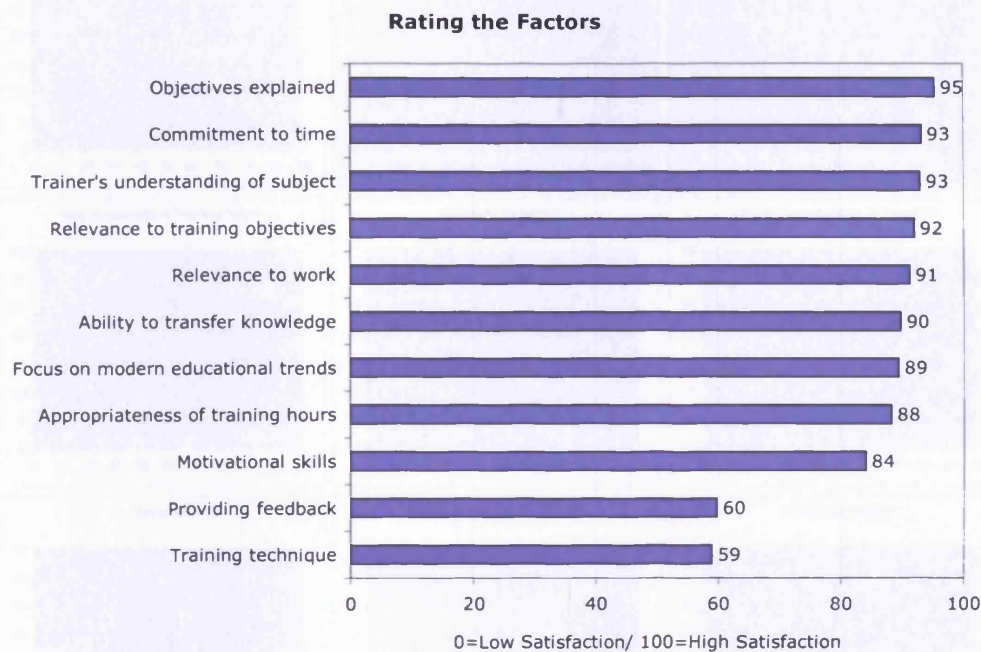


Figure 4-26: The factors influencing the efficacy of the program

Scores were significantly lower apropos the training technique (extent of the focus on practical training) and the feedback provided by the trainer, suggesting that these have hampered the learning and made some of the program contents as less effective.

Further more a normal correlation analysis from Excel was undertaken in order to understand the extent to which each of the factors affects and correlates with the program results. Normally a Correlation Coefficient of 1 signifies high correlation while a value towards 0 signifies no correlation. However, because this is a social research, the researcher accepted 0.3 and 0.4 to depict reasonable correlation.

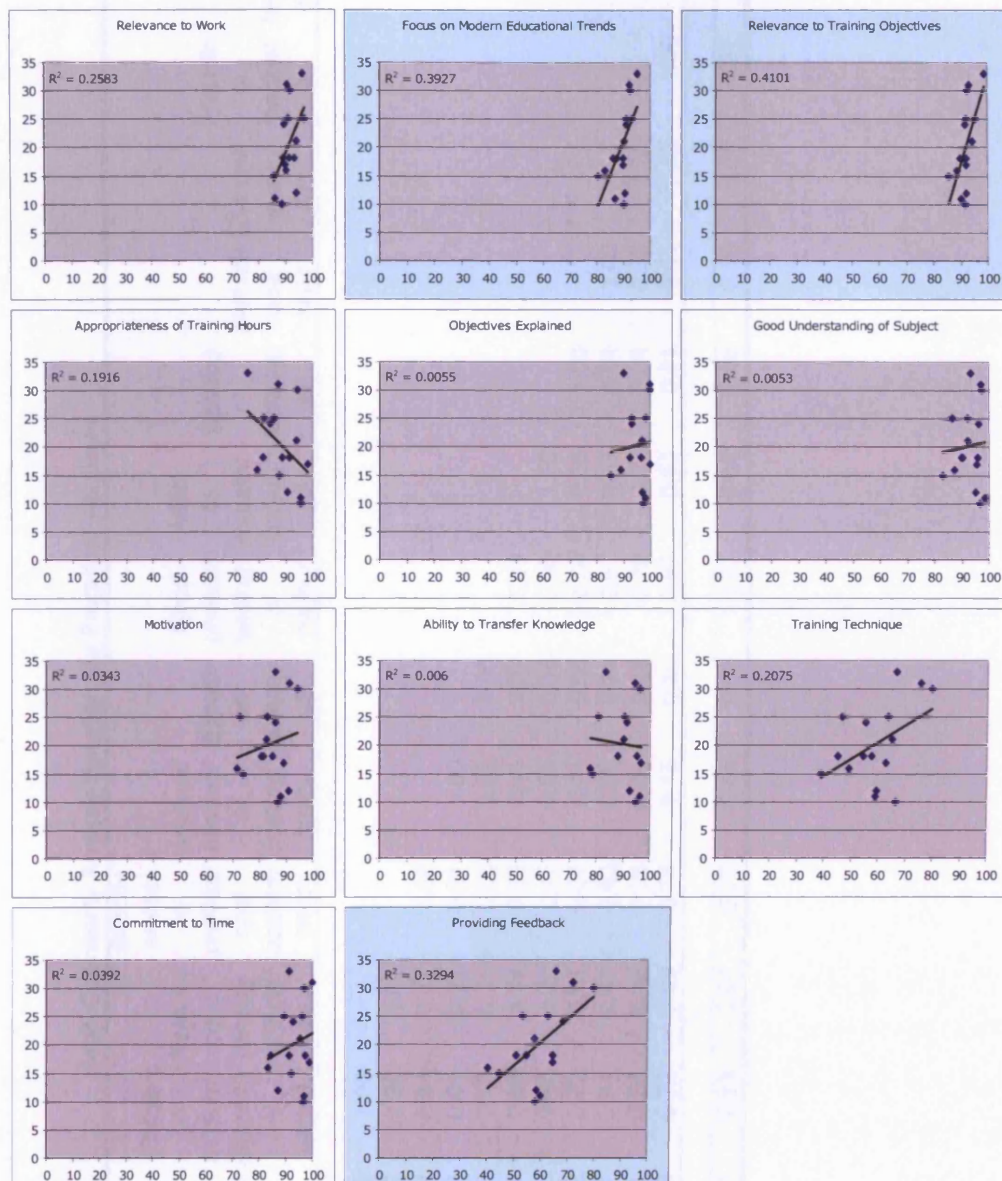


Figure 4-27: Correlation analysis of the factors influencing the efficacy of the program

The findings are illustrated in Figure (4-27). In all the graphs, a Y-axis represents the percentage improvement while the X-axis represents the satisfaction score (0-100) for the factor. Charts shaded in blue mark those factors correlating highly with improvements in skills and include the program focus on modern educational trends (training techniques), its relevance to the training objectives, and trainer providing feedback.

Table 4-10: Multi Co-linearity Analysis between the program's Attributes

Multi Collinearity Analysis Between the Programs' Attributes													
	Relevance to work	Focus on modern educational trends	Relevance to training objectives	Effectiveness on professional performance	Appropriateness of training hours	Explained objectives	Good understanding of subject	Ability to transfer knowledge	Training techniques	Motivational skills	Commitment to time	Providing feedback	% Improvement
Relevance to work	1.00												
Focus on modern educational trends	0.69	1.00											
Relevance to training objectives	0.82	0.90	1.00										
Effectiveness on professional performance	0.62	0.94	0.87	1.00									
Appropriateness of training hours	-0.44	-0.05	-0.27	-0.01	1.00								
Explained objectives	0.17	0.55	0.35	0.50	0.62	1.00							
Good understanding of subject	0.07	0.60	0.38	0.55	0.48	0.77	1.00						
Ability to transfer knowledge	0.00	0.46	0.23	0.46	0.69	0.88	0.90	1.00					
Training techniques	0.42	0.72	0.63	0.67	0.24	0.66	0.74	0.66	1.00				
Motivational skills	0.17	0.61	0.41	0.63	0.46	0.74	0.91	0.87	0.81	1.00			
Commitment to time	-0.31	0.21	0.12	0.29	0.49	0.46	0.28	0.37	0.34	0.35	1.00		
Providing feedback	0.32	0.72	0.58	0.76	0.15	0.60	0.67	0.63	0.81	0.81	0.52	1.00	
% Improvement	0.51	0.63	0.64	0.70	-0.44	0.07	0.07	-0.08	0.46	0.19	0.20	0.57	1.00

Multiple regression analysis was performed using these factors to numerically quantify the impact of each in influencing the effectiveness of the professional development program. However, the results were not of significant due to two main reasons. One of them was related to the low number of factors. The other reason was due to the fact that there is a high multi co-linearity between the factors (Table 4-10) indicating that all of the program attributes are related to each others.

Table (4-10) Shows that although all of the program attributes (factors) are related to each others however, the topic effectiveness on the professional performance of the participants scored the highest. Several other factors appeared to have higher correlation as well such as relevance of the topic to program's objectives, its focus on the modern educational trends (training techniques), and its trainer providing feedback to the participants and its relevance to the participants' work.

It is not surprising to see that there appropriateness of training hours is considered one of the factors related to the efficacy of the program. The participants had always expressed their dissatisfaction with the length of the program. They believe that the program is very long and time consuming.

Furthermore, to identify the parameters those have primarily differentiated the more successful training topics from others, the researcher choose three most effective and three least effective program components to compare (Figure 4-28) in terms of average satisfaction score of the different factors that could have impacted the training program.

According to the program participants, the three most effective components were (Using computers, Cooperative learning and Writing reports) while the three least effective components were (Managing classrooms, Understanding and dealing with secondary school students and Evaluation system in Bahrain government schools) (Figure 4-11 and 4-12).

Factors Impacting Training Program	3 Most Effective Components			3 Least Effective Components			Avg. satisfaction scores for most effective components	Avg. satisfaction scores for least effective components
	Using computers	Cooperative learning	Writing reports	Evaluation system in govt. schools	Understanding & dealing with secondary school students	Managing classrooms		
Relevance to work	96	92	97	94	86	89	95	90
Focus on modern educational trends	95	92	93	91	87	90	94	89
Relevance to training objectives	99	92	96	92	90	92	96	91
Appropriateness of training hours	76	94	82	90	96	95	84	94
Explained objectives	90	100	99	97	98	97	96	98
Good understanding of subject	93	97	92	95	98	97	94	97
Ability to transfer knowledge	83	96	91	92	96	95	90	95
Training techniques	67	80	63	59	59	66	70	62
Motivational skills	86	94	83	91	88	87	88	89
Commitment to time	91	97	89	87	97	96	93	94
Providing feedback	66	80	63	59	60	58	69	59
% Improvement	33	30	25	12	11	10		

Figure 4-28: A comparison between the three most effective and the three least effective components of the program in terms of average satisfaction score of the different factors that could have impacted the training program

Analysis of the satisfaction scores for the various factors influencing the effectiveness of the training programs reveals that it is essentially on three main parameters that the scores for the most effective and least effective training programs differ. Two were to do with the training techniques and the trainers providing feedback following the training session. The third one revealed another factor that is related to the appropriateness of the training hours.

Cooperative Learning versus Self-learning

To get a closer look at the difference between the most and least effective component of the program, the researcher had don an analysis of the satisfaction scores for the various factors influencing effectiveness of the two similar teaching methods. She choose cooperative learning as one of the most effective training component and self-learning as one of the least effective training component (Table 4-11).

Cooperative Learning VS. Self Learning			
	Cooperative learning	Self-learning in the classroom	Difference
Training techniques	80	39	41
Providing feedback	80	45	35
Motivational skills	94	74	20
Ability to transfer knowledge	96	79	18
Explained objectives	100	85	15
Good understanding of subject	97	83	14
Effectiveness on professional performance	85	71	13
Focus on modern educational trends	92	80	12
Relevance to training objectives	92	85	7
Appropriateness of training hours	94	88	7
Relevance to work	92	86	6
Commitment to time	97	92	5
Training Need	74	74	0

Table 4-11: Cooperative Learning Vs. Self Learning

This comparison revealed that training techniques and providing feedback, appeared to be the factors which mostly differentiate these two training components (Figure 4-29).

When cross referenced between all factors impacting the effectiveness of the program, it is safe to conclude that the most effective components of the program were distinguished with two important characteristics: Using Good training techniques and trainer providing feedback to the participants.

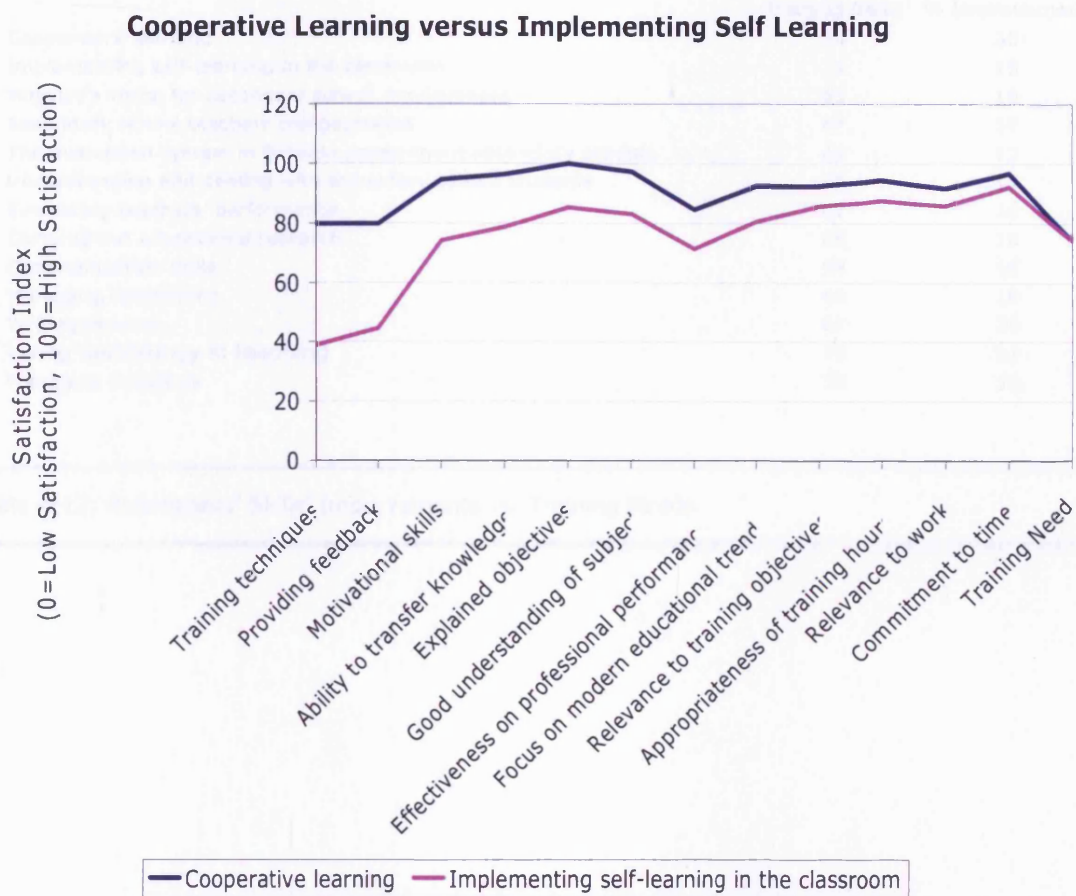


Figure 4-29: Cooperative learning vs. Self-learning

	Training Need	% Improvement
Cooperative learning	74	30
Implementing self-learning in the classroom	74	15
Ministry's vision for secondary school development	63	18
Secondary school teachers competencies	67	17
The evaluation system in Bahrain government secondary schools	64	12
Understanding and dealing with secondary school students	60	11
Evaluating teachers' performance	67	18
Carrying out educational research	68	16
Communication skills	59	18
Managing classrooms	46	10
Writing reports	67	25
Using technology in teaching	73	33
Managing meetings	59	24

Table 4-12: Participants' Skills' Improvements vs. Training Needs

Gap Analysis Between Percentage of Improvement and Training Needs				
			% Difference in Improvement from Average	% Difference in Training Needs from Average
			(% skills' improvement-average improvement)*100/average improvement	(% training needs- training needs' average)*100/training needs' average
			Y	X
			Total	Importance
Subjects	% Improvement	Training Needs	Gap	Gap
Using technology	33	0.86	75.22	7.26
Cooperative learning	30	0.85	59.29	6.80
Self-Learning	15	0.85	-20.35	6.80
Educational Research	16	0.82	-15.04	2.37
Teachers' Performance	18	0.82	-4.42	2.04
Writing reports	25	0.81	32.74	1.32
Teachers' Competencies	17	0.81	-9.73	0.92
Evaluation System	12	0.79	-36.28	-0.89
Ministry's Vision	18	0.78	-4.42	-2.19
Dealing Adolescents	11	0.77	-41.59	-3.80
Communication skills	21	0.76	11.50	-4.66
Managing classrooms	10	0.67	-46.90	-15.97
Average	18.8	0.8		

Table 4-13: Gap Analysis between Percentage of Improvement and Training Needs

Training Need versus Improvement

The researcher analysed the relation between the training needs and the level of improvement (Table 4-12). A Gap analysis was performed (Table 4-13) between the percentage of improvement and the training needs of the participants in skills for various topics. (Figure 4-30) plots the scores for training need and percentage improvement. The plot has been divided into 4 quadrants, one of the most important being that in the higher right corner. This holds the attributes that had the highest training needs, and for which the training program improved teachers' performance measurably. These attributes include implementing Cooperative learning and Using technology.

Another important quadrant being that in the lower right corner. This holds the attributes that had the highest training needs, but for which the training program failed to improve teachers' performance measurably. These attributes include implementing self-learning in classrooms, understanding the evaluation system, understanding the competencies required by secondary school teachers and carrying out educational research.

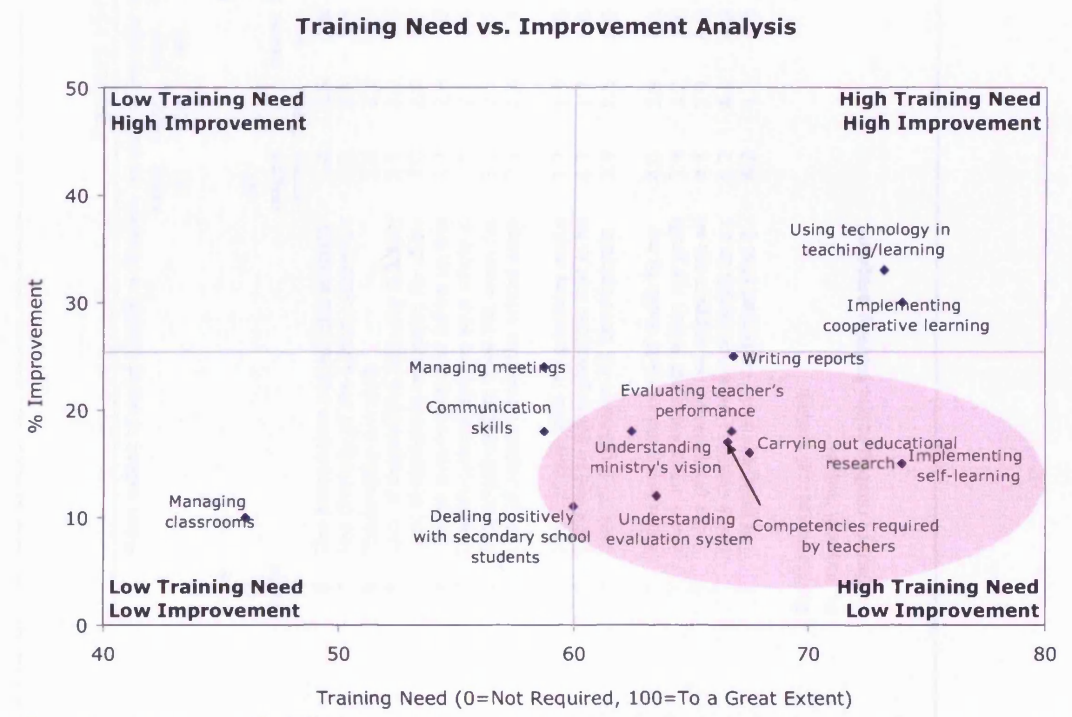


Figure 4-30: Training need vs. improvement analysis

Table 4-14: Factors Hindering the Transfer of Learning by Category

Factors Hindering the Transfer of Learning																	
Mean extent of agreement(5 = Strongly agree/1 = Strongly disagree)																	
		Mean 82	Mean 38	Mean 44	Mean 61	Mean 21	Mean 16	Mean 64	Mean 21	Mean 19	Mean 23	Mean 19	Mean 48	Mean 30	Mean 18	Mean 28	Mean 35
Type of facto rs		All respon dents	Male	Femal e	Diplom a/ Bachel or	Master	Acting ST	ST	Arabic	English	Math	Scienc e	Trainin g	No trainin g	Up to 15 years	Betwe en 15- 20 years	More than 20 years
E	The limited time against the amount	3.8	3.9	3.8	3.8	3.9	4.3	3.8	4.0	4.3	3.5	3.7	4.0	3.6	4.1	3.7	3.8
E	The diversity of the senior teacher's r	3.6	3.5	3.7	3.6	3.8	4.1	3.6	3.8	4.3	2.9	3.6	3.8	3.4	4.3	3.7	3.2
E	The lengthy curricula	3.5	3.3	3.7	3.5	3.6	3.8	3.4	3.7	3.5	3.6	3.3	3.7	3.4	3.7	3.4	3.5
E	Lack of cooperation from my teachers	3.1	2.8	3.3	3.0	3.2	2.9	3.1	3.7	3.2	3.0	2.5	3.2	3.1	3.4	3.2	2.8
E	Lack of resources necessary for chang	3.0	2.9	3.0	3.0	2.8	3.4	2.9	3.1	3.1	3.0	2.8	3.1	2.7	3.4	2.7	2.9
E	Lack of supervision and follow up from	2.7	2.8	2.6	2.6	2.8	2.9	2.6	2.8	2.7	2.8	2.3	2.7	2.6	2.9	2.6	2.5
E	The educational system as a whole de	2.5	2.6	2.4	2.4	2.8	3.0	2.4	2.5	2.9	2.6	2.1	2.7	2.2	2.5	2.4	2.6
E	The school system does not encourag	2.1	2.5	1.7	2.1	2.2	2.4	2.0	2.1	2.2	2.1	2.1	2.3	1.8	2.1	2.0	2.2
E	Lack of support from the school admi	2.1	2.3	1.9	2.1	2.0	2.3	2.0	2.2	2.3	2.0	1.9	2.3	1.8	2.3	1.9	2.1
P	I am content with my practices and s	1.7	1.9	1.6	1.8	1.5	2.0	1.6	1.6	1.7	1.5	2.0	1.7	1.7	1.6	1.7	1.8
P	I got use to some practices that is ha	1.7	1.7	1.6	1.7	1.7	1.6	1.7	1.7	1.7	1.8	1.5	1.8	1.6	1.8	1.5	1.8
P	Lack of motivation for development	1.4	1.5	1.4	1.4	1.5	1.4	1.5	1.3	1.6	1.4	1.4	1.5	1.4	1.6	1.4	1.4
T	Some areas did not add much to my	4.0	3.8	4.3	3.9	4.5	4.1	4.0	4.2	4.1	3.7	4.2	4.0	4.0	4.3	4.1	4.0
T	Some areas were not within my profe	3.4	3.2	3.6	3.2	3.8	3.1	3.5	3.7	3.5	3.0	3.5	3.4	3.4	3.1	3.8	3.3
T	Some sessions did not support me wi	4.1	3.9	4.2	4.0	4.4	4.0	4.1	4.0	4.1	4.2	4.1	4.3	3.8	4.0	4.1	4.1
T	Some sessions were not taught in a p	4.2	4.1	4.3	4.1	4.4	4.1	4.2	4.4	4.1	4.0	4.3	4.3	4.0	3.9	4.4	4.1
T	The program is so condensed that it i	4.2	4.2	4.3	4.2	4.3	4.4	4.2	4.5	4.2	4.1	4.1	4.2	4.2	4.2	4.3	4.2
E: Environmental factors																	
P: Personal factors																	
T: Factors relating to the training program																	

Four: Factors Encouraged or Discouraged Senior Teachers to Transfer Learning to Workplace

To answer the last research question: What factors encourage senior teachers to transfer their learning to the workplace, or discourage them from doing so? The research used data collected by the questionnaire (Table 4-14), interviews (Figure 4-19) and observation (Appendix 5-10 and 5- 11).

Previously the researcher concluded that the most effective components of the program were effective because they were suitable to the training needs and interests of the participants (Figure 4-25), the trainers were knowledgeable, the trainers conducted practical sessions and provided participants with feedback and practical tools to implement what they learnt in school.

It was also concluded that the most effective components of the program had transferred more to the junior teachers. Therefore it is possible to conclude that the same reasons that made the program components more effective also encouraged the participants to transfer learning to schools.

The opposite was also true. The participants believed the lack of the above factors hindered learning and the transfer of learning to the workplace. They related the hindering factors to three main areas: the program, the working environment and the participants themselves (Figure 4-31).

The program factors scored the highest (Figure 4-32). The participants believed that the program was so tightly packed that it allowed no time for practice, and also that some parts of the program were not taught in a professional manner. They said some sessions did not support them with tools to use in the workplace, and some sessions like Classroom management, were not effective in adding to their knowledge because they were over-taught and not related to their training needs.

Factors that could have hindered the learning process	
	5 = Strongly Agree 1 = Strongly Disagree
Some sessions were not taught in a professional manner	4.2
The program was so packed that it allowed no time for practice	4.2
Some sessions did not support me with practical tools for implementation	4.1
Some areas did not add much to my knowledge	4.0
The limited time against the amount of work	3.8
The diversity of the senior teacher's responsibilities	3.6
The lengthy school curriculum	3.5
Some areas were not within my professional needs	3.4
Lack of cooperation from my teachers	3.1
Lack of resources necessary for change and development	3.0
Lack of supervision and follow up from the responsible bodies	2.7
The educational system as a whole does not encourage development	2.5
The school system does not encourage development	2.1
Lack of support from the school administration	2.1
I am content with my practices and see no need for change	1.7
I am used to some practices that are hard for me to change	1.7
Lack of motivation for development	1.4

Figure 4-31: Factors that could have hindered learning

The interviewed participants complained that the program was so demanding that the amount of work they leave behind while they were attending the program sessions was not taken into account. They were not able to do what the program required of them because they still had to perform their duties as senior teachers in their schools. The participants also believed that some sessions that were strictly theoretical were a 'waste of time' as one senior teacher expressed it. The trainees felt they were 'left with training in a skill without the knowledge of how to apply it in the workplace' as one senior teacher explained. This made the senior teachers so frustrated that they just abandoned the skill without even trying to apply it.

From the point of view of the participants, many environmental factors worked against the transfer of learning to the workplace, such as the amount of work and the responsibilities of the senior teachers (Figure 4-28). Other such elements were the length of the curriculum, the lack of cooperation from their subordinate teachers and the lack of resources needed for applying what they learned.

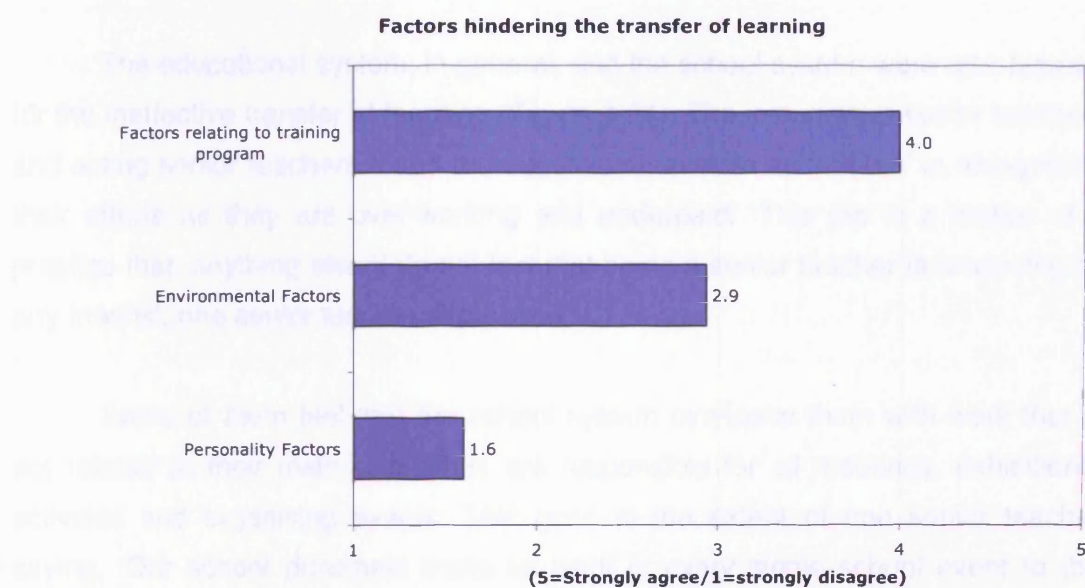


Figure 4-32: Factors hindering the transfer of learning

With this heavy load of responsibilities, the senior teachers believed that any further commitment (such as this program) would distract them and burden them with additional work. The interviewed participants insisted that the program has to be highly rewarding to be beneficial.

The lack of cooperation from teachers was another obstacle for improvement (Figure 4-31). One senior teacher said 'some of my teachers believed that I am less qualified and less experienced than them; that made them not to accept me as their leader. They believed that it was by chance and not by qualification that I am in this position'.

The lack of resources and tools required for implementing change were also hindering transfer of learning (Figure 4-31). By this, the participants meant that the program did not succeed in providing the trainees with required tools.

By observation (Appendix 5-10), the researcher noticed that only 4 sessions out of nineteen succeeded in supplying the trainees with forms, methods, ways and techniques that could be used in improving their practice. They were Cooperative learning, Managing meetings, Writing reports and Using computers

The educational system, in general, and the school system were also blamed for the ineffective transfer of learning (Figure 4-31). The interviewed senior teachers and acting senior teachers found the educational system as 'not fair' in recognising their efforts as they are over-working and underpaid. 'This job is a matter of a prestige than anything else. I do not feel that being a senior teacher is rewarding by any means', one senior teacher expressed.

Some of them feel that the school system overloads them with work that is not related to their main role. They are responsible for all meetings, exhibitions, activities and organising events. This goes to the extent of one senior teacher saying, 'Our school principals make us work in every single school event to the extent that we cannot do our main job as expected'. Since they believe school principals were not supportive, it was not surprising to know that majority (63%) said that their school principals did not notice changes in their performance as a result of the program (Figure 4-19).

Interviewed senior teachers strongly recommended that this program to be taught to the school principals first. They claimed that principals did not know the main roles and responsibilities of senior teachers in their schools. They feel that all what their principals care about is to get the work done and are concerned only about exhibitions and show off that they do not even asked what they learn learned. It was observed that when it comes to recognition, the learning outcome is not considered which explains their relationship with the school administration.

Some of them said there were no mentors, coaches or advisors of any kind. Others were considered lucky if their school principals were knowledgeable and responsive to their needs and if offered training and guidance.

The second group of hindering factors related to the participants themselves (Figure 4-32). Some senior teachers had worked in specific ways for so long (in some cases more than 10 years) that they found it difficult to change. The participants were very happy with their level of knowledge and skills, to the extent that they saw no need for change. Some trainees were so used to some practices that were hard to change but others, however, were not motivated to develop their professional practice further.

The participants believed that their lack of motivation could have hindered the transfer of learning to the workplace. The performance appraisal system in the Ministry of Education is not linked to a financial reward system. Senior teachers acknowledge that almost every teacher, senior teacher or school principal will get at least an excellent grade. This system invites lot of criticism and can create an atmosphere hostile to professional development. It encourages a laid-back attitude and inadequacies in them. It does not challenge the staff or motivate them to work harder in order to show results of improvement. Therefore, the researcher concludes that any improvement needs to stem from within the learner, rather than from a system command.

Chapter 5: Analysis of Findings

The Importance of Senior Teachers' Professional Development

Schools and educational organizations spend a great deal of time, money and effort on professional development to improve the effectiveness of their teachers because researchers argue that the ongoing development of teachers' knowledge and skills is important in improving student achievement (National Commission on Teaching and America's Future, 1996).

Researchers create a link between professional development and students' learning. They argue that professional development aims to improve teachers' effectiveness; therefore professional development is the key to student learning (Figure 2-1). Schools use effective teacher professional development programs in order to improve students' learning as a result of their teachers' development (Killion, 2000a),

Because a program is considered "effective" if it is successful in accomplishing what it was designed to do (Sweeny, 2001), the researcher studied the goals and objectives of the Senior Teachers' Professional Development Program (Chapter 3) to judge its effectiveness.

The program did not set high expectations for the trainees. Its goal and objectives focused on developing the knowledge but not the skills of the participants. The program objectives did not require the learners to be able to apply what they learned. The exception was the computer skills component, which aimed to teach computer skills so they could be applied in education and staff supervision.

Although the program coordinator stated that "the intention of the program was to develop the skills through gaining an understanding of the skills", the researcher believes that there is no place for intentions here. Objectives need to be selected wisely and objectively in relation to what is expected from the learners as an end result.

In addition, the researcher found no reference to demanding improvement in students' learning as a result of developing the effectiveness of the senior teachers.

The program's philosophy, goals and objectives (Chapter 3) focused on perfecting the senior teachers' roles and responsibilities with no reference to improving the students' learning. And when the senior teachers, their junior teachers and their principals were asked if they noticed any improvement in the students' learning, most of them replied either they "did not know", they "did not notice", they "did not see the relationship" or they are "not sure". These responses were not based on scientific analysis, but primarily on general feelings and intelligent guesswork.

Principals, on the other hand, did not believe that the training program made any difference to students' performance; neither did they believe that the program had any effect on the relationship between the teachers and their students.

Through studying the goals, objectives and philosophy of the Senior Teachers' Professional Development Program, it is clear that the program did not intend to produce senior teachers who have an impact on the development of their students' learning, which should have been the main objective of an effective program.

Effectiveness of the Senior Teachers' Professional Development

An effective teachers' professional development program aims at creating change in teachers' knowledge, understanding, behaviour, and skills (Southern Educational Development Laboratory (SEDL), 2006) in an attempt to produce effective teachers (Sparks & Hirsh, 2006) and to improve students' learning (Killion, 2000a),

In order to judge the effectiveness of the program, the researcher studied the development of the senior teachers' qualities as a result of the Senior Teachers' Professional Development Program through questionnaires, interviews, observation and document analysis.

From the point of view of the senior teachers, the program was able to develop their performance by only 20 per cent. Although there was a 26 per cent improvement in their personal skills such as Using computers, Writing reports and

Managing meetings, there was only 17 per cent improvement in their functional skills such as Cooperative learning and Planning teachers' professional development (Figure 4-5). This result is not surprising because the senior teachers had been in post for an average of 10 years which gave them enough experience to gain confidence in their functional skills as senior teachers

Professional development can be recognized as effective if it has developed the teachers' qualities and had impact on the workplace. Researchers believe that effective professional development produces immediate gains in teachers' skills (Sparks & Hirsh 2006, p.3) which lead to a change in all aspects of the school (Shapiro, 1995).

Evaluation of the Senior Teachers' Professional Development Program showed that there was a relatively high correlation coefficient of 0.55, confirming that participants rightly judged that content most effective which made the biggest impact in improving their skills (Figure 4-24). Furthermore, the relatively higher correlation coefficient of 0.5 confirms that the maximum amount of skill transfer to school occurred for training programs that were in the first instance most effective in raising the skill levels of the senior teachers themselves (Figure 4-23).

Skills that were judged as effective such as Cooperative learning, Report writing, Managing meetings and Use of technology proved to bring about positive changes at school and were transferred to the junior teachers at school (Figure 4-21, 4-22, 4-23, and 4-24). But skills that proved to be less effective like Implementing self-learning and Carrying out educational research proved not to have any impact in schools (Figure 4-23, 4-24).

The most effective components of the program were transferred to the junior teachers and proved to bring about positive changes at school. From their own point of view as well as the point of view of their junior colleagues, the senior teachers became more effective in writing reports, using technology and having effective meetings. They became better at communicating with their teachers and evaluating and following their performance. The influence of the senior teachers reached

further when they succeeded in introducing cooperative learning as a teaching method in the classroom (Figure 4-19 and 4-20).

However, the overall improvement in the functional and personal skills was fairly low. The researcher wanted to know why the program did not succeed in developing the skills of the participants more than 20 per cent. She therefore investigated the reasons through literature and compared it to the findings of her study.

Theoretically, there is a positive relationship between training needs and the level of improvement (Sparks & Hirsh, 1997). In this study, Managing classrooms and Dealing positively with secondary school students showed low training needs and low improvement (Figure 4-30). Using technology in teaching and learning and Implementing cooperative learning showed high training needs and accordingly higher improvement; however there were several topics that showed low improvement although the training need was high; examples are Implementing self-learning, Carrying out educational research, Evaluating teachers' performance and Competencies required by teachers. In these cases, the low level of improvement must be related to factors other than the relevance of the topic to the participants' training needs.

To understand this situation, a close comparison was made between two similar skills. The trainees needed these exactly at the same level, but they differed significantly in their training effect. An analysis was made of the satisfaction scores for the various factors influencing the effectiveness of the two skills: Implementing cooperative learning and Implementing self-learning (Figure 4-29). The comparison revealed that training techniques and providing feedback were the two most significant factors that could be responsible for the difference.

The researcher further compared the three most effective training program components (Cooperative learning, Using computers and Report writing) with the three least effective components (Understanding the evaluation system, Understanding and dealing with secondary school students and Managing classrooms) (Figure 4-28). They were compared in order to identify the parameters

that primarily differentiated the more successful training programs from the others. The comparison was done in terms of: Relevance to work, Focus on modern educational trends, Relevance to training objectives, Appropriateness of training hours, Explained objectives, Good understanding of subject, Ability to transfer knowledge, Training techniques, Motivational skills, Commitment to time and Providing feedback.

An analysis of the satisfaction scores for the above factors influencing effectiveness of the training programs revealed that the scores for the most effective and least effective training programs differ in three main parameters (Figure 4-28). These were to do with the appropriateness of number of training hours, the training techniques and the trainers providing feedback following the training session.

Furthermore, in order to understand the extent to which each of the factors affected the training results, a correlation analysis was made between the percentages of improvement versus the satisfaction levels (Figure 4-27). A correlation coefficient of 0.3 and 0.4 was considered a reasonably strong correlation, because it was a social survey. The factors correlating highly with improvement in skills include relevance to the training objectives and trainer providing feedback.

The participants agreed with these findings and characterized the most effective components of the Senior Teachers' Professional Development Program as those areas which related to their own training needs and interests, and which were led by knowledgeable trainers who conducted practical sessions and provided them with feedback and the tools necessary for implementation. The participants also mentioned the importance of their own inner motivation in making this program effective (Figure 4-31).

However, whatever they failed to learn was due to external factors such as the intensiveness of their workload, which was so great that it allowed no time for development. Other factors related to the program itself, such as lack of feedback and tools to implement what was learned.

Researchers agree that effective professional development programs are practical, focus on the specific problems practitioners face, reinforce and sustain group work and collaboration among teachers, principals and district personnel, link directly with day-to-day work in real schools and classrooms, sustain a consistency of focus over time, and use feedback (American National Development Council, 2002).

Effect of Studying the Training Needs on the Effectiveness of the Senior Teachers' Professional Development

The researcher believes that one possible reason for the participants not benefiting sufficiently from the program was that there were several functional skills sessions that were not related directly to the senior teachers' work, such as Managing classrooms, Understanding adolescence and Dealing positively with secondary school students. Adults tend to learn better if the learning experience is related to their professional needs and interests.

Identifying the training needs of the participants is considered by many researchers as the first step toward professional development best practice (Wills, 1993 and Earley & Bubb, 2004). It is considered that the accurate identification of the training needs is crucial to the organisation, overall success and development (Bramley, 1996) and the success of the program.

Some researchers argue that the training needs are to be studied at three levels: the organisation, the job and the person (Collins, 2005) while other researchers believe that the individual needs are of three types: professional, personal and social development needs (Earley & Bubb, 2004). Researchers believe that studying the participants' training needs can guide the trainer developers to plan better for the program.

In spite of the real importance of identifying the training needs and abilities of the participants, the Senior Teachers' Professional Development Program failed to identify the training needs of its participants, with the sole exception of the "Using technology" module. The reason for that was justified by the program coordinator

who believes that the program committee knows the real needs of the participants, especially those of senior teachers who were part of the committee. In addition, this program was mandatory for all senior teachers and acting senior teachers in Bahrain government secondary schools.

For the purpose of studying the effectiveness of the Senior Teachers' Professional Development Program, the researcher simply studied the professional training needs of the participants. She found that senior teachers were generally confident that they have the necessary skills and expertise to do their job, to the extent that 27 per cent of them believed they did not need some or any elements of the functional and personal skills in the program (Figure 4-4).

This is not surprising because the senior teachers and acting senior teachers attending this program had been in position for an average of 10 years, with an average teaching experience of 25 years. Most of them received previous training and held at least a diploma in education (Figure 4-1).

At the end of the program, the researcher made a comparison view between the training needs and the degree of effectiveness of the program's different components. When the relationship between the participants' profile and the level of effectiveness was studied, the researcher found that in developing their skills, there was a difference in improvement which related to their level of training and qualification. The untrained and the less qualified participants scored more improvement in almost all skills (Figure 4-14, 4-15).

These results are logical. Participants who were trained previously or who held higher degrees seem to have had higher expectations, and to have been more disappointed by the program. They had expected to be challenged with new knowledge and new skills. Trainees would not benefit from subjects that they already knew and had already been exposed to. "Unless the program is capable of providing the trainees with their expected outcome, its benefit and effect will be limited" a trainee explained.

In addition, acting senior teachers who were just stepping into their new role benefited more from the program and were more appreciative of it, particularly in equipping themselves with the necessary functional skills to do their job better.

Using computers, Using conferencing skills, Writing reports and Managing meetings were the four most effective components of the personal skills (Figure 4-10). These were either new to the trainees (like Using computers and Using conferencing skills) or were perceived as falling within their training needs (such as Writing reports and Managing meetings).

In addition, much of the improvement in functional skills (Figure 4-12) was related to four major areas. Three were very new subjects that were related to training needs (Figure 4-5 and 4-6): Implementing cooperative learning in the classroom, Using technology in teaching and learning and Using cognitive coaching. Moreover, one (Planning teachers' professional development) was directly related to the participants' job responsibilities.

Researchers believe that learning can be more effective if it is at the learners' stage of development, if it is challenging enough to require them to stretch, but attainable with effort (Joyce & Weil, 1980). The constructivist theory (Crystal, 2007) argues that the extent and nature of learning is influenced by the learner's self-awareness and belief about her/his ability, clarity and strengths of learning goals, personal expectations, general state of mind and motivation to learn.

The researcher believes that if the Senior Teachers' Professional Development Program committee had identified the real training needs of the participants, they could have been able to plan better and prioritize the efforts to focus on the components of the program that were most needed, instead of wasting time on topics that were of less interest to the senior teachers such as Managing the classroom and Understanding and dealing with the secondary school students, which were seen as not being among their training needs (Figure 4-4)

Stating that, however, the researcher found that the program was successful in meeting the participants' highest training needs in two of the program

components only: Cooperative learning and Using technology. It failed to meet their other highest needs such as Implementing self-learning in the classrooms, Understanding the evaluation system, Understanding the competencies required by secondary school teachers and Carrying out educational research.

It can thus be seen that meeting the training needs alone does not make the program effective. The next section will examine one more aspect of the program that the participants viewed as a baseline for its effectiveness: the training methods and their impact on the effectiveness of the program.

Effect of Training Methods on the Effectiveness of the Senior Teachers' Professional Development Program

The most effective components of the Senior Teachers' Professional Development Program revealed that the methods of training had an impact on the effectiveness of the program (Figure 4-28, 4-29.). The senior teachers believed that those trainers who used practical, hands-on sessions and provided them with tools for implementation, such as in Cooperative learning, Using technology, Writing reports and Managing meetings, were more successful in developing their skills. On the other hand, the trainers who were theoretical and used only lectures failed to help them develop their skills.

There was strong agreement between the interviewed participants that the trainer's training method makes a significant difference. According to the participants who evaluated the sessions as not practical, most of them said that some sessions were not taught in a professional manner and claimed that some sessions did not support them with practical tools for implementation (Figure 4-26).

To understand this view, the researcher used the observation data (Appendix 5-11) for the four most effective program components, Cooperative learning, Using computers, Report writing and Managing meetings, to study them in terms of their training methods and feedback given to the trainees. The details were as follows:

"Using computers" was taught in 70 hours. The trainer was a male technology-training specialist, who first assessed the actual training needs of the trainees by conducting a placement test. The sessions were held in a computer lab where every trainee had their own computer to work on. They followed the trainer's directions, presented on a big screen in front of them, step by step. The trainer ensured that each trainee developed the requisite skill before moving to the next level.

At the end of each session, the trainer gave practice activities to be done as homework. At the beginning of the next session, the first thing done was to review what had been learned in the previous session and in the homework. Several projects were assigned to the trainees as individuals and as groups. The trainer graded almost all these projects and feedback on progress was always given to the trainees. The trainer ensured that all the applied activities were related to the senior teachers' work such as grading on MS-Excel, presenting on MS-PowerPoint and writing reports on MS-Word.

A female training specialist taught "Cooperative learning" skills, in 6 hours. The trainer did not use any needs assessment because "this was a new subject hence it must be within the trainees' needs" as she explained. In the first session, the trainer gave orientation to the trainees about the objectives of the sessions and what was expected from them. She started introducing the lesson content. She used a modelling teaching method where the senior teachers were put in a real classroom situation. They learned as students and sometimes as teachers. They went through all stages of cooperative learning, practically from the planning stage to the evaluation stage.

The trainees lived the experience and enjoyed the way it should be practised as if they were in a real classroom situation. The trainees were given implementation projects that they tried in their own classrooms. After applying the skills, the trainees were encouraged to share their experience, listen to their colleagues' comments and work together to evaluate the cooperative learning skill and its appropriateness to the field. The participants discussed the outcome of their experience and received feedback from both the trainer and their colleagues.

A female secondary school principal taught "Writing reports" over 6 hours. The trainer started the session by informing the trainees about the main objectives of the session and her expectations of them at the end of it. These sessions were as practical as the previous two sessions. The trainer started by collecting a sample of the trainees' reports one week before the session. She evaluated them individually and came prepared, knowing where the participants stood on writing report skills. Her sessions were very busy, with several activities focused on analysing and writing good reports. Throughout the sessions, the trainer encouraged the sharing of information and receiving feedback from colleagues.

Almost the same technique was used in the "Managing meetings" sessions, which were taught in 6 hours by a female secondary school principal. At the beginning of the first session, the trainer administered a questionnaire to establish the trainees' skill level in managing meetings, followed by a written activity to ascertain actual practices in the schools. Before she started her activities, the trainer oriented the trainees about the objectives of the session and her expectations from them.

During the sessions, the senior teachers role-played how to plan, conduct and manage meetings practically. They rehearsed the whole meeting process in a real life situation through many activities, which varied between individual and group activities. Throughout the two sessions, the trainer assigned at least two activities to apply outside the training room. The trainees were encouraged to pass on their experience to the whole group and get their feedback.

In conclusion, three out of four trainers teaching the most effective components of the program evaluated the level of understanding of the trainees before starting their sessions, in order to establish what their learning needs were, and to be able to give them individual attention (Greer & Greeso, 1996). All four trainers had a clear idea about the objectives of their work (Hunter, 1990) which they conveyed clearly to the trainees in their first session. These objectives were precise, measurable, and attainable and reflected the expected performance that the trainees needed to reach.

In their first sessions, all the four trainers did an orientation, during which they described the content of the session to the trainees and discussed the procedures of the lesson and what was expected from them, creating an organising framework for the ideas, principles, and information that was to follow (Joyce & Weil model, 1980). Since trainers acknowledge the fact that adults prefer face-to-face learning, they first explained the new concept, idea or skill and immediately after that, they identified and presented the steps of the skills or the task with several real life examples to show them what was expected as an end product of their work.

All four trainers encouraged a strategic approach (Bell & Gilbert, 1996) where the learners first develop surface learning, then move on to a higher level of understanding through the practical use of knowledge in their personal experience. Furthermore, they made sure that the activities presented in the sessions related both to the objectives of the sessions (Hunter, 1996) and the real life experiences of the learners (Piaget) which made the adult learners learn best because the subject was related to their everyday life (Greer & Greeso, 1996).

All four trainers tried to expand on the application of abstract ideas with real life examples. The trainees were given homework and practice sample activities to try what they had learned. The trainers allowed for interaction, peer support, corrective feedback and assessment of performance by the group. Moreover, at the end, all the four trainers left their trainees with practical tools to be able to apply what they learned in real life situations.

Although researchers claim that there is no best method or best medium for teaching, there are some teaching methods that are more appropriate and suitable for the specific training needs and the nature of the participants. Mastery Learning theory (Warren, 2003) argues that all learners can learn a set of realistic objectives with suitable instruction and enough time to learn.

Teachers' professional development involves teaching adults, and adult learners have their own learning requirements. Understanding this concept can help trainers, professional developers or decision-makers in making choices among learning activities when planning for their professional development (Moon 2001).

Adults are self-directed (Knowles, 1984). In order for them to learn effectively, they need to work in a climate of trust, openness, respect and collaboration. Adults require recognition and appreciation of their past experiences. They are motivated when learning is important to them and arises out of their interests. They prefer to be selective about what to learn and how to learn. They prefer practical applications (Knowles, 1984).

Many learning theories emphasise the importance of providing practical learning. The cognitive theory focuses on the processing and transmission of information through communication, explanation, recombination, contrast, inference and problem solving (Banks & Mayes, 2001). The social theory, in addition, accounts for social interactions. It stresses the interpersonal relations involving imitation, and modelling (Kearsley, 2007).

The constructivist theory prefers hands-on, self-directed activities that focus on design and discovery (Crystal, 2007). They argue that learning involves interaction between learners, to share information and solve problems cooperatively. It works as a social arena for examining knowledge and increasing individuals' understanding.

Researchers such as Joyce & Weil (1980), Hunter (1990) Bell & Gilbert (1994) (Figure 2-2) and Wills (1993) suggest models that provide basic best practice in learning. All these models share common stages. One of them is the presentation and practice stage. At the beginning, the trainer presents the concept(s) or skill(s) to the trainees. S (he) explains and gives examples or analogies to extending the understanding and the application of abstract ideas.

After that, the trainer encourages learners to practise learning by labelling, categorising, comparing, problem-solving and summarising the learned concept. This is followed by the instructor ensuring that learners have understood and are 'doing it right' before advancing to practice.

At the "structured practice" stage (Joyce & Weil, 1980) or "support" (Bell & Gilbert, 1994) stage or "information processing" stage (Bruce & Weil, 1992) the trainer guides learners through step by step practice examples under his/her direct

instruction, supervision and guidance so that learners can see the generation of each step.

Once the learners master the knowledge or skill, the instructor will provide reinforcement practise by giving the learners a few activities or projects to practice what they learned in different relevant situations without assistance and with delayed feedback (e.g., comments on graded papers).

By exposing the learners to various activities or projects to practise what they learned on different relevant settings, the trainer provides for transfer of learning (Allen, 1998a) Researchers argue that transfer of learning does not occur automatically as a result of learning. Instead, it requires planning and enforcing afterwards, ensuring that the learner mastered the knowledge or skill required. The failure to apply what is learned is responsible for most learners not to transferring what they learned to the workplace (Ibid, p.3).

Although the four most effective components of the Senior Teachers' Professional Development Program proved to have the characteristics necessary for effective learning, they were responsible for improving the trainees' skills by only 28 per cent.

The program was not successful in improving the skills of its participants more because it did not meet most of the training needs of the participants and there was absence of effective training methods in most of its components. There is one more fundamental reason, according to the participants, that related to providing them with corrective feedback or performance assessment.

Effect of Trainers' Feedback on the Effectiveness of the Senior Teachers' Professional Development Program

Research on teachers' effectiveness emphasized that trainers can promote participants' learning by "structuring and organizing their teaching tightly, by explaining to students what they are to learn and by providing continuous feedback" (Harris, 2001, p181).

At the end of the learning session, the instructors should monitor learners' work, assess their performance and provide reflection and corrective feedback to them (Joyce & Weil (1980), Hunter (1990) Bell & Gilbert (1994), Wills (1993)). "The brain responds best to conditions of high challenge with low stress, where there is learner choice and regular and educative feedback" (Smith, 2001 p.107)

Recent research on the brain and learning (Smith, 2001) found that positive reinforcement and selected words change the structure of the brain. An amine called serotonin plays an important role in self esteem and self concept:

The presence of serotonin encourages the electrical "jump" across the snaps when connections are made. Where there is immediate positive reinforcement, such as the recognitions of a challenge met or a task successfully achieved serotonin is released simultaneously into the brain and intestines inducing a positive "gut-feeling", a sense of well being and security. This feeling coincided with the chemical conditions for enhanced neural networking and higher order thinking.

Smith 2001, p.111

Educative feedback and reflection become essential parts of the learning process if they are done in a practical, evaluative and non threatening way (Smith, 2001). Peers' feedback can be more influential than the trainers' feedback in obtaining lasting performance results (Druckman *et al.*, 1988 in Smith, 2001).

In this study the researcher found that providing feedback to the trainees is one of the most important factors that differentiated the most effective from the least effective components of the program (Figure 4-28),. The program participants believed that they benefited more from trainers who gave them feedback, praise or acknowledgment of success and identified strengths and weaknesses or areas to develop in the future (Earley *et al.*, 2004) such as in Cooperative learning, Use of technology and Report writing.

Almost none of the program components, including the most effective ones, offered measurement of the level of development of the participants' skills. The exception was "Use of technology". The trainers did not monitor the improvement of the trainees' performance level. They ascertained that there was a general understanding, but they were not sure that every trainee had mastered the skills expected (mastery learning). There were no tests or real grading system used by any trainer as an indicator of development, except in the use of technology, and the trainers depended on their theoretical judgment of the overall performance level of the trainees.

At the end of the program, there was no follow up to find out whether the trainees applied the skills acquired in the workplace. The trainees were left alone in their schools without coaches or mentors to monitor and guide their development. They were left with the choice either to apply what was taught, or to continue performing as they always had done before attending the training; the school principal and the school advisors were never a part of the learning decisions. They were therefore unaware of the development expected from the senior teachers.

Effect of School Culture on the Effectiveness of the Senior Teachers' Professional Development Program

For effective professional development, it is important to create a culture of learning (Blandford, 2000) which is found when teachers, administrators and all school staff members continue to learn and grow together and "support one another in planning more advanced lessons, improving the quality of their students' work, and solving the day-to-day problems of teaching and learning" (Sparks & Hirsh 2006, p. 4).

It is the responsibility of the school leadership to establish a positive value on continuous learning and development. Professional development tends to work most effectively when certain organisational cultures are established by the leaders (Busher, 1998) who are expected to focus on strengthening teaching and learning (Mazzeo 2003, p.1).

In this study, it was found that the school leadership had a negative impact on the transfer of learning. The participants complained of several factors hindering their development. Some of them were related to the school culture, such as: lack of support, cooperation and understanding from the school administration and teachers, which was viewed as lack of good leadership (Figure 4-31). They explained that their professional development was neither recognized by their school principals nor appreciated by their junior teachers.

In addition, when interviewed the school principals showed negative perception of the program. They did not value or noticed its effect. They claimed that it had no value and indicated that it was a “waste of time” and hindered their work at school.

Generally, school principals viewed this program as an obstacle to their regular workflow in the school. They complained that they could not afford to let the senior teachers attend the program, even for a half day each week. Some principals perceived themselves to be in competition with the program. They believed that they provided better training for their senior teachers than that offered by the program, and attributed the level of improvement in the senior teachers' performance to the continuous support and advice from the school administration.

This attitude was sensed by the senior teachers, who claimed it was a factor hindering their professional development. Most of the senior teachers showed no hesitation in assuming that their school principals and school management would not notice their improvement. They were confident that they were not part of their principals' priority.

The senior teachers believed that the school system was not supportive at all. They feel that they were overworked and under appreciated. They blamed the school administration for not knowing the main roles and responsibilities of senior teachers, which created conflicts.

The condition of the current school culture de-motivated the learners and hindered their development. It showed that many Bahrain school principals, as in

many parts of the world, lack the skills necessary to lead in today's schools (Mazzeo, 2003).

Effect of Self Motivation on the Effectiveness of the Senior Teachers' Professional Development Program

The participants believed that their lack of motivation could have been a factor in hindering the transfer of learning to the workplace (Figure 4-31). In addition to the unsupportive culture, there were several reasons that worked against the self motivation of the senior teachers. One was their conviction that they did not need this program, which was very clear in their response to the extent of their training needs in relation to the program components. Some senior teachers did not see it as over confidence, but rather the inability to accept change and the reasons for change. They were confident that at the end of the month they would receive their salaries.

The ineffectiveness of the performance appraisal system in the Ministry of Education de-motivated the senior teachers. The system invited a lot of criticism and created an atmosphere inimical to professional development. It encouraged a laid-back attitude and inadequacies. It did not challenge the staff to work harder in order to prove themselves. Therefore, any improvement needed to stem from the learner, rather than be required by the system.

The nature of the program itself was another reason for de-motivation. As well as the fact that it was not related to their training needs, repetitive, unpractical, too long and did not support them with tools to apply what they learned. For all of the above reasons, the participants became so frustrated that they just abandoned the skill without even trying to apply it.

Conclusion

Teachers' professional development is expected to positively affect not only the knowledge, attitudes and practice of individual teachers, administrators and other school employees, but also the culture and structure of the schools (Sparks & Hirsh, 1997). It must develop teachers' autonomy and sense of self worth (Lave, 1995) and leave a positive effect on students' performance (Killion, 2000a).

This program – in common with the other programs offered by the Ministry of Education – was not designed to serve these purposes. Its main goals and objectives were to ensure that the trainees understood the concepts and skills and were aware of the importance of applying them.

This program was not very effective because it did not deal with learning as a product (Smith, 1982) where there is emphasis on the outcome of the individuals' growth in skills as much as in knowledge. It did not deal with learning as a process (Smith, 1982) where learners' needs meet the goals. It did not deal with learning as a function either (Smith, 1982) where change occurs as a result of the learning experience (Butler, 1992, p.2). This program was not results-driven but was just another training program that had limited effect, and will continue to have this effect unless it is changed dramatically.

A Recommended Professional Development Model and Checklist

As a result of what was learned from this study, the researcher is recommending a professional development model, or guidelines, to be followed by the Directorate of Training when planning for any professional development program. It should work as a quality control system.

After a thorough study of the existing model of the professional development program, the researcher devised an effective and improved model as follows:

A Proposed Model for Professional Development

The researcher's model comprises six stages of development (Figure 2-3): the Policies and Procedures stage, Planning and Preparation stage, Designing and Programming stage, Orientation stage, Implementation stage and the Follow up and Evaluation stage.

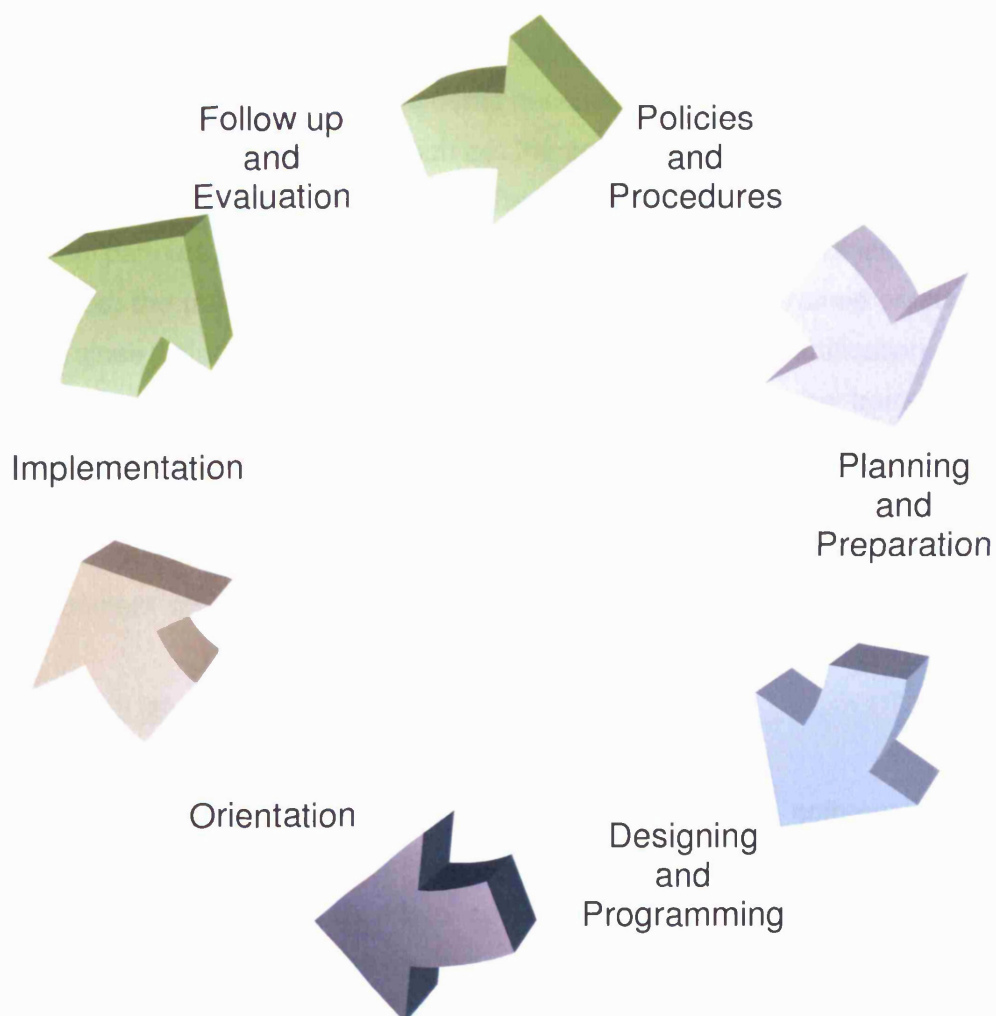


Figure 5-1: Model suggested by the researcher for professional development

Policies and Procedures stage

The researcher viewed to start the model with a Policies and Procedures stage considering the fact that the nature of the Bahraini culture necessitates having policies in order to be followed. Without having written policies and procedures, there is a caution that some activities will be ignored and eliminated from the cycle of the model. At the policy and procedures stage policies for the training processes and procedures are formed and documented. They can be suggested by Directorate of Training officials and reviewed and approved by a responsible committee. The policies should include all the elements necessary to ensure the positive outcome of the professional development, such as: the presence of objectives, competencies at knowledge, skills and attitude level, the responsibilities and liabilities of the main training partners, the costing and budgeting system; the allowances and rewards schemes; the trainer selection and recruitment criteria; the trainee selection policy; the trainee attendance policy; the trainee reward and certification policy; the trainees' responsibilities, obligations, rights and privileges; the trainee evaluation policy, the worksheet designing criteria, the training techniques; the procedures for studying the training effect; the program evaluation system; the procedures to provide support, feedback and reflection to the trainees and the training environment specifications.

Planning and Preparation stage

After policies and procedures are established and communicated to the different training partners the planning and preparation stage starts, where all responsible bodies, such as school advisors, school principals, senior teachers and teachers are involved in planning the program. A committee may be formed to plan the input, the process and the outcome of the program. It reviews the policies and procedures and studies the previous evaluation results and recommendations of the previous cohorts.

This stage starts with identifying measurable training objectives that are in line with the expected qualities or competencies (knowledge, skills and attitude),

followed by identifying the target group and their training needs. The committee identifies the budget and allocates resources. It plans for total development of the participants (professional, social, emotional and personal) and the different levels of learning: the surface, the deep and the strategic. It plans the training methods, tools and subject content. It also plans for the provision of support, feedback and reflection to the trainees and for the evaluation of both the program and the trainees. The committee is responsible for the final planning and preparation decisions.

Design and Programming stage

At this stage the program is designed and put in its final form. After the committee has made the strategic decisions, the program coordinator designs the program in terms of objectives, content, training techniques, time, location, resources, trainees and program evaluation, in coordination with the responsible people. S(he) ensures that the objectives are stated clearly and objectively to represent the main purpose of the program, and also ensures that the content meets the trainees' needs and interests, and is in line with the objectives and evaluation. In addition s(he) selects the training methods and techniques that are suited to the content and the nature of the participants' learning.

At this stage, the program coordinator chooses the most suitable time that fits in best with the participants' professional responsibilities. S (he) selects the most suitable trainers in terms of knowledge, training skills, communication skills, subject expertise, commitment and availability. S (he) picks an appropriate location, taking into account training needs such as space, weather, lighting, prayer facilities and snack facilities. The program coordinator also organises the training budget, the trainees' transport, the training tools and the program evaluation with the responsible bodies. S(he) selects the trainee evaluation methods in conjunction with the trainers.

Orientation stage

After designing the program, the responsibility for training is communicated to all parties concerned: trainees, trainers, school administrators, supervisors, and

Ministry officials. School administrators and other related officials are informed formally at least one term prior to the start of the program. The trainers, the trainees and their supervisors receive a copy of the program.

At this stage the trainers are oriented about the program and its objectives, the relationship between their subject and the content of the program, the expected presentation and evaluation tools and the expected outcome of the session. The trainees and their supervisors are also oriented about the program: its objectives, the competencies expected, the projects and assignments required, the timings, the performance evaluation system and the level of input expected from them. At this stage, trainees are encouraged to make decisions relating to the content and the timing of the program and they are encouraged to assess their actual performance level before attending the program.

Implementation stage

This is the stage where the actual learning takes place. The instructor prepares the sessions beforehand. S(he) develops objectives for the training and establishes its framework. The instructor prepares for adult learning in terms of structure of learning, experiences, learning climate, phases of learning, teaching and learning strategies (Greer & Greeso, 1996). The fact that adults prefer flexible schedules that respond to and consider their own time pressures is also taken into consideration. They prefer working on their own terms, therefore, their learning needs have to be identified and met. Adults learn better when their learning is individualised.

Preparation is followed by the orientation phase where the instructor prepares the learners and orients them about what is expected of them as well as learn their own expectations. S(he) presents the objectives and the content of the lesson and discusses with them the procedures. S(he) also involves the learners in the decision-making process. Usually adults have expectations of their learning experience and they expect those to be considered. Adults need to acknowledge the reason for their engagement in learning; adults would prefer to be involved in making decisions about the nature, pace and approach of their learning because

usually they make their own decisions about things, and adults learn best if the subject is meaningful and related to their everyday life (Cognitive theory) (Knowles, 1989).

The third phase is presentation, where the instructor presents the subject or the lesson to the participants. S(he) uses a visual representation of the task (VRT) because adults prefer face-to-face learning more than learning from audio or video cassettes or independent study (Greer & Greeso, 1996). The instructor uses examples or analogies to explain the concepts for better understanding. S(he) uses several methods such as labelling, categorising, comparing, and problem-solving to provide more concrete understanding. The trainer ends the session with a conclusion to help learners bring the ideas together and make sense of what has been learned, to organise their learning, to form a complete picture of what has been taught, to reinforce the major points and to help establish appropriate networks for further learning.

Adults prefer learning that gives them practical tools so they can apply their learning in related circumstances (Greer & Greeso, 1996). Learning is not a passive, receptive process, but an active use and practical application of knowledge in solving problems (Constructivism). Adults learn more when they interact with others from different backgrounds and share their own experiences (Greer & Greeso, 1996). Much learning involves associations established through contiguity and repetition (Cognitivism). Adults value problem-solving and cooperative learning. They need active participation, constructive feedback and are unwilling to sit through long lectures (Greer & Greeso, 1996).

At this stage, the instructor allows learners to do lots of supervised activities in the training room to ensure that understanding has been fully achieved. S(he) gives the learners chances for guided and structured independent and group activities, to apply what has been learnt to real life situations.

These guided activities are followed with independent, in-school activities where the learners apply what they learned in their own workplace. In this application phase, the learners are expected to come back to the training room to

share their in-school application experience with the other trainees during the training session in order to receive their corrective feedbacks. This activity can be repeated more than once until the skills are fully acquired.

The instructor ensures that a suitable climate is provided for adult learning: a climate of helpfulness and peer support; a climate of trust and acceptance, where opinions are safely expressed and accepted. The instructor provides practice through reflection, analysis and critical examination because adults tend to value learning that increases their autonomy and encourages them to create personal meanings. S(he) helps to establish mentoring, guidance, peer coaching or collegial support systems at work, and works as a partner with trainees and their superiors in evaluating the development of the trainees' performance.

Follow Up and Evaluation stage

The instructor follows up the participants' work by continuous monitoring of their performance. S(he) gives both immediate and delayed feedback, depending on the activities and the level and nature of learning. Feedback can work as reinforcement; the presence of reinforcement can support behaviour and the absence of reinforcement can weaken it (behaviourism). Reinforcement can work as a motivator (cognitivism). The instructor ensures numerous feedback loops, based on small units of well-defined and appropriately sequenced outcomes (mastery learning). The instructor is expected to introduce mentoring to be done by experienced teachers, to teach the new teachers how to manage and cope with changes.

At this stage, trainees are encouraged to assess their own development after attending the program. Their development is assessed also by the trainer, as well as by their subordinates and/or their superiors. The assessment is done by using assessment tools to observe and monitor the changes in participants' knowledge, skills, performance and attitude. The instructor assesses students' progress based on the objectives of the instruction rather than the traditional norm-referenced test (CRI model of Robert Mager). In addition, they are assessed on the level of transfer of

the learning to their colleagues and workplace in shape of informative sessions; through seminars, workshops, meetings or any other form of training.

This model is designed by the researcher and is supported by a checklist (Appendix 2-1) that can be used and followed as a framework or template for all professional developers, whatever the nature of their training. Its versatile design is suitable for any type of training in all professions. The researcher offers this model and checklist as a contribution to the field of professional development.

This model is supported with a checklist of six sections (appendix 2-1); each section represents a stage in the professional development process: Policies and Procedures Stage, Planning and Preparation Stage, Programming Stage, Orientation Stage, Implementation Stage, Evaluation and Follow-up Stage. The researcher believes that if the Directorate of Training follows the suggested guidelines, it will help to establish a quality control mode to ensure that any training program has positive effects.

Chapter 6: Conclusion

Summary of the Research Problem and Methods

Hundreds of teachers and school staff have had attended various training programs offered by the Directorate of Training in the Bahrain Ministry of Education every year. But the government school system was denying that these programs had any effect on the teachers' practices. The Training Directorate was making a concerted effort to produce change in schools; however, this change was not taking place as expected or at least neither the public nor the school officials recognised it.

In this study, a non-experimental case study was used to evaluate the effectiveness of one of the training programs offered by the Directorate of Training in the Ministry of Education in Bahrain. This program was the Senior Teachers' and Acting Senior Teachers' Professional Development Program, which was offered to the senior and acting senior teachers in the Bahrain government secondary schools.

In order to study the training effectiveness of the Senior Teachers' Professional Development Program, five research questions were identified to which the answers were sought through the research. Those questions were:

1. To what extent did the Senior Teachers' and Acting Senior Teachers' Professional Development Program develop the personal and functional skills of the teachers?
2. What were the changes of the senior teachers' and acting senior teachers' skills and practices as a result of the training program?
3. What were the most and least effective components of the program? And what were their characteristics?
4. What were the factors encouraging and discouraging senior teachers from transferring their new skills to their workplace?

The researcher concludes that the Senior Teachers' Professional Development Program was successful in improving the personal and functional skills of the trainees by only 20 per cent. On an average, the effect of the four most

effective components of the program: Writing reports, Using technology, Managing meetings and Implementing cooperative learning in the classrooms, did not exceed 28 per cent. These subjects proved to be effective because they were new, interesting or within the trainees' training needs. However, the opposite was not true. Those skills which were highly sought did not necessarily score high as regards improvement. For example, a skill such as implementing self-learning in the classroom, which 84 per cent of the trainees suggested as most needed before the training program, scored as one of the least improved skills (at 15%) (Figure 4-6).

According to the senior teachers and their junior colleagues, the main development detected in their skills were in report writing, managing meetings, evaluating teachers, using technology and implementing cooperative learning in the classrooms. Teachers view their senior teachers as more effective, more understanding, more open to criticism, more transparent in their evaluation, and more supportive to their professional development.

There is a positive correlation between the most effective components of the program and the development of the senior teachers' skills and their practices at school. For example, Cooperative learning and Managing meetings were seen by the senior teachers as two of the most effective components of the program. The improvement of these skills was also witnessed by the teachers as the most obvious and most effective.

The least effective components of the program were Managing the classroom, Understanding and dealing with secondary school students and the Evaluation system in government schools (Figure 4-17).

The most significant factors relevant to the variations in the effectiveness of the program components were the training techniques and providing feedback to the trainees on their performance (Figure 4-16, 4-17). The most effective program components were practical sessions, which prepared the learning atmosphere after understanding the real training needs of the learners. They focused on group and individualised meaningful learning that was related to their job as senior teachers and as leaders of other teachers.

The most effective program components also engaged the learners in their learning decisions. Trainees acknowledged the reasons for learning and became aware of their learning process. They were encouraged to foster an atmosphere of cooperation and trust where each one of them participated in the professional development of his colleagues. They were given the chance to apply their learned knowledge and received continuous feedback on their performance.

The most effective program components eventually transferred to the schools. Senior teachers became better at using technology, writing reports and managing meetings (Figure 5-6). They trained their teachers more and they became better in following up their performance. Teachers, in their turn, benefited indirectly from this program. Their needs were better catered for, their voices were heard more clearly and they benefited from better communication with their senior teachers. They started using more teaching and learning techniques such as cooperative learning and were more encouraged to focus on less advanced students (Figure 5-6). Teachers believed that their meetings became more beneficial, more fun and were considered to be learning experiences.

The effects of the program, however, did not reach the school administrations, which were seen as an obstacle to the transfer of learning (Figure 4-25). The school administrations did not support either the program or the trainees. They viewed the program as a waste of the senior teachers' time, which should be devoted to duties in the school.

The trainees believed that they were responsible for any benefit derived from the program. They believed that without their determination and interest this program would not have been as effective (Figure 4-20). However, the fact that many trainees did not benefit from large parts of the course was blamed on the program itself. It did not consider their training needs, did not offer interesting and practical sessions, did not succeed in providing them with practical tools to be used at their schools and failed to offer feedback on their performance (Figure 4-25).

The senior teachers also condemned their onerous responsibilities, the extensive curriculum and limited resources, the school administrations for their overwork and neglect of their needs and their junior teachers for not cooperating and not accepting change (Figure 4-25). They held the school system and the Ministry's system responsible for the limited benefit of the program. They believe that the system is neither transparent nor supportive of their change and development; instead it was viewed as unfair and unwise.

However, the researcher believes that there were some other important factors that hindered the transfer of learning to the schools. The program objectives reflected its focus on the professional knowledge of the trainees, rather than on their skills. It also neglected to plan for the social and personal development of the trainees. Social development involves the renegotiation and reconstruction of what it means to be a teacher of a specific subject. It also involves cooperative working with others to establish a social interaction necessary for her/his professional identity. Although there were some activities in the program that supported that, they were done without a well-acknowledged purpose.

The second reason was the training system of the Training Directorate in the Ministry of Education which did not have adequate quality control systems in place. Each training program was assigned to one coordinator, usually from the Directorate of Training, who planned the program from beginning to end. The program coordinators are responsible for designing, coordinating and implementing the program. They choose their trainers according to their own criteria and as well as the program content and the duration, according to the availability of the trainers.

Often, the Directorate of Training program coordinators change the content or the number of hours for their own reasons. The Directorate rarely questioned such an act. For instance, the length of the Senior Teachers' Professional Development Program changed from 190 hours in 2001, to 72 hours in the year 2006. Module 5 was omitted to reduce the length of the program and several sessions were eliminated because the trainers used to teach them were not available. The irony was that the most effective two sessions were excluded from the program. Both

using computers and implementing cooperative learning were removed because the respective trainers left the Training Department.

At the end of the year, the program coordinator presents her/his report to the head of the training department. The results are accepted without questioning the quality or the effects of the program. Even when the feedback evaluation results come out, there is no attempt to use the recommendations to improve the programs.

It was clear that the success of the program was not a major concern of the Directorate of Training, which was supposed to deliver the program but never accounted for its success. The training programs offered by the Ministry of Education never count for any further changes at school. Their main concern was developing the trainee's knowledge. However, teachers' development 'not only must effect the knowledge, attitudes and practice of individual teachers, administrators and other school employees, but it also must alter the cultures and structures of the organisations in which those individuals work' (Sparks & Hirsh, 1997, p2). It must be result driven and job embedded (Sparks & Hirsh, 2006).

In addition, the main concern of teachers' professional development should be its effect on student learning (National Commission on Teaching and America's Future, 1997). Because a 'quality professional development program can raise student achievement' (Sparks & Hirsh, 2006, p.2), it must be linked to student learning (Killion, 2000 a), yet, the program in question never planned for such an outcome, either in its objectives nor in its evaluation process. In fact, it did not attempt to link its outcomes with students learning. The Training Directorate did not have a system to measure the real success of its programs. The only indicator used was a reaction questionnaire to check whether the trainees were happy or satisfied with the program, its trainers and its environment.

Furthermore, the Training Directorate never invested in its human resources. None of the staff, without exception, was a professionally-trained trainer. There was an attempt to enrol them in a 'Training the Trainers' program but that program stopped abruptly without any warning. The training specialists were from different backgrounds ranging from senior teachers and curriculum specialists to educational

specialists. None of them had specialised in training and only rarely received any training to perform tasks such as planning, studying training needs, coordinating, delivering or evaluating training programs.

The researcher suggests a second reason that hindered the transfer of learning and that was the lack of follow up to the trainees' performance after they finished the training program. This program, like most of the training programs offered by the Directorate of Training, did not offer or even encourage any follow up, guidance, peer coaching, collegial support, mentoring or collaboration.

The third reason that the researcher points out is that this program completely failed to win the support of school administrations and also failed to communicate with other departments within the Ministry of Education that were responsible for following up the performance and development of the senior teachers.

Although the program tried to involve some of the Ministry's divisions in the program management committee, this involvement was superficial and proved to be depending on the personal interest of its members. There was no real partnership seen in this process. The Training Directorate worked alone. It initiated the program, consulted the committee and administered the program. It did not involve other departments concerned within the Ministry in making decisions related to the success of the program such as reducing the workload of the senior teachers, allowing them one day a week to attend the program or orienting their principals to understand the program requirement and their functional role in the senior teachers' development program.

The researcher argues that lack of leadership was another factor hindering the effectiveness of the program. She observed that the leadership of both the Training Department and the school focused more on managerial and political aspects, without paying adequate attention to the main objectives of their organisations. The Training Manager was not concerned about the training outcome while the students' performance was not considered as the prime objective of most of the school principals.

In education, evaluating professional development outcomes poses a problem for many researchers. The evaluation concept needs to progress from measuring the reaction level of the trainees and how much they enjoyed taking part in the program, to establishing proof that the program meets their training needs, the organisational goals and improves students' achievement.

This study has shown the impact of the teachers' effectiveness on student learning. It has demonstrated the importance of effective professional development programs in developing teachers' qualities. This study also highlighted how learning is different for adults than it is for children. It examined many models of teaching and learning with a focus on Mastery learning theory, its concept and its relationship to training and development. The researcher also drew attention to models of effective teachers' leadership in professional development and how learning could be transferred to the workplace.

At the end of the study, the evaluation of professional development was considered. It was concluded that professional development is considered successful when it produces improved change in participants' knowledge, behaviour, skills and attitudes in relation to the program objectives. This impact is difficult to measure in this case because the evaluation process is complex, there was difficulty in controlling the other factors influencing the changes, there was no previous planning for the evaluation at the program conception stage, and sometimes the program objectives were not clear or quantifiable.

In education, the bottom-line of teachers' professional development is the crucial role it plays in the improvement of student learning, however, evidence of student achievement because of the teachers' professional development program is difficult to measure because there are many complicating factors that are intangible and difficult to quantify.

However, this view should not stop evaluators from collecting evidence about the impact of professional development on students' achievement. New approaches to evaluation could be applied to demonstrate this link. The evaluators can use both

qualitative and quantitative approach to collect valuable information and evidence related to participants' outcome, organisational outcome and even students' outcome.

Evaluators should know that the effectiveness of professional development can be observed rather than quantitatively measured, and evidence of its success can be extracted from written and verbal feedback, observation, visual evidence, curriculum change, and tracking the participants' behavioural changes. Evaluation can be drawn from several partners such as school administrators, trainers, training officials in addition to the participants.

This study has provided a model for effective professional development program. It has created a checklist to be followed by the policy-makers, the program managers and the trainers in addition to the trainees. This model is supposed to provide the policy-makers and the program managers with some solutions to the identified challenges throughout the different stages of the professional development program. It helps them to construct the needed policies and procedures, to plan for the success of the program, to implement the best of the program and finally to explore the outputs and measure its success in relation to its goals and objectives.

Limitations of the Study

The researcher, being a member of staff of the Training Directorate, tried her best to keep her previous knowledge of the department from influencing her ethics and philosophical assumptions. She was also careful to be unbiased with her prior understanding of the political context of the Training Directorate.

This program was partially her product. She contributed to the program design and taught part of its content. The researcher was the program coordinator. She was part of the program committee and an employee of the Directorate of Training. The researcher took utmost care that her position and authority did not interfere with the genuine feedback from the respondents. She constantly insisted on and stressed the importance of honest and objective answers from the

participants. To ensure this, the researcher postponed the administration of the questionnaire and interview sessions until after the participants had received their training certificates.

The researcher had to convince the participants that this evaluation was an independent research project and it was not related to their performance appraisal. She had to explain to them the purpose of this research and what was expected from them and gave them the choice of participation. The questionnaire was anonymous, so participants could voice their thoughts freely without fear of being penalised for stating their views.

In a culture like Bahrain, participants usually receive better grades than their actual performance in a situation. Trainees do not make reality checks while evaluating, as they feel that there is no harm in awarding a high score to the trainers, though they do not merit it. Responses can be subjective. For instance, if the trainer was nice and had worked hard to please them, they would give him/her higher scores even if they had not learned much. For this reason, the researcher had to remind the participants to be neutral when rating the trainers.

The researcher used several methods of investigation to ensure the validity of the data she received. She wanted to make sure that she understood the real situation from the point of view of different partners in the program, such as the trainees, their principals and their junior teachers, the trainers and the training specialists. This procedure was time consuming and taxing. All the participants had to be included in the research sample. Interviews were carried out with 28 per cent of them, their teachers and their principals. 25 per cent of the trainers and the training specialists were also interviewed. Despite the high percentages and the length of the exercise, this was done to ensure the optimal validity of the data collected.

After the researcher left the Training Department, it became more difficult to access the necessary information. She had to go through a long process of authorisation all over again in order to reach people or the required documents. This was primarily because her study was evaluative in nature, and she had to combat

resistance arising from a concern that any evaluation could express a negative view of the state of affairs. Usually officials are fearful to let researchers study their situation because they believe that the results could be detrimental to them.

Constrained by the local culture of being careful not to show women's faces on public recordings such as this one, the researcher had to get the cameras placed behind the trainees while video recording some of the training sessions. This obscured some parts of the training site and as a result the images of the actual communication that went on in the training room are unclear.

In spite of the researcher explaining the purpose of her observation, she noticed that some of the trainers were self-conscious and even panicked as they were not feeling comfortable during observing the sessions. The researcher resolved this problem by only starting the video recording thirty minutes after the beginning of the session, when she was sure that the trainer got used to her presence and was more at ease.

Although the participants were able to come to the Training Directorate for the interview session, the researcher chose to interview them in their respective schools so that they did not feel uncomfortable in the surroundings and could feel more confident. This belief required a lot of travelling, time and effort on the part of the researcher but this was judged to be worth the effort for its effect on the validity of the information gathered.

Suggested Further Research

Professional development programs are crucial for organisational growth and school improvement (Earley & Bubb, 2004) therefore it is wise to study closely how to achieve high-quality professional development programs in Bahrain that can produce immediate gains in teacher quality (Sparks & Hirsh, 2006).

In addition, professional developers in Bahrain are urged to study how to ensure the transfer of learning to the work place, which should be the ultimate goal of professional development.

Professional developers should also be studying how to develop professional development that focus on improving the learning of all students in Bahrain.

They are encouraged to link the professional development outcome to organisational change and development because 'Individual learning and organisational changes must occur simultaneously and support one another if the gains made in one area are not to be eliminated by continuing problems in another' (Sparks 1998, p.17).

Professional developers in Bahrain are also advised to study the possibility of introducing other forms of professional development in education. Such new forms can include school-based professional development, work-based and incidental working opportunities, teamwork, self evaluation and inquiry, partnership with people from local education authorities, external professional development opportunities, networking, critical leadership and collaboration or learning from each others (Earley & Bubb, 2004)

Furthermore, the researcher suggests further study of the effectiveness of other professional development programs offered by the other Training Departments in Bahrain to challenge the above findings in order to be able to generalise it to other sectors in the training field in Bahrain and elsewhere.

Recommendations for Policy and Practice

The researcher recommends the following to the different parties in the Ministry of Education:

To the Minister of Education:

- Invest in research on effective professional development and the links between professional development and student learning (p.31).
- Provide necessary information for growth and development of the teachers practices to reach the main goal of education which is improving student learning.
- Set up favourable conditions and provide required resources in all schools and Ministry divisions to make use of professional development to its full potential (p.40).
- Examine, analyse, and establish policy modes that are effective in promoting quality professional development.
- Provide technical assistance to the Training Directorate to enable it to use its resources wisely and professionally (p.151).
- Develop a good leadership for the Training Department (p. 153)
- Encourage school principals to exhibit leadership (p.37).
- Provide immediate and long-term action to improve leaders' preparation programs.
- Act decisively and immediately to raise a new generation of high-quality school leaders
- Amend the training system to cope with the demand for the successful transfer of learning to the schools as an end result of all training programs (p.60).
- Demand concrete positive outcomes of the training programs offered by the Training Directorate (p.62).
- Hold the Training Directorate responsible for the effect of all of its training programs.
- Establish an effective monitoring system of all the training programs to ensure their impact in schools (p.62).
- Expect the training impact to reach the students' performance level (p.31)

- Establish a quality control system to ensure the quality of the programs provided by the Ministry (p. 63).
- Introduce coaching and mentoring systems at schools (p. 76).
- Introduce the learning school' system (p.44).
- Encourage school leadership to cooperate and participate in the program and its success (p.35).
- Establish and pass policies that regulate the workload of the trainees while attending long professional development programs.
- Improve the trainees' and trainers' reward system (p.169).
- Invest in recruiting high calibre trainers for the Directorate of Training (p.150).
- Invest in developing the staff of the Training Directorate.
- Ensure that the recruitment and appraisal system is transparent to school staff (p. 170).

To the Directorate of Training and Development:

- Incorporate the effectiveness of the program as early as at the inception stage and make successful outcome part of the program objectives.
- Enhance the program evaluation to exceed the expectation levels of the trainees in terms of transfer of learning to the workplace (p.60).
- Link the effectiveness of the training programs to the development of students' performance (p.31).
- Measure the success of the program in correlation with the success of implementing the newly learned skills in the workplace.
- Evaluate the effectiveness of programs and communicate the findings to the end users.
- Establish a quality control system to check the quality of the programs offered by the Directorate of Training (p.72).
- Make trainees' performance follow up mandatory for the responsible bodies to be implemented immediately after they finish attending the program.
- Correspond closely with all the divisions and departments concerned, to ensure the success of the training (p.182).
- Hold the training staff accountable for the effectiveness of the training programs.

- Encourage the contribution of the school leadership in the success of the programs.
- Involve all the divisions concerned at all stages of the training program development, starting from the planning to the evaluation stage (p.182).
- Assign a professional committee for each program that includes representatives of all divisions concerned (p.73).
- Engage the learners in their learning decisions (p.45).
- Identify the trainees' training needs during the first stage of planning (p.163).
- Ensure the quality of the training sessions by using program content that is contemporary, interesting and within the trainees' training needs (p.141).
- Ensure that the training offers the right balance between theoretical and practical training methods (p.141).
- Provide immediate feedback on the performance of the trainees (p.141).
- Provide required and adequate tools for the trainees to use at school (p.141).
- Equip the trainers with latest training methods and tools (p.141).
- Choose trainers who are available and committed to the success of the program (p.141).
- Guide and monitor the trainers to follow the content of the program and the training methods required (p.151).
- Enhance the skills of training staff with the help of qualified trainers (p.170).
- Invest in developing the skills of the training staff in terms of planning, studying training needs, implementing and evaluating the training programs (p.170).
- Track and consider positive program recommendations and utilise them for planning future programs (p.152).

To the schools:

- The school has to promote a common goal towards which every school member should work that helps improve the students' outcome (p.43).
- The schools have to develop a culture of learning for all its members, which involves continuous change, and development for all (p.43).
- Schools need to encourage all the staff to work together in a cooperative manner during planning and solving problems as well.

- Schools should encourage staff to determine their growth need and provide assistance in meeting them (p.49).
- The school should take full responsibility for following-up the development of the trainees as a result of their professional development program.
- The school principals should act as leaders and work toward change and development of the school (p.35).

The Researcher's Experience and her Benefits from the Research

When the researcher started this study, she was seeking her dream degree, a doctorate. However, in the course of the study, her priorities changed and focussed on acquiring knowledge and skills more than just earning a degree. The realisation of this benefit made the researcher believe that it was worthwhile continuing and completing the study, despite the challenges and hardships this entailed. It even meant the researcher gave up her job for two years to fully concentrate on the research, as well as limiting social activities and holidays. All this was to keep on track to achieve her goals.

The research experience has brought about more than one positive change in the researcher, such as improved reading skills, being resourceful in searching and finding necessary information and its appropriate use. In particular, the questioning and interviewing sessions helped her dramatically to improve interactive and communication skills. She became more confident in putting her thoughts together and critically analysing what she experiences. The study encouraged the development of new ways of thinking, and as the study progressed she experienced a perceptible, gradual personal development as a researcher, trainer and even as a future policy-maker.

With the help of this research experience, the researcher feels empowered to look at things from different perspectives and appreciate all points of view. The evaluation part of the research has taught her to be analytical and rational in her thinking. She has learnt to give every study due consideration and be critical where her thoughts differ. Her communication skills, both verbal and written, have greatly improved. She has learned to be unbiased and objective while expressing opinions

and acquired the knowledge to differentiate between a real situation and an imposed one.

Although did not come as a surprise, the researcher was happy to see that the results of this study can have practical implications. The research, reading, interviews and the investigation proved to be an immensely enjoyable learning experience even long after they ended. This experience was a rewarding one because it was as much learning as it was enjoyment.

To sum it up, the researcher strongly believes that the study has transformed her into a knowledgeable person with improved and additional skills that would help her to contribute significantly to the betterment of her society and her field.

Appendices

Appendix 1-1

Training Budget 1997-2006

Budget in BHD

Year	Ministry of Education Budget	Training Budget	Percentage
2006	151,560,000	700,000	0.005
2005	155,643,000	620,000	0.004
2004	134,000,000	487,000	0.004
2003	125,000,000	475,000	0.004
2002	101,000,000	360,000	0.004
2001	93,000,000	283,000	0.003
2000	81,700,000	117,000	0.001
1999	84,500,000	159,000	0.002
1998	83,000,000	340,000	0.004
1997	81,700,000	312,000	0.004

Source: Financial Management Information System, Bahrain 2007

Appendix 1-2: Number of trained teachers and school staff

Year	Ministry Budget	Training Budget	Percentage	Number of teachers and school staff	Number of teachers and school staff
1997	81700000	312000	0.004	7837	5188
2006	151560000	700000	0.005	12844	12000

Appendix 2-1

The Researcher's Professional Development Checklist

Policies and Procedures

No	Task	Yes	No
1	The training process and procedures are specified		
2	The effect of training is acknowledged as a fundamental outcome of the program		
3	A change in knowledge, skills and behaviour is required as an end result of the program		
4	The responsibilities of the Training Directorate are identified		
5	The responsibilities of the different training partners (school administrators, supervisor, trainers and trainees) are clarified		
6	The responsibilities of the program committee are clear		
7	The responsibilities of the program coordinator are defined		
8	The budgeting system is clear and unified		
9	The transportation scheme is clear		
10	The trainers' payment scales are at the accepted rate for the job		
11	The trainers' selection criteria and procedures are identified		
12	Trainees' selection policy is defined		
13	The trainees' attendance policy is clear		
14	Trainees' certification policy is identified		
15	The policy for trainee rewards is clear		
16	The policy for trainee sanctions is clear		

17	The policy for the evaluation of trainees is described		
18	The trainees' responsibilities and obligations are defined		
19	The trainees' rights and privileges are clear		
20	The training reward and sanctions policies are understandable to all training partners		
21	The criteria for designing the worksheet is developed		
22	Acceptable training techniques are listed		
23	There are well-defined procedures for studying the effects of training		
24	There is a program evaluation system		
25	There are procedures for providing support, feedback and reflection to the trainees		
26	There are guidelines for suitable training facilities, in terms of location, lighting, ventilation, comfort of chairs and desks and availability of refreshments		
27	There is a description of the modern training tools and use of technology in training		

Planning and Preparation Stage

I	Task	Yes	No
1	The main objective of the program is the immediate gain in trainees' ability to improve students' learning outcome		
2	Trainees' training needs are assessed		
3	Trainees' performance levels and the qualities or competencies expected from the program are identified.		
4	Program objectives are related to the intended program outcome		
5	Program objectives are measurable		
6	The program is planned for all aspects of the trainees' development: <ul style="list-style-type: none"> • Social • Personal • Professional 		
7			
8			
9	The program plans for different levels of learning: <ul style="list-style-type: none"> • Surface • Deep • Strategic 		
10			
11			
12	The program is planned to provide support, feedback and reflection to the trainees		
13	All responsible bodies (school advisors, school principals and/or senior teachers) are involved in the planning of the program		
14	Policies and procedures are established and communicated to the different partners to facilitate trainees': <ul style="list-style-type: none"> • Transport • Working hours • Workload • Responsibilities 		
15			
16			
17			

18	A program evaluation system is planned in relation to the objectives		
19	A program effectiveness tool is prepared		
20	Trainees' evaluation system is prepared		
21	A program committee is formed		
22	The program committee includes representatives of all concerned parties		
23	The program reward system is established		
24	The program budget is identified		
25	The program resources are identified: • Human		
26			
27	• Financial		
27	The results of the previous program evaluations are taken into account		
28	The recommendations, comments and feedback from the previous program are reviewed		
29	Modern training tools are available and sufficient for the use of the trainers		

Programming Stage

No	Task	Yes	No
1	The program content is in line with its objectives		
2	The program content meets the trainees' training needs		
3	The program takes account of the trainees' past experiences and interests		
4	The program content is approved by the program committee		
5	The program consists of practical sessions		
6	The program content follows a module system		
7	The program content is new and interesting		
8	The program content is related to the nature of the trainees' work		
9	The program timing is convenient for the trainees'		

10	The trainers are qualified to teach the subjects		
11	The trainers have good evaluation records		
12	The trainers are skilled in using good training methods		
13	The trainers have good communication skills		
14	The training committee has approved the trainers		
15	The trainers are committed to the program		
16	The trainers are satisfied with their financial reward system		
17	The divisions where the trainers come from are aware of their participation, encourage it and approve it.		

18	The program training methods are practical		
19	The training methods allow interaction		
20	The training methods allow team work		
21	The training methods allow individual work		
22	The training methods are diversified		
23	The training methods are suitable to the subject content		
24	The training methods are suitable to the age of trainees		
25	The training methods place an emphasis on giving immediate and long term feedback to the trainees on their performance		

Orientation Stage

No	Task	Yes	No
1	The responsibility for training is communicated to all partners: school administrators, supervisor, trainers and trainees		
2	Trainees are oriented about the program: its objectives, the competencies expected, the projects and assignments required, the timing, the performance evaluation system and the level of input expected from them		
3	The trainees are encouraged to take decisions related to the content and the timing of the program.		
4	The trainees are encouraged to assess their existing performance level before attending the program		
5	School advisors, school principals and trainers are oriented about: the objectives, the competencies expected, the projects and assignments, the timing and the type of support expected from them		
6	Trainers are oriented about the program and its objectives, the relationship between their subject and the contents of the program, the expected presentation and evaluation tools and the expected outcome of the sessions.		
7	The trainers, the trainees and their supervisors receive a copy of the program		
8	Schools' administrations and other related officials are informed formally at least one term before the program starts		

Implementation Stage

No	Task	Yes	No
1	The trainer assesses the level of the trainees at the beginning of the session		
2	The trainer explains the objectives of the session and how it is going to affect their performance as a learning process rather than a remedial one		
3	The trainees are encouraged and empowered to be responsible for their own goals and development		

4	The trainer describes the content of the lesson and its relationship to the participants' prior knowledge/ experience		
5	The trainer orient the trainees about the session, its expectations, procedures, its different parts and the learner's responsibility during the different activities		
6	The trainer involve the trainees in making decisions about the session		
7	The trainer presents the new concept and gives examples orally and visually.		
8	The trainer shows them examples of what is expected as an end product of their work		
9	The trainer allows them to practice examples from their own experiences. He/she allows trainees to work through activities, under his/her direct instruction, supervision and guidance. He/she is expected to check the level of mastery of learning and provide individual additional support as needed to ensure mastery of the subject		
10	Training is followed by independent practice of the concept learned		
11	The trainer monitors trainees' work closely		
12	The trainer provides corrective and constructive feedback and assess trainees' performance to determine whether the trainees are ready for the next instruction (mastery learning)		
13	Trainers use the procedures to provide support, feedback and reflection to the trainees		
14	The trainer encourages peer support, reflection, analysis and critical examination		
15	The trainer ends with a conclusion to help learners bring ideas together to make sense of what has been learned, to organise their learning, to form a complete picture of what has been taught, to reinforce the major points and to help establish appropriate networks for further learning.		

16	The trainer supports the trainees with practical tools that can be implemented in the workplace		
17	The trainer helps with the establishment of a mentoring, guidance, peer coaching or collegial support system at work		
18	The trainers, managers and trainees are partners in evaluating the development of the trainees' performance		

Evaluation and Follow-up Stage

No	Task	Yes	No
1	Trainees assess their own training needs		
2	Trainees assess their level of knowledge and performance before attending the program		
3	Trainees assess professional development achieved while attending the program		
4	Trainees compare their 'before and after' performances		
5	Trainees transfer the learning to their colleagues		
6	Trainees transfer their learning to their subordinates		
7	Trainees implement changes in the workplace, in accordance to what they have learned in the program		
8	Trainees' superiors observe the changes in knowledge, performance and attitude due to attending the program		
9	Trainees' superiors use special tools to follow up the trainees' performance development		
10	Trainers use the procedures to provide support, feedback and reflection to the trainees		
11	The trainers give objective feedback, using an evaluation tool, on the development of the trainees performance		
12	The trainers and trainees evaluate the program using an evaluation tools		
13	A mentoring system by experienced teachers is introduced, to teach new teachers how to manage and cope with changes		

Appendix 3-1

Senior Teachers' Professional Development Program Survey

Dear Colleague,

The purpose of this questionnaire is to evaluate the effectiveness of the training program in developing the knowledge, skills, attitudes and practices of the senior teachers who attended the "Senior Teachers' Professional Development Program"

Thank you for taking the time to complete this survey.

Please fill in the spaces below with your personal information

Sex (Please Tick)	Male	Female

Qualification	Diploma	Bachelor	Master	Others (Specify)

Present job (Please tick)	Acting ST	ST

No. of years of experience	As teacher	As Acting ST	As ST

Subject of specialty (Please tick)	Maths	Science	Arabic	English

No. of teachers under your supervision	
--	--

Have you gone under any training previously?	Yes	No

Today's Date	
--------------	--

1. Using the 5 point scale shown below where:

5	4	3	2	1
Excellent	Good	Average	Acceptable	Poor

Please rate yourself with regard to the each of the following areas before training and after training by ticking (✓) the appropriate boxes

Area	Your rating									
	Before training					After training				
	5	4	3	2	1	5	4	3	2	1
Understanding the Ministry's vision of secondary education development										
Understanding adolescence										
Dealing positively with secondary school students										
Understanding the competencies required by secondary schools teachers										
Performing the actual roles and responsibilities of the senior teacher										
Planning for teachers' professional development										
Evaluating teachers' performance										
Using Cognitive Coaching										
Using Conferencing Skills										
Managing meetings										
Leadership Skills										
Communication skills										
Writing reports										
Carrying out educational research										
Implementing Cooperative Learning in the classroom										
Implementing Self-learning in the classroom										
Managing classrooms										
Understanding the evaluation system in secondary schools										
Using technology in teaching and learning										
Using computers for your work										

2. Please list **3 areas of the training program** that have been very effective in bringing out positive changes at your school?

1.
2.
3.

3. Could you please tell me the reasons why the above areas of the training program were found to be more effective? Please choose from the list below.

Reasons	Tick
Area was new and interesting	
Area was related to my training needs	
The scheduling of the session at the beginning of the training program when I was fresh	
The trainer provided me with valuable knowledge	
The trainer conducted practical sessions to show me how to implement what I learned	
The trainer provided feedback on my implementation	
The trainer provided me with the tools necessary for implementation	
Personal interest in upgrading my professional skills in education	
Others (please specify):	

4. Please specify changes that have occurred at your school as a result of the training program in the following areas

Area	Specific development
Teaching Methods <i>e.g. Cooperative learning, self learning.....</i>	
Teachers' attitudes toward students' learning	
Administrative Skills: <i>e.g. Leadership skills, Communication skills, report writing.....</i>	
Technical Skills: <i>e.g. Teachers' evaluation, supervision.....</i>	

5. Using the 5 point scale shown below where:

5	4	3	2	1
Strongly agree	Agree	Not Sure	Disagree	Strongly disagree

Please indicate your level of agreement for the following reasons that might have hindered the transfer of learning from the training program

Statements	Extent of agreement (Please tick)				
	5	4	3	2	1
Some areas did not add much to my knowledge					
Some sessions did not support me with practical tools for implementation					
Some areas were not within my professional needs					
Some sessions were not taught in a professional manner					
The program is so condensed that it allowed no time for practice					
I got use to some practices that are hard to change					
I am content with my practices and see no need for change					
The diversity of the senior teacher's responsibilities					
The limited time against the amount of work required					
Lack of motivation for development					
The school system does not encourage development					
Lack of support from the school administration					
Lack of resources necessary for change and development					
The lengthy curriculum					
The education system as a whole does not encourage development					

Statements	Extent of agreement (Please tick)				
	5	4	3	2	1
Lack of supervision and follow up from the responsible bodies					
Lack of cooperation from my teachers					
Others (please specify)					

6. What areas of the training that you received have you provided for your teachers? Please list below?

1.	
2.	
3.	
4.	
5.	

Appendix 3-2

Interview Questions

Senior Teachers

1. How has the training you received affected your current practices in the school? Give some examples?
2. How has it affected the teaching styles and methods used in the classroom?
Give examples?
3. What are the activities and methods you used to transfer the knowledge you gained from the program to the teachers at school?
Give examples
4. How has it affected the way teachers support students' learning?
Give examples?
5. How did it affect the overall students' learning?
Give examples?
6. How did it affect your relationship with the teachers at work?
Give examples?
7. Do you think that your teachers noticed the changes in your behaviour, skills or knowledge as a result of the program? Explain?
8. How did it affect your relationship with the administrators [do you mean Principal, too?] at work?
Give examples?
9. Do you think that your school principal noticed the changes in your behaviour, skills or knowledge as a result of the program? Explain?
10. What are the reasons behind the development in your behaviour, skills or knowledge?
11. What are the reasons hindered the development in your behaviour, skills or knowledge?

Principals

1. What changes have you noticed in the senior teachers' practices since training?
Give examples?
2. What changes have you noticed in the teachers' teaching styles?

Give examples?

3. What changes have you noticed in the teachers' support of students' learning?
Give examples?
4. What changes have you noticed in the senior teacher - teacher relationship?
Give examples?
5. What changes have you noticed in the senior teacher - administrator relationship?
Give examples?
6. What changes have you noticed in the students' learning standards?
Give examples?
7. List all activities and methods the senior teacher used to transfer what he learned from the program to you?
8. What impact have senior teachers had on the whole school since training? Give examples.

Teachers

1. What changes have you noticed in the senior teachers' practices since training?
Give examples?
2. How did it affect your teaching style?
Give examples?
3. How did it affect your support of students' learning?
Give examples?
4. How did it affect your relationship with the senior teacher?
Give examples?
5. How did it affect the way the senior teacher was following your performance?
6. How did it affect the relationship between the senior teacher and the administrators?
Give examples?
7. How did it affect the students' learning?
Give examples?

8. List all activities and methods the senior teacher used to transfer what he learned from the program to you?

Trainers - the Directorate of Training

1. What do you think of the organisation of the program?
2. How was the atmosphere of the program? The training room?
3. Was the time sufficient?
4. What activities did you provide for the trainees?
5. Did you follow the course plan step by step?
6. What were the most challenging situations?
7. Did you give practical sessions? What type?
8. Did you follow up their application? Why?
9. Did you give tools for practice? What?
10. Did you give them feedback? In what form?
11. How effective was the program?
12. What was missing from the program?
13. You were a trainee and then a trainer, what is the difference in perception?

Training officials - the Directorate of Training

1. What do you think of the planning and the organisation of the training programs in general and the senior teachers' professional development specifically?
2. What is the atmosphere like in the training rooms?
3. What is your opinion of the training activities that the directorate provides for its trainees?
4. Do you usually study the training needs of the trainees?
5. What do you think of the selection procedures for trainers?
6. Do you have set criteria for the trainers to follow?

7. Do the trainers follow it step by step?
8. How do you evaluate the effect of the programs?
9. Do you study the effect of the program?
10. What do you do with the results?
11. What are the most challenging situations in training?

Appendix 5-1: Participants' opinion of the suitability of the number of hours of the program's content

	No. of hours suggested by participants	Actual no. of hours in the program
Understanding and dealing with secondary school students	0-3	3
Secondary school teachers' competencies	3	3
Implementing Cooperative learning	6	6
Implementing Self-learning in the classroom	3	3
The evaluation system in Bahrain government secondary schools	6	6
The Ministry's vision for secondary school development	3	3
Leadership skills	3	3
Cognitive coaching	3	3
Conferencing skills	3	3
Teachers' professional development	6	6
Evaluating teachers' performance	6	6
Carrying out educational research	9	6
Writing reports	9	6
Communication skills and managing meetings	9	6
The integrated relationship between the senior teacher and school staff and administration	0-3	6

Appendix 5-2: Work Sheet Specifications (translated)

Front page:

Kingdom of Bahrain
Ministry of Education
Training Directorate

Title

Senior Teachers' Professional Development Program

School year 200- to 200-

Prepared by:
Date:

Session Objectives:

Specific, clear objectives that are geared toward knowledge, skills and attitude change and related to the main objectives of the program

Competencies

Competencies expected at the end of the program

Duration of the session

Number of hours required to finish the session

Work Plan:

Pre-session activities
In-session activities
Post-session activities

Trainees' Evaluation

Attendance	20%	Compulsory
Participation and activities	70%	Depends on session requirement

Appendix 5-3: Evaluation Form

مملكة البحرين
وزارة التربية والتعليم
ادارة التدريب والتطوير المهني
قسم التقييم والتطوير

مقياس تقويم برنامج تدريبي

اسم البرنامج التدريبي :
الاسم (اختياري) :
الجنس : ☐ ذكر ☐ أنثى
المؤهل العلمي :
الوظيفة الحالية :
عدد سنوات الخبرة في الوظيفة الحالية :
المرحلة التعليمية : ☐ ابتدائي ☐ إعدادي ☐ ثانوي ☐ أكثر من ١٠
مادة التدريس (للمعلم) :
مكانها :
(سنة - ٥) ☐ (٦ - ١٠ سنوات) ☐ (أكثر من ١٠) ☐

عزيزي المتدرب

- * تستخدم هذه الاستمارة بهدف تقويم وتطوير برامجنا التدريبية.
- * رأيك الصريح ومقترحاتك الهادفة تساهم في تطوير برامجنا التدريبية.
- * عبر عن رأيك بوضع علامة (✓) أمام كل بند من بنود المقياس في خانة التقدير التي تعبر عن رأيك.
- * يرجى ملاحظة أن درجة (جيد) في المقياس تعني تقديراً متوسطاً.
- * شاكرين لك تعاونك.

درجة التقويم					البنود	مسلسل	المحاور
1	2	3	4	5			
ضعيف	مقبول	جيد	جيد جداً	ممتاز			
					واضحة ومحددة.	1	الأهداف
					منبثقة عن احتياجاتك التدريبية.	2	
					تحققت أثناء التدريب.	3	
					مستوى المعلومات المقدمة في البرنامج.	4	المادة التدريبية
					مستوى المهارات والتطبيقات العملية.	5	
					مرتبطة بمجال عملك.	6	
					مرتبطة بالأهداف التدريبية.	7	
					مرتبطة بحاجاتك التدريبية.	8	
					أكسبتك معارف و مفاهيم جديدة.	9	
					أكسبتك مهارات جديدة قابلة للتطبيق ميدانياً.	10	

Evaluation Form (cont'd)

درجة التقويم					المحاور	مسلسل	البنود
1	2	3	4	5			
ضعيف	مقبول	جيد	جيد جدا	ممتاز			
					الأساليب و الأنشطة التدريبية	11	ملائمة للأهداف والمادة التدريبية.
						12	أعطت مجالا واسعا للجانب التطبيقي (العملي).
						13	شجعت مبادراتك وأنشطتك الذاتية.
						14	أفسحت المجال للمشاركة أثناء الجلسات التدريبية.
					بيئة التدريب والتجهيزات	15	ملاءمة قاعة التدريب لعدد المتدربين.
						16	توفر المعينات التدريبية المتعددة.
						17	حداثة تجهيزات وسائل التدريب.
						18	الإضاءة داخل القاعة.
						19	التهوية داخل القاعة.
					الجانب التنظيمي	20	مستوى التنظيم والإشراف العام.
						21	تزويد المتدربين بالمادة التدريبية (الأهداف – المحتوى- نتائج) .
						22	تزويد المتدربين بالوثائق قبل فترة كافية من بدء البرنامج.
						23	تاريخ انعقاد البرنامج .
						24	توقيت انعقاد البرنامج (صباحي – مسائي).
						25	مدة البرنامج التدريبي.
						26	ملاءمة عدد المتدربين لطبيعة البرنامج .
					التقييم العام للبرنامج	27	بوجه عام ، فإن تقديرك للعائد من هذا البرنامج من الناحية النظرية والعملية هو:

١ - ما أبرز ثلاث مشكلات التي واجهتك أثناء البرنامج التدريبي ؟ حددها بوضوح وإيجاز ؟

- ١ -
- ٢ -
- ٣ -

٢ - ما مقترحاتك المحددة لتطوير البرنامج ؟

- ١ -
- ٢ -
- ٣ -

Appendix 5-4: Recommendations - Directorate of Training (2001)

The Annual Report: Senior Teachers Professional Development Program, Ministry of Education, Bahrain

اقتراحات المتدربين لتطوير البرنامج

- أن تكون جميع الحلقات متوازنة بين العملي والنظري مع التركيز على العملي .
- تقليل المشاريع و الواجبات المطلوبة من المتدربين .
- تفريغ المعلم يوماً واحداً لحضور الدورة ومتابعة متطلباتها .
- تخفيف الأعباء المدرسية على المعلم الأول المتدرب حتى يتفرغ قليلاً للدراسة وتطبيق ما يتم تعلمه في البرنامج .
- التخطيط لزيارات ميدانية للاطلاع على تجارب المدارس من أجل تبادل الخبرات .
- إتاحة فرصة أكبر للنقاش أثناء التدريب .
- تسليم جميع الأوراق المرجعية قبل موعد الحلقة بوقت كاف حتى يتسنى للمتدربي قراءتها وبالتالي المشاركة الفاعلة في مناقشتها .
- إيجاد مدربين متخصصين أو أكثر كفاءة .
- موضوع " خصائص نمو الطالب " غير ضروري .
- بعض الموضوعات بحاجة إلى ساعات أطول مثل : التعلم التعاوني 1, التعلم الذاتي 1 ، نظان التقويم التربوي .
- تقليل عدد ساعات البرنامج .
- تقليل مدة الحلقة الواحدة إلى ساعتين فقط .
- تحسين خدمة المواصلات .
- التركيز على استراتيجيات التعليم و التعلم .
- أن يكون هناك تطبيق ميداني لما تم تعلمه في جميع الموضوعات على غرار " التعلم التعاوني " .
- أن تنفذ الأنشطة البعيدة خلال الحلقة .
- بعض الموضوعات المطروحة غير جديدة .
- تحويل محور مهارات الحاسوب إلى الفترة الصباحية .
- التركيز على مهام المدرس الأول .
- إضافة موضوعات حول كيفية رفع المستوى التحصيلي للطلاب .
- أن يبدأ البرنامج بمحور " مادة التخصص " .
- أن يضاف محور لتعليم اللغة الإنكليزية أو الفرنسية للبرنامج .
- أن يضاف للبرنامج موضوعات في " وضع الخطط اللاصفية ، الخطط العلاجية ، كيفية التعامل مع المدرسات وتشجيعهن على العمل بإخلاص ، كيفية عمل تقييم صادق للمعلمين ، تحليل الاختبارات " .
- اختيار الوقت المناسب لتنفيذ البرنامج مثل بداية العام الدراسي .

Appendix 5-5: Results of Computer Skills Test

الدورة المتقدمة على استخدام الحاسوب
لمعلمي ومعلمات مدارس وزارة التربية والتعليم
العام الدراسي 2001/2002

كشف الدرجات

وقت التدريب : 8-6

Trainer:

ايام التدريب : الاحد والثلاثاء

مكان التدريب : احمد العمران الثانوية للبنين

Absent	PowerPoint	Excel	Win+Word	CPR no	Name	م
0	100	95	90			1
10	Absent	Absent	85			2
9	Absent	Absent	85			3
2	Absent	90	92			5
1	100	99	100			8
4	100	92	100			9
2	90	85	83			10
5	90	99	95			11
3	غ	87	90			12
4	94	95	93			13
2	100	95	100			15
1	95	88	87			16
0	100	99	98			17
3	100	98	99			18
0	90	92	95			19
1	100	96	100			20
1	97	92	96			21
1	95	90	92			22

Appendix 5-6: Needs Assessment for Use of Technology

نتائج اختبار تحديد المستوى
للمدرسين الأوائل والقائمين بأعمال المدرسين الأوائل المرشحين
لبرنامج التنمية المهنية للمدرسين الأوائل والقائمين بأعمال المدرسين الأوائل
للعام الدراسي 2000-2001م

الرقم	المدرسة	الاسم	الرقم الشخصي	نتيجة اختبار تحديد المستوى في الحاسوب				
				PowerPoint	Internet	Excel	Word	Windows
				*	*	*	*	*
				*	*	*	*	*
				-	-	-	-	-
				*	*	-	-	-
				*	*	*	*	*
				*	*	*	*	*
				مستوى 2	-	-	-	-
				*	-	-	-	-
				-	-	-	-	-
				*	*	*	*	*
				*	*	*	*	*
				*	*	-	-	-
				*	*	-	-	-
				*	*	*	*	*
				*	*	-	-	-
				*	*	-	-	-

* Means needs the subject
- Means does not need the subject

Appendix 5-7: Needs Assessment Results for Use of Technology

Technology use assessment results					
	PowerPoint	Internet	Excel	Word	Windows
no. of trainees needing this subject	79	72	63	50	47
total no. of trainees participating in the assessment	97	97	97	97	97
% of trainees needing this subject	81%	74%	65%	52%	48%

Appendix 5-8: Needs Assessment Form

Senior Teachers' Professional Development Program Needs Assessment Form

Dear Colleague,

The purpose of this questionnaire is to assess the training needs of the senior teachers and acting senior teachers attending the "Senior Teachers' Professional Development Program".

Thank you for taking the time to complete this survey.

Subject		To what extent do you need this subject?			
		to a great extent	to some extent	to a little extent	you don't need it
Secondary school system	the Ministry's vision for secondary school development				
	secondary school students				
	the evaluation system in secondary schools				
	secondary school teachers' competencies				
	learning strategies				
	classroom management				
Technical skills	roles and responsibilities of senior teachers				
	planning for supervision				
	supervision methods				
	teacher evaluations				
Administrative skills	researching				
	report writing				
	manage meetings				
	communication skills				
	team work				
	senior teachers' relationship with school administration and staff				
Subject specialty	subject specialisation				
	teaching strategies				
	using technology				
	analysing and developing curriculum				
	test building and analysing test results				

مملكة البحرين
وزارة التربية والتعليم
إدارة التدريب

بطاقة متدرب

البيانات الشخصية:

اسم المرشح رباعيا : _____
رقم البطاقة السكانية: □□□□□□□□ الجنس: ذكر ○ أنثى ○
الحالة الاجتماعية: ○ أعزب ○ متزوج ○ غير ذلك
العنوان: شقة _____ مبنى _____ ممر/طريق/شارع _____ مجمع _____ منطقة _____
هاتف العمل: _____ الفاكس: _____ هاتف المنزل: _____ النقال: _____
الوظيفة الحالية: _____ الإدارة: _____
موقع العمل الحالي: _____ تاريخ التعيين: _____

المؤهلات والخبرات:

أعلى مؤهل أكاديمي وأعلى مؤهل تربوي	التخصص	الجهة المانحة	التقدير العام	تاريخ الحصول عليه
-1				
-2				

البرامج التدريبية التي حضرها	جهة التدريب	مكان التدريب	عدد الساعات	الفترة		التقدير
				من	إلى	

البرنامج التدريبي المطلوب	التخصص	مكان التدريب	عدد الساعات	الفترة	
				من	إلى

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Appendix 5-10 Observed Training Techniques

Subject	Trainers	Session analysis									
		Self study	Presentation and discussion	Study and analysis	workshops	Report writing	Researching	Projects	Modelling teaching	Professional technology	Use of technology
Understanding the Ministry's vision for secondary education development	Ministry's official		*								
The evaluation system in Secondary School Education			*	*							
Understanding the competencies required by secondary school teachers	Secondary School Head Teacher		*	*							
Evaluating teacher's performance	Educational Supervision Specialist		*								
Planning teacher's professional development	Curriculum Specialists School Principal		*	*							
Using cognitive coaching	Training Specialist Senior teachers		*	*				*			
Carrying out educational research	Research Specialist		*	*		*	*	*			
Understanding the evaluation system in secondary schools	Evaluation Specialist		*								
Understanding and dealing with adolescence	Supervision Specialist		*	*				*			
Implementing cooperative learning in the classroom	Training Specialist		*	*	*			*	*		
Implementing self-learning in the classroom	Training Specialist		*								
Managing classrooms	Supervision Specialist		*	*							

Subject	Trainers	Session analysis								
		Self study	Presentation and discussion	Study and analysis	workshops	Report writing	Researching	Projects	Modelling teaching	Professional
										Use of technology
Communication skills and Managing meetings	Secondary School Principal		*	*	*			*		
Using conferencing skills	Training Specialist		*	*	*			*	*	
Leadership skills	Training Specialist		*							
Using computers	IT Specialist		*	*				*		
Report writing	Secondary School Principal		*	*	*	*		*		
The integrated relationship between the senior teacher and school staff and administration	Head of Primary Education		*	*						

Appendix 5-11 Observed Training Activities

Subject	Trainers	Training Strategies							
		Back ground knowledge assessment	Introducing session objectives	PowerPoint presentation	Discussion	Before session activities	During session activities	After session activities	Evaluation and Feedback
Understanding ministry's vision for secondary education development	Ministry Official			*	*				
The evaluation system in Secondary School Education				*	*				
Understanding the competencies required by secondary school teachers	Secondary School Head Teacher			*	*	* 2	*4		
Evaluating teacher's performance	Educational Supervision Specialist			*	*		*14		
Planning teacher's professional development	Curriculum Specialists / School Principal			*	*	*	*5	*	
Using cognitive coaching	Training Specialist / Senior Teachers		*	*	*		*2	*	*
Carrying out educational research	Research Specialist			*	*	*			
Understanding the evaluation system in secondary schools	Evaluation Specialist			*	*				
Understanding and dealing with	Supervision Specialist			*	*	*	*3	*	

Subject	Trainers	Training Strategies							
		Back ground knowledge assessment	Introducing session objectives	PowerPoint presentation	Discussion	Before session activities	During session activities	After session activities	Evaluation and Feedback
adolescence									
Using technology in teaching and learning	University Instructor			*	*				
Implementing cooperative learning in the classroom	Training Specialist		*	*	*	+	*20	*	*
Implementing self-learning in the classroom	Training Specialist			*	*				
Managing classrooms	Supervision Specialist			*	*		*		
Communication skills and Managing meetings	Secondary School Principal	*	*	*	*	+	*13	*	*
Using conferencing skills	Training Specialist			*	*		* 2	*	*
Leadership skills	Training specialist			*	*		*		
Using computers	IT specialist	*		*	*		*	*	*
Writing reports	Secondary School Principal	*	*	*	*	*	*10	*	*
The integrated relationship between the senior teacher and school staff and administration	Head of Primary Education			*	*		*3		

Appendix 5-12: Training Certificate



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