



**Teacher Professional Development Practices
Appropriate for Post-Basic Education School
Teachers in Oman**

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Dedication

This thesis is dedicated to my dearly loved family. First of all, my mother and my father, then my wife, Asila, my sons Malik, Abdul Malik, my daughters Malak, Al Reem and Sheikha who are my inspiration to my life.

Declaration of Authorship and Originality

I, the undersigned author, declare that all of the research and discussion presented in this thesis is original work performed by the author. No content of this thesis has been submitted or considered either in whole or in part, at any tertiary institute or university for a degree or any other category of award. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

The submission of this thesis is in partial fulfilment of the requirements of the Doctor of Philosophy at Central Queensland University.

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Abstract

There is a growing body of research concerning teacher professional development (PD) practices and their role in improving the quality of education. In Oman, the Ministry of Education (MOE) has teacher PD programs for Post-Basic education school teachers. There is evidence that an increased use of teacher PD practices, as recommended by the MOE, has not improved student learning outcomes and that Omani students are not college ready at the end of their schooling. However, in the Omani context there is limited research that has examined the provision of teacher PD that can enhance teaching practices and ultimately student learning outcomes.

This research used a qualitative methodology to identify PD practices appropriate for use by Omani Post-Basic Education school teachers. The nominal group technique (NGT) was used to determine PD ideas and priorities, and focus groups were used to determine aspects of teacher PD practices that may be appropriate to influence student learning outcomes. The data was collected using MOE-based Directors General, Human Resources Development Directors, School Principals, Supervisors and Teachers.

Findings that emanated from this research were:

- There was a varying level of agreement as to the priority of ideas for enhancing teacher PD use.
- There was a general level of agreement with the literature regarding identification of teacher purposes, needs and practices for the presentation of teacher PD use, however there was a lack of common understanding and interpretation of teacher purposes, needs, and for practices for the presentation of PD use for teachers. This was because participants involved in undertaking PD practices understand such practices differently according their level of involvement/responsibilities.
- The use of PD had limited impact on teacher practices.
- There is a lack of a systematic approach for critical evaluation of PD programs.
- A coordinated MOE approach for the use of PD, specifically policy and practices for PD, tends to be lacking at the PD provision in Oman.

The results from the research were used by the researcher to develop recommendations, namely:

- Establish national guidelines for the provision of PD.
- State explicit meaning of PD and training within the policy documents.
- Re-organise the Specialised PD Administration (SPDA) for the provision of PD in Oman.
- Undertake a comprehensive review of the practices and presentations of PD and training in Oman.
- Develop a framework to use in the design, development and use of teacher PD practices for enhancing existing teacher PD program.

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Abbreviations

DGHRD	Directorate General of Human Resources Development
Ds-G	Directors General
DRC	Diwan of Royal Court, Oman
FGs	Focus Groups
HEAC	Higher Education Admission Centre
HRDD	Human Resources Development Department
HRDDs	Human Resources Development Directors
INSTET	In-service Training for English Teachers
MOE	Ministry of Education
MOHE	Ministry of Higher Education
NGT	Nominal Group Technique
OECD	Organisation for Economic Co-operation and Development
OOTT	The Oman Online Training
PD	Professional Development
PDCs	Professional Development Centres
PL	Professional Learning
SCPTT	Specialised Centre for Professional Training of Teachers
SPDA	Specialised PD Administration
SPs	School Principals
Ss	Supervisors
TESOL	Teaching English to Speakers of Other Languages
TMOECs	Training MOE Centres
Ts	Teachers
UNESCO	The United Nations Educational, Scientific and Cultural Organization

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Chapter 1

Introduction

“Of course, professional development was never intended to trigger such pessimistic reactions. Even critics of the professional development movement admit that all forms of teacher development, whether effective or not, have at their core the noble intention of improving student learning. We might disagree with the implementation processes available, but not with their purpose. Indeed, when correctly implemented, they actually yield the results intended. In this era of high-stakes testing and increased accountability, it is necessary to reposition professional development so that the collective efforts of teachers, students, and administrators result in enhanced learning for all members of the teaching community” (Díaz-Maggioli, 2004, p. 1).

1.1 Introduction

Professional development (PD) concerns the provision of new or different types of knowledge and skills in regards to the profession of an employee in order to advance the individual performance as well as to achieve the organisational goals. In different professions, people participate in professional development programs or practices to enrich their knowledge and skills. In education, teaching quality is related to student learning outcomes. It follows that teachers constantly are required to expand their knowledge and to improve their skills to implement the best educational practices for their students (Darling-Hammond, Hyler & Gardner, 2017). In this respect, literature such as Al Barwani, Al-Ani and Amzat (2012) indicate that further research is needed to investigate the importance of teacher PD to enhance effective teaching and learning.

In the Sultanate of Oman, the Omani ruler, His Majesty Sultan Qaboos Bin Said, has given his directives to develop human resources in education (Al kharusi & Atweh, 2008; Al-Ani, 2017). In response to His Majesty’s directives, the Omani Ministry of Education (MOE) adopted a plan for developing teachers’ performance to improve student learning outcomes. In general, according to ministry policy, professional development provides opportunities for nurturing new

ideas, developing skills, enriching experiences, developing personalities and providing a stage to work collaboratively to solve problems and to enhance learning (Ministry of Education, 2011). In this respect, the MOE devised a systematic reform of education as documented in “Vision 2020” (Ministry of Education, 2003). One of its aims is to introduce the organised educational improvement to help Omani students to attain a higher standard of education.

It is evident in MOE documentation that the use of teacher PD was deemed most necessary for developing the education system in Oman. Therefore, teacher PD has become one of the top priorities of the MOE. It was also most challenging as the use of PD is a comparatively new concept to be explored in the Omani landscape. Sales, Al-Barwani and Miske (2008) endorse that “Oman has undertaken efforts to provide continuing professional development opportunities for its teachers and to modernize both training methods and content” (p. 120).

In this respect, the MOE has developed many courses and workshops to assist teachers in the reform process and provides both central and non-central PD programs. An example of this was the ministry assigned the English language-teaching department with twenty trainers to coach teachers in English in every training centre in all governorates (Etherton & Al-Jardani, 2009; Wyatt, 2013).

Despite the foregoing, there is evidence that current teacher PD practices have not improved student learning outcomes (World Bank, 2013). In research by Funsch (2015) it was also found that the Omani education system does not prepare the Omani youth for the real marketplace work. However, there has been limited research undertaken in Oman that investigates PD use. Existing research suggests that if Oman is to have a strong economy, a knowledgeable and competent human resource pool is needed (Alibakhshi, 2015). Thus, a reliable education system, and appropriate teacher PD practices of teachers would be of utmost necessity to achieve these goals. It is noted that a philosophy of education, which was issued in 2017 as a new version document by the Education Council (2017b), stated that the philosophy is “based on current educational research and studies on modern educational thought, and in identifying the values, attitudes and knowledge that are consistent with those practiced in Omani society” (p. 16). Furthermore, the Education Council (2017b) asserts that the philosophy is based on the fundamental principles which “include the concepts of nurturing, educating, training, cultivating and awareness-raising in the light of quality standards and through linking these principles to life-long learning, human development and the labour market” (p. 16).

The remainder of this chapter outlines the background for the topic, which includes information about Oman, its education system and details about the teacher professional development system. The researcher then provides a description of the topic identification and the research aims. The chapter ends with an organisation of chapters by presenting the Chapter outlines.

1.2 Background

1.2.1 Introduction

This section provides background information about the context of the research, Oman, through describing its location, economy and culture. This section is to aide visualisation of the way in which teacher PD practices are developed within the research context. It also describes Oman's educational system, particularly at school and higher education levels with an overview about teacher professional development within that context.

1.2.2 Description of Oman

The Sultanate of Oman is considered the oldest liberated country in the Middle East. Oman is one of the famous and essential states in the Gulf countries and an active member in the Gulf Co-operation Council in the Arabian Gulf. It is an independent, Arab Islamic and a fully sovereign state with Muscat as its capital city. Historically, the Omanis were among the first to embrace Islam in 630 AD when the Prophet Mohammed – Peace be upon Him – sent his envoy, Amer bin AlAs, to meet the ruler of Oman to embrace the faith. Oman has a population of more than 4.5 million people which includes 2 million foreign workers. Arabic is the main speaking language and the state religion is Islam (Stiftung, 2018; National Centre for Statistics and Information, 2018). Since 1970, and under the leadership of His Majesty, Sultan Qaboos Bin Said Al Said, Oman has taken up initiatives for extensive modernisation by maintaining a healthy business relationship with long trading partners such the United States and the United Kingdom. Oman has also taken up progressive social measures like creation of jobs for the Omani youth and strengthening the economy by striving for a zero corruption rate and by ensuring job opportunities generally.

Location

The Sultanate of Oman is located at the Gulf mouth of the southeastern end of the Arabian Peninsula. The state is situated in the Middle East along the borders of the Arabian Sea, the Arabian Gulf and the Gulf of Oman. It shares its borders with Saudi Arabia, the United Arab Emirates and Yemen, and has a total area of 309,500 sq. km (Bhambare, Majumder & Sudhir,

2018) with a coastline ranging up to 3,165 km. The majority of the Sultanate of Oman is characterised as desert, some parts are mountainous and there is a coastal landscape. It includes different terrains that vary from plain to highlands and mountains. According to the Royal Decree No. 114/2011, issued on 26 October 2011, the Sultanate of Oman comprises of 11 governorates as shown in Figure 1.1, namely, Muscat, Al Batinah North, Musandam, Al Buraimi, Al Dhahirah, Al Batinah South, Al Sharqiah North, Al Dakeliah, Al Sharqiah South, Al Wusta and Dhofar.

Figure 1.1 The Sultanate of Oman



World Atlas (2018)

Economy

Since 1967, Oman's economy has been transformed by the export of oil. However, dates, limes and fish are traditional exports. Since 1970 Oman has relied heavily on oil and national gas. The price of oil is subject to extreme uncontrollable price fluctuations, which makes government revenue unpredictable and hence can slow down economic growth. Oman's policy has consistently given consideration to diversify revenue. The gas centred industries, tourism, mining and information technology were the means used to establish a stable economy (Ministry of Information, 2003). Oman also addressed human resources development especially school leavers to enable them to compete internationally and to contribute to Oman's prosperity

(Ministry of Information, 2016). In addition, there has been a broadening of revenue resources through agriculture, fisheries, tourism and mineral resources such as silver, zinc, iron and chromate (Ministry of Information, 2016). According to the rankings of the Global Peace Index, Oman is categorised as a country having a high-income bracket for its citizens. The Institute for Economics and Peace (2019) places Oman 21 of 144 countries and has the 69th position as the most peaceful country in the world to live in (Institute for Economics and Peace, 2019).

Culture

Omani society is comprised of three basic groupings. First, people living on the coast who make their living by fishing, seafaring and trade. Second, people who make their living from agriculture on the Batinah Coast. Third, people who are in the interior and the south of Oman and the Bedouin of the desert areas. The culture of Omani societies is closely associated with the social environment as a product of such environment.

As most of the Gulf countries and the Middle East, two major social features dominate Oman society: religion and family. The religion of Islam is an entire way of life and that makes it an exceptionally strong sociocultural system. The Holy Qur'an has specific customs, traditions and rituals for guiding everyday life, including education, discipline and marriage events. However, there are still numerous customs relating to the family and tribe that affect current decision making until today.

1.2.3 Education in Oman

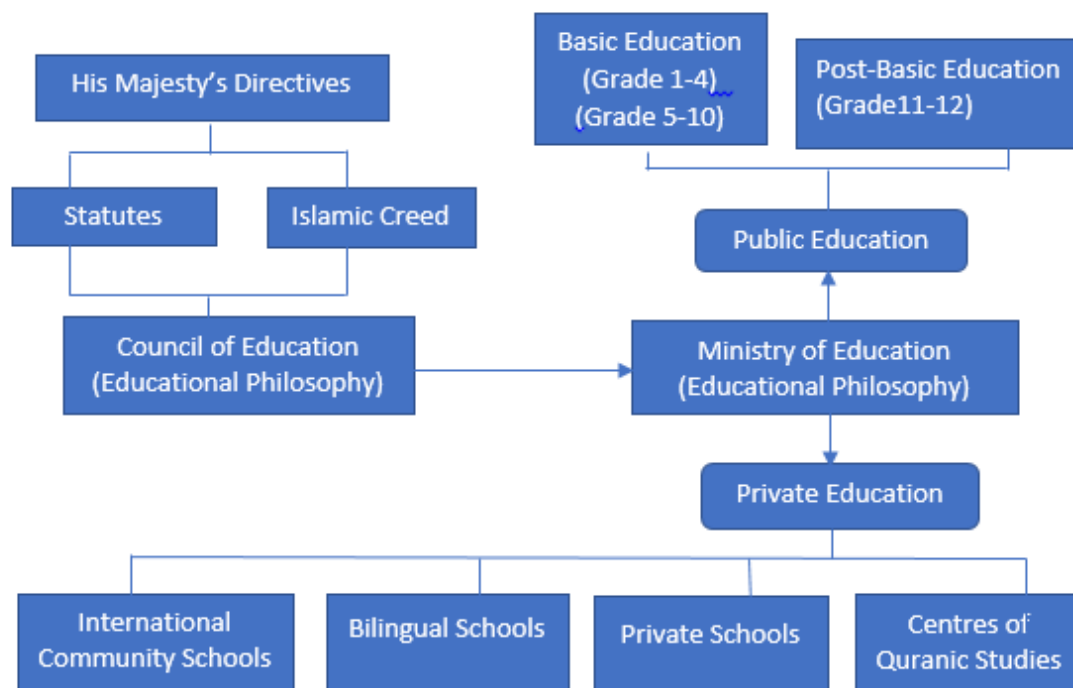
An overview about education in Oman has been provided to identify how teacher PD is considered within the Omani context. This section highlights information about educational system in Oman as this research is related to the Post-Basic Education school teachers.

Overview of the Education System

Since the renaissance in 1970, Oman has experienced 48 years of comprehensive development of the country. Specifically, Oman's first priority was to build the Omani citizen as capable of taking the responsibilities of the development of civilisation. Education plays a vital role in the socio-economic development of Oman. Therefore, it is considered in Oman as the most basic fundamental pillar of its society.

Educational policies in the Sultanate of Oman derive from the directives of His Majesty, the Sultan, and the Basic Law of the State and the relevant laws and Ministerial decisions. These all reflect the prevailing socio-cultural system which emanates from the Islamic religion, and a national orientation towards persistent development and modernisation programs. This approach aims to build a productive society, which can interact with and participate in human civilisation without jeopardising the national identity of its own value system (Ministry of Education, 2001). In 2012, a new educational council called the Council of Education was established under the leadership of His Excellency the Minister of Diwan of the Royal Court, the highest authority in the Omani Government (Ministry of Education, 2014). The Council is responsible for policy development pertaining to human resource development, education and training. Al-Ani (2017) states that the Council “represents all the interest groups comprising private and public groups and the ministers form all ministries with a stake in education in Oman” (p. 325).

Figure 1.2 Educational Structure in Oman



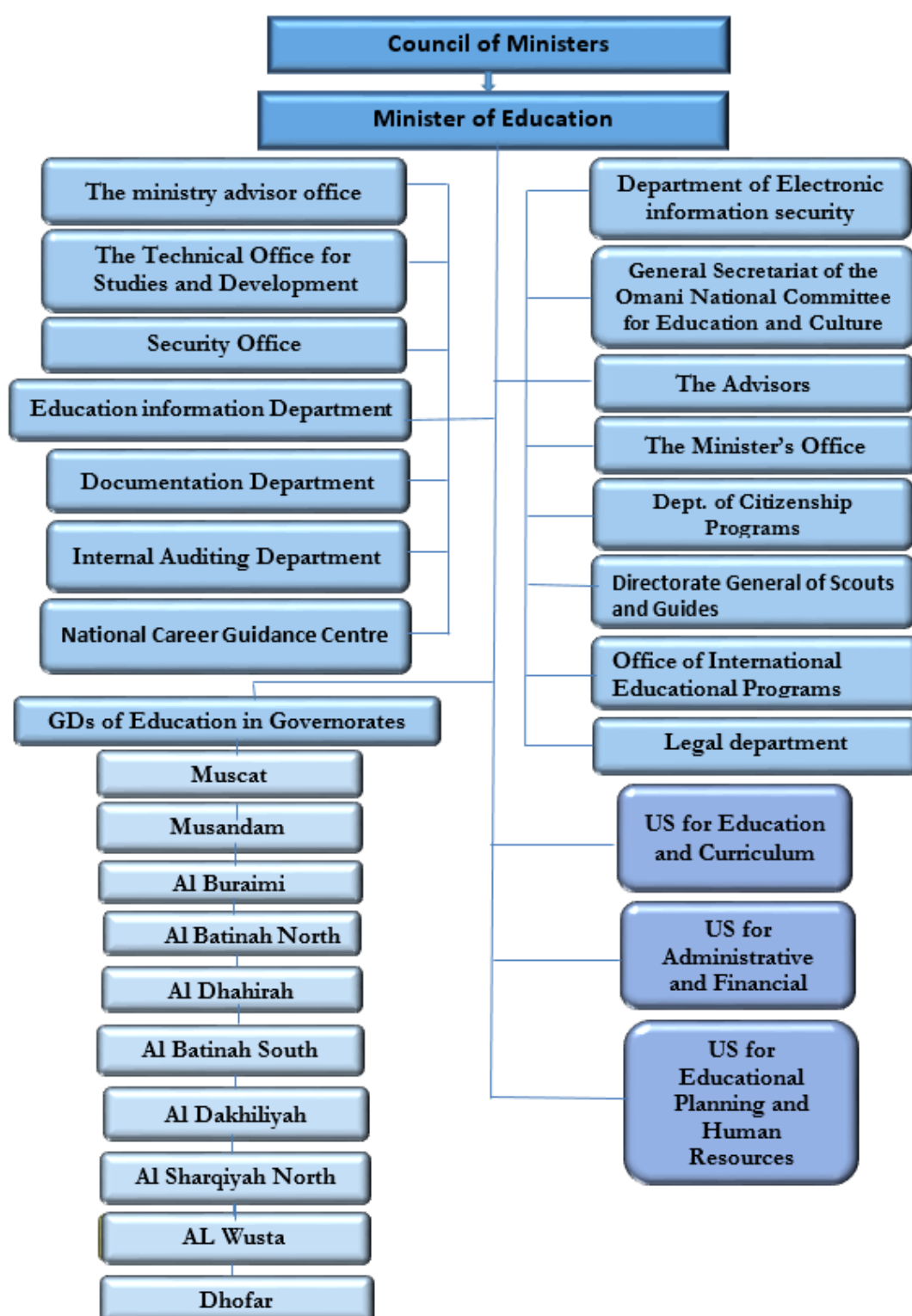
Adapted from (Al-Ani, 2017, p. 327)

Figure 1.2 shows the structure of the education system in Oman. The figure shows that through His Majesty's vision, the Statutes and the Islamic Creed provides the overarching educational

philosophy and directions as developed by the Council of Education for implementation by the MOE. It can be seen from the figure that the MOE administers both public and private education. Its charter is to provide direction to the school system for it to maintain the pride in the Omani identity, the priority of Islamic values and the continuing promotion of citizens who are enthusiastic about the well-being of their country.

Figure 1.3 presents an organisational chart of the Ministry of Education and details the complexities of the organisations in the provision of education in Oman. In summary, the Ministry of Education has a supervisory role, which includes monitoring tasks. In this respect, educational legislation is developed through committees and boards, including the Ministry Education Council and the Directors General as members. There are other high-level committees that participate in proposing policies and legislation and in monitoring the implementation stages (Ministry of Education, 2018a).

Figure 1.3 Ministry of Education Organisational Chart



(Ministry of Education, 2018a)

It can be seen from the figure that at the top level is the Minister who is in control of all the sections in the Ministry of Education and its related administration. The Minister reports his work to the Council of Ministers. At the top of the figure there are fifteen administrations. At the right bottom of the figure, there are three offices, for undersecretary for education and curriculum, for administrative and financial affairs and for educational planning and human resources development. At the lower level at the left bottom of the figure, there are the eleven Directorates General of education at the governorates in Oman.

Education System

Education gained momentum in the Sultanate of Oman when His Majesty, Sultan Qaboos Bin Said became the ruler of Oman. In the 1970s when the Sultan came to power, the status of the school system was that Oman had only three schools with 30 teachers educating 909 boys. Nearly 66% of Oman's adults were illiterate (Ministry of Education, 2006; Al-Najar, 2016). These schools were only for boys. Gradually, the Omani society has evolved, and in this respect, it became necessary for the Omani government to establish schools for both boys and girls. Nursery schools were established in Oman in 1993 without any help from government (Ministry of Education, 2003). In 2018, Oman had 1434 schools, in addition to 44 international schools, with approximately 770,481 students, of which 90% are government funded (Education Council, 2018).

With respect to education, Oman has strived for a modification in its system. As an outcome, a Basic Education System was adopted in 1997/1998. This reform aimed to create a unified education system covering grade (1-12) years of schooling (Ministry of Education, 2015). As shown in Figure 2, the Basic Education system covers cycle one; from grade one to grade four (year 1-4) and cycle two; from grade five to grade ten (year 5-10). It is then followed by a two-year Post-Basic Education school system; years 11 and 12 where students take specialised curricula according to desires and choices (Ministry of Education, 2004; Ministry of Education, 2015). Education in Oman has achieved a remarkable expansion in student enrolment. The Education Council (2019) has indicated that "in 2017/2018 the net enrolment school rate in first grade was 97.0% of the children at Basic Education. Enrolment in Post-Basic Education reached 84.9%" (p. 21). The Education Council (2019) has also specified that "The number of students accepted in higher education institutions inside and outside the Sultanate in 2018 was 24421 students, at the age-group 18 – 24, compared to 23837 students in 2019" (p. 57).

Besides public schools, there are private education schools which are supervised by the Ministry of Education. They use the national curriculum and syllabi, except for the international community schools which have their own curricula. After graduating from school, students receive the General Diploma Certificate and have the opportunity to complete higher education at public or private colleges or at a university. The Higher Education Admission Centre (HEAC), managed by the Ministry of Higher Education (MOHE), organises the admission and acceptance of students at the higher education institutions for college and university studies in Oman or abroad. Within the same system, students can also apply for local or international scholarships through the Directorate General of Scholarships at the Ministry of Higher Education.

It is relevant to note that the MOE places an emphasis on the improvement of education quality and efficiency. This is being done by focusing on Basic Education, and the development of personnel through training and recruiting more teachers and eliminating illiteracy. For both strategic and socio-cultural reasons, the development of human resources is a top priority in Oman. In accordance with this, preservation and development of high-quality Omani teachers is a key priority for the Ministry of Education. For this purpose, teacher education colleges in Oman provide courses for Post-Basic Education School graduates to become teachers at all levels of education and in different class subjects. In this respect, in addition to Sultan Qaboos University (SQU), in 2015 the Teacher College of Education in Rustaq in Al Batinah South Governorate in Oman has taken the lead to graduate teachers in school subjects. Moreover, private higher education institutions such as Nizwa University, Suhar University, Dhofar University and A'Sharqia University continue to qualify and to upgrade bachelor degree holders as teachers.

In regards to the development in the educational sector, His Majesty gave His directive to conduct a comprehensive evaluation of the educational system (Education Council, 2017a). A result was the establishment of a number of educational projects. An example is the National Strategy of Education 2040 which has four principles, namely, adoption of a new framework for education, capacity building, delegation of responsibilities to educational institutions, and adoption of an outcome-based philosophy or approach (Education Council, 2017a).

Recently, the Education Council (2017b) articulated a philosophy of education that emphasised the role of education for sustainable development as one of its eight principles of achieving

sustainable development. One objective to achieve was to “provide teachers with knowledge, skills and values related to issues of sustainable development” (p. 23).

1.3 Teacher Professional Development in Oman

In 2003, the MOE established the Administration of Human Resources Development to take the lead for providing teacher training programs. When initially established, it was named the Administration for Guidance and Teacher Training. At that time, the emphasis was more on training than PD as a way to enhance performance of the ministry’s employees. However, based on the Vision of Oman’s Economy (Oman 2020), the issuance of the Royal Decree No. 37/2008 by His Majesty, positioned a framework within the Ministry of Education structure. It was implemented to include an administrative division represented by the establishment of the Directorate General of Human Resources Development. The establishment of this division resulted in a greater emphasis on PD rather than on training. Included within this directorate was a Teacher Training and Teacher Qualification Section to provide training and qualification services to teachers for in-service training and professional development programs. These programs were made available at the regional, central and school levels. The Directorate General of Human Resources Development is responsible for promoting the performance standards of Omani teachers and to raise the level of student performance in the Sultanate. Moreover, within this framework, there was also the introduction of new posts such as senior teacher, senior supervisor, general supervisor and trainer (Ministry of Education, 2005b).

Omani teachers are encouraged to diversify their teaching and use various learning and teaching strategies (Ministry of Education, 2001). The aims of the framework are as follows:

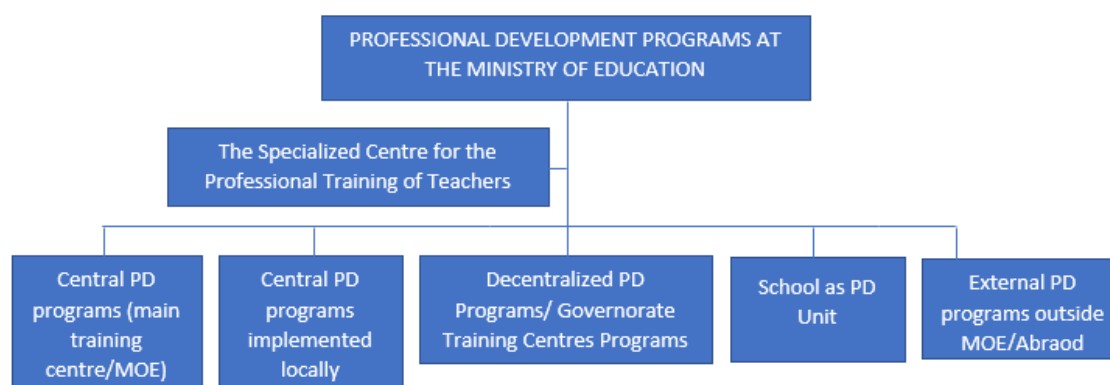
“

- updating the teacher’s professional standard to fulfil the objectives of each educational level.
- updating the teachers’ knowledge in their specialization to prepare them to face modern challenges and to be acquainted with the latest innovations.
- acquainting teachers with the general objectives and policies in his or her field of specialization” (UNESCO, 2011, p 23).

The extent of provision of PD programs for teachers by the MOE is shown in Figure 1.4. It can be seen that there are a range of PD programs, namely, central programs, decentralised programs, school-based PD and upgrading programs. The PD also includes the provision of

post-graduate degrees such as a Master degree or Doctorate programs abroad or undertaken at Omani universities. Furthermore, the Specialised Centre for Professional Training of Teachers (SCPTT) was established in 2014 under the supervision of the Ministry of Education and is elaborated upon at the end of this section.

Figure 1.4 Provision of Professional Development Program for Teachers



Adapted from (Ministry of Education, 2019)

The Ministry provides many specialised training courses every year whether at the central level, at the main training centre in Muscat, or decentralised in various training centres across the country (Ministry of Education, 2005a). The Directorate General of Human Resources Development uses 11 training centres that are distributed within the Directorates General of Education in all governorates in the Sultanate. Every centre at each governorate/educational directorate general has its own training programs that are identified as a requirement for its teachers and has its own independent plan and budget. In each case, the plan for the educational development is to create training programs appropriate for teachers to qualify them to be able to apply a theoretical knowledge to practical activities. Programs are delivered to teachers by trainers in the training centres. Within the central plan at the Ministry, experts from universities or colleges in Oman or from abroad deliver many PD programs. School-based PD programs are delivered by supervisors, senior teachers, school principals or school teachers related to PD and training practices. Professional development experience for the teachers could range from a one-day workshop to an essential learning process to improve the learning mechanism of the students. PD programs are organised by the ministry's Human Resources Development Department (HRDD) for all subject areas. It can be seen in Table 1.1 that participation in these programs has increased considerably over the three-year period between 2015 and 2017 for both central

and non-central PD programs. Overall the number of participants has increased by 74% whilst the number of programs has increased by 16.4%.

Table 1.1 Enrolments in PD Programs (2015 and 2017)

Year	Central Programs		Non-central Programs		Total	
	Participants	Programs	Participants	Programs	Participants	Programs
2015	3522	18	24508	716	28030	734
2017	6266	142	31524	731	37790	873

(Ministry of Education, 2018b)

As part of the reform, the Specialised Centre for Professional Training of Teachers (SCPTT) was established in 2014 for teacher staff development. As indicated by the Education Council (2017a) the aim of SCPTT, “is concerned with raising capabilities of teachers, polishing their skills, measuring their performance and finding mechanisms and plans for their training and analysing their performance” (p. 40).

The centre offers PD for teachers that is directly related to the classroom practice and is also for the provision of different types of career development programs for teachers, school principals, deputy principals and supervisors (Specialised Centre for Professional Training of Teachers, 2019).

1.4 Topic Identification and Research Aims

It was intimated in Section 1.1 that students in Oman, at the completion of their studies, are not competent enough for the global stage (World Bank, 2013). In addressing this problem, research is needed to determine aspects of teacher PD that need to be implemented. However, the research literature considered in Chapter 2 shows that in Oman there is relatively limited available research that can inform decisions making regarding the use of teacher PD.

The general aim of the research focuses on the professional development practices appropriate for use by Omani Post-Basic Education school teachers. The focus will be used to determine the most appropriate PD practices for enhancing the quality of teacher performance.

The research focuses specifically on Omani Post-basic Education to identify PD practices appropriate for use by Omani Post-Basic Education school teachers. This stage of student learning is very important for gaining the outcomes of education. Teacher PD practices can enhance teacher proficiency and the quality of education processes implemented as part/a cycle of the education system. The Post-Basic Education area is a phase where judgement/evaluation could be made for the assessment of implemented teacher PD practices. Hence, changes can be made for future enhancement of students learning outcomes and teacher PD practices.

Specifically, this research investigates the perspectives of different participants regarding teacher PD, namely, the Directors General (Ds-G), the Human Resources Development Directors (HRDDs), the School Principals (SPs), the Supervisors (Ss) and the Teachers (Ts). The researcher deems that a detailed understanding of PD priorities of ideas and PD aspects by the concerned participants/stakeholders can form the basis of proposing recommendations to enhance the quality of teacher PD use.

1.5 Organisation of the Chapters in the Dissertation

Chapter 1 Introduction and Research Context

This introductory chapter has provided an overview of Oman along with its various aspects of its education system. Topic identification is presented followed by the aim of this research.

Chapter 2 Literature Informing the Research

This chapter presents a platform to conduct the research based upon professional developmental aspects in the context of Oman. It also identifies gaps in the research with particular reference to Oman.

Chapter 3 Research Design Methodology

The research design methodology chosen for this research is presented. Also, details are presented regarding the chosen data collection instruments, research sample and data analysis methods. The ethical clearance issues are also detailed.

Chapter 4 Design, Development and Administration of Data Collection Instruments

This chapter presents details of the design, development and administration of the data collection instruments used in the research.

Chapter 5 Participants Ideas and Priorities for Teacher PD

The results derived out of the nominal group technique (NGT) data are presented.

Chapter 6 Participants Views on Different Aspects of Teacher PD

The results derived out of the data sourced from the focus group (FG) data are presented in this chapter.

Chapter 7 Discussion of the Results

This chapter presents a discussion on the results derived from Chapter 5 and 6. A summary of the findings is also presented.

Chapter 8 Conclusions and Recommendations for PD Use

Research questions and conclusions from the research are presented. These are used to generate recommendations of further use of PD in Oman. Areas for further research and concluding remarks are also presented.

Chapter 2

Literature Informing the Research and Research Questions

2.1 Introduction

Chapter 1 provided an introduction to the dissertation and details of the research context. As such the purpose of this Chapter is in two-fold. Firstly, it reviews recurring PD aspects that emerge from the cited literature that can serve as a framework to inform the research. Secondly, it seeks to identify gaps in the research of PD with respect to Oman and in the Middle East in general. In this regard, a preliminary review of the literature has revealed that there is limited research concerning the use of PD in Oman and in the Middle East generally. Therefore, this review primarily draws upon literature from the UK, Europe, USA and Australia.

The literature drawn upon is from an assortment of publications including books, journals, government documents and research theses. The range of sources drawn upon included:

- Articles from refereed /peer-reviewed journals that centre upon professional development generally and for teachers in particular. Such journals include *Professional Development in Education*, *Educational Research* and *Education Administration Quarterly*,
- Textbooks on PD, for example, Joyce & Calhoun (2010) and Diaz-Maggioli (2004).
- Documents from Omani government bodies, for example, the Ministry of Information, the Ministry of Education, the Education Council, the Ministry of National Economy and the Supreme Council for Planning.

Using these resources, the preliminary review identified 7 broad PD aspects as follows:

- PD and Training – Definition of PD and training.
- Purposes of teacher PD – Reasons for teachers undertaking PD.
- Teacher PD needs – The importance and desirability for doing PD.
- Teacher practices for the presentation of PD programs – The way PD is made available for teachers.
- Improving teacher PD practices – Making availability improvements for PD access by teachers.
- Characteristics of effective teacher PD programs – criteria for effective PD.
- Impact of teachers' PD – The influence of PD on student learning outcomes.

The remainder of this Chapter has used these aspects to explicate their features to use in the context of PD for teachers as reported in the general literature and specifically Omani based literature.

2.2 Definition of Professional Development and Training

2.2.1 Introduction

A working definition for PD and training is warranted because a preliminary review of literature indicates that there is a misunderstanding in Oman with regards to the use of these terms. This section undertakes a critical analysis of the definition of PD and training in the education sector and develops a definition of each for use in this research.

2.2.2 A working definition for Professional Development

The term “Professional Development” has been applied in various fields such as education, health industry, business and manufacturing, military service, and civil service where either private or public enterprise has mandated the practice of PD for their employees. Definitions for professional development are abundant within the literature and the various interpretations make it difficult to define. The difficulty in defining PD can be attributed to the fact that it is contextualised according to the setting in which it occurs (Scribner, 1999; Lauer, Christopher, Firpo-Tiplett & Buchting, 2014).

Table 2.1 presents definitions of teacher PD that have been identified in the literature. The table includes multiple authors being listed for a particular aspect of the definition of teacher PD.

Table 2.1 Definitions of Teacher PD in the Literature

Definition	Author	Year
Any activity intended to prepare staff members for improved performance in present or future roles in the school districts.	- Little - Joyce & Calhoun - Creemers, Kyriakides & Antoniou	1987 2010 2012
A collaborative process that happens through meaningful interactions with others based on a constructivism model.	- Darling-Hammond & McLaughlin - Loucks-Horsley, Hewson, Love & Stiles	1995 1998
Structured professional learning that results in changes in teacher practices and improvements in student learning outcomes.	- Kutner, Sherman, Tibbetts & Condelli - Darling-Hammond, Hyler & Gardner	1997 2017
Processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students.	- Guskey - Bubb - Aguinis & Kraiger - Casteel & Ballantyne	2000 2004 2009 2010
A systematic effort to bring about change in the teacher's classroom practices, attitudes and beliefs, and in the learning outcomes of students.	- Guskey - Yoon, Duncan, Lee, Scarloss & Shapley - OECD - Marfu'ah, Djatmiko & Khairudin	2002 2007 2009 2017
A full range of activities both formal and informal that engage teachers or administrators in new learning professional practices.	- Knapp - OECD	2003 2009
The professional growth through increased experiences and through attending formal and informal experiences.	- Villegas-Reimers - Richards & Farrell	2003 2005
Consists of all-natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school.	- Day & Sachs - Richter, Kunter, Klusmann, Lüdtke & Baumert	2004 2011
An ongoing process of reflection and review that articulates with development planning to meet corporate, departmental and individual needs	- Middlewood, Parker & Beere - Fraser, Kennedy, Reid & McKinney - Murray	2005 2007 2010
The ongoing, and coherent improvement/process of professional knowledge and skills during one's career.	- Myers & Clark - Diaz-Maggioli - OECD - Aguinis & Kraiger - Guskey & Yoon - Shawer	2002 2004 2009 2009 2009 2010
A variety of educational experiences related to an individual's work and is designed to improve practice and outcomes.	- Darling-Hammond & McLaughlin - De Monte Jenny - Akiba & Wilkinson	2011 2013 2016

The table shows that PD has a range of components that constitutes a comprehensive definition of PD. Based on the foregoing, a working definition of teacher PD to guide this research is as follows:

Professional development is a change, a collaborative, a comprehensive, an ongoing process or activity happening in a particular context to develop an individual's skills, knowledge, competence, beliefs and attitudes to meet school and individual teacher needs as practices.

2.2.3 A working definition for training

Table 2.2 presents definitions of training identified in the literature. Table 2.2 shows the components that can embrace a definition of training.

Table 2.2 Definition of Training in Literature

Definition	Author	Year
Concerned with an employee's attendance to workshops and training courses provided by an expert.	- Sparks & Loucks-Horsley	1989
A means by which new knowledge is added to the teacher's professional repertoire.	- Joyce & Showers	2002
A systematic approach for acquiring knowledge, skills, and attitudes in order to improve individual, team, and organizational effectiveness.	- Aguinis & Kraiger	2009
An integral part of ensuring the concept's operating system is implemented correctly and efficiently at the unit level.	- Monson	2010
A tool to attain individual, organizational needs related to the jobs undertaken intended to improve the work culture of the group involved in a group task.	- Vijayabanu & Amudha	2012
A basic necessity when organizations are experiencing significant growth or increased competition.	- Phillips	2012

Based on the foregoing, a working definition of training for teachers has been developed to guide this research:

Training is a systematic approach or a means to add new knowledge to teachers' experiences through attending workshops and training courses provided by an expert to address the individual and organisational needs in order to improve the work culture and to enhance workplace practices.

2.3 Teachers' Purposes of PD

2.3.1 Introduction

This section examines the stated purposes for teachers doing PD as presented in the literature and to examine the extent these purposes are adopted in Oman.

2.3.2 Stated Purposes of PD in the literature

In reviewing the literature, researchers have found that the purposes of PD are critical for the success of programs and strategies in most human endeavours, including education, business and human services. The different purposes for doing PD documented in the literature in educational contexts are presented in Table 2.3. As can be seen from the table, a range of particular purposes have been identified by different authors. This can be expected as PD is often used to address new contexts introduced in schools, for example, implementation of a new curriculum or the use of alternative technologies for teaching practices. A synthesis of the purposes delineates four main purposes for PD for teachers:

- To enhance the quality and standards of student learning experiences.
- To provide teachers with skills and knowledge to make possible implementation of new innovated classroom practices.
- To provide teachers with opportunities for building learning networks and contacts.
- To make possible career growth and advancement.

Table 2.3 Teacher Purposes of PD

Purposes	Author	Year
To improve professional collegiality.	- Sparks - Vescio, Ross & Adams - Sykes	2002 2008 1996
To maintain innovative teaching practices for teachers.	- Little - Chaudary	1999 2011
To support teachers and endorse PD to be a valuable resource to raise teacher quality.	- Liu - DeMonte	2015 2013
To help teachers to prepare PD programmes.	- Sparks - Borko - Lessing & De Witt	2002 2004 2007
To improve job performance skills.	- Luneta	2012
To provide teachers with opportunities to meet new people and build learning network.	- De Laat & Schreurs - Borg	2013 2015
To gain higher qualifications or upgrade teachers' qualifications.	- Alexandrou	2014
To act as a teacher induction programme.	- Lessing & De Witt, - Huish - Kennedy - Charlotte	2007 2014 2016 2017
To enable teachers to develop new resources.	- Lawless & Pellegrino - Murray	2007 2010
To fill in the gaps in the skill sets of new teachers, and to continue to develop the expertise of teachers.	- Evers, Van der Heijden & Kreijns - Badri, Alnuaimi, Mohaidat, Yang & Al Rashedi	2016 2016
To provide teachers with better organizations and planning skills.	- Charlotte	2017
To enhance the quality of students' learning.	- Luneta - Evers, Van der Heijden & Kreijns - Polly, McGee, Wang, Martin, Lambert & Pugalee,	2012 2016 2015
To enhance teachers' performance through career growth.	- Luneta	2012
To develop the professional knowledge and understanding of an individual teacher.	- Luneta	2012

2.3.3 The documented purposes for teacher PD in Oman

MOE has documented the purposes of doing PD (Ministry of Education, 2005b). These purposes are as follows:

- To upgrade the qualification of teachers;
- To make teachers aware of the core values of basic education in Oman;
- To implement new innovation practices in curricula and assessments;
- To strengthen teachers' ability to employ alternative teaching strategies; and
- To implement specific changes instituted by the MOE.

Cultural traits within Oman as referenced in Chapter 1 indicate that much of the knowledge concerning teacher PD has been verbally communicated and is either documented as a government policy or is not published. However, within the Oman context, and according to the researcher's experience, a number of purposes for PD can be identified and further elaborates upon the MOE purposes:

- *Strengthen teachers' ability to employ alternative teaching strategies* rather the traditional ones in teaching different subjects as found by Al kharusi & Atweh (2008). These authors identified that teachers are encouraged to design learning environments to be more learner-centred rather than using the traditional way which depends on memorisation.
- *To enhance novice/new teachers' skills, knowledge towards teaching.* Al Jabri, Silvennoinen and Griffiths (2018) clarify that newly appointed Omani teachers in Oman do PD to “enhance new teachers' knowledge, skills and attitudes towards teaching and provides them with the support they need at the beginning of their careers” (p. 90).
- *To make teachers aware of the core values of basic education in Oman.* Al-Ani (2014) states that “there is a set of values embedded in the administrative practices geared towards professional development such as values of learning, knowledge production, self-development, creativity and training for professional development” (p. 175).
- *To implement new innovation practices in curricula and assessments* to advance such practices. Al Lamki (2009) proclaims that “new innovations such as upgrading the new curricula through using PD support upgrading the qualifications of teachers” (p. 127).
- *To develop teachers' skills and performance.* Al Ghafri (2006) found that Omani teachers generally believed in the value of In-service Training for English Teachers (INSTET) courses in developing job skills. Nevertheless, some of the teachers involved in Al

Ghafri's study felt that attending such courses was a waste of time because their needs were not considered.

- *To upgrade the qualification of teachers.* An example is to update two-year diploma holders to a bachelor degree in Teaching English to Speakers of Other Languages (TESOL). This program is provided by the cooperation with the Sultan Qaboos University, Ministry of Higher Education and the University of Leeds in the UK. As well, the Bachelor's degree (BA) is provided by the University of Leeds for the local Ministry of Education teachers in the Sultanate of Oman. Furthermore, a three-year course was designed for Diploma-holding teachers of English (Wyatt & Atkins, 2009).

2.3.4 Summary

In the general literature presented in Section 2.3.2, there are similar purposes of PD in Oman. However, these purposes for PD appear to be more focussed on the specific purposes for PD as articulated by MOE.

2.4 Teacher PD Needs

2.4.1 Introduction

This section examines teacher PD needs in general and for teachers in Oman.

2.4.2 Identified teacher PD needs in literature

A review of the literature indicates a relatively limited reference to teacher PD needs. Table 2.4 presents the cited PD needs for teachers.

Table 2.4 Needs of Teachers doing PD

Needs	Author	Year
To have more time for doing PD.	- Garet et al. - Wheatley - Desimone - Van Veen, Zwart & Meirink	2001 2002 2009 2012
To provide more practical sessions in implementing new skills.	- Ministry of Education	2001
To adopt follow up activities.	- Dunne	2002
To make PD standards clear for teachers to advance motivation.	- NSDC	2001
To enable collaboration between teachers.	- Kennedy & Clinton	2009
To develop teachers experiences in education in order for teachers to gain new posts in their future career.	- Villegas-Reimers - Kennedy & Clinton	2003 2009
To use a systematic PD approach in order to make it effective at work.	- Guskey - Song	2000 2016
To support the implementation of teacher practices in assessment, planning, and in evaluation.	- Darling-Hammond & Mclaughlin - Maria & Garcia	2011 2016
To provide more of the continuing opportunities for teachers.	- Kennedy & Clinton - Girvan, Conneely & Tangney	2009 2016

Further explanation of teachers' needs is presented in the remainder of this section.

- *To have more time for PD.* Wheatley (2002) and Garet, Porter, Desimone, Birman and Yoon (2001) claim that longer PD events are more likely to afford chances for in-depth discussion of the content, teaching, and student ideas/misconceptions.
- *To provide more practical sessions in implementing new skills.* Assisting teachers in the implementation of new skills and strategies is a need for doing PD. Therefore, teachers may need more practice to master new skills (Ministry of Education, 2001).
- *To adopt follow up activities in order to ensure changes in teachers' performance and the effectiveness of the PD programs.* Dunne (2002) emphasised that there is a need to construct PD that addresses aims such as: constructing knowledge, translating into performance, practice teaching and reflection.

- *To make PD standards clear for teachers to advance motivation* is a need that accomplishes motivation and courage among teachers to acknowledge PD practices positively. The NSDC (2001) provides PD standards to be followed.
- *To provide collaborative PD experience.* Kennedy & Clinton (2009) revealed the importance of involving teachers in “observation and shadowing”, “sharing practice” and “working with others” (p. 38). The authors claimed that “collaboration was shown to be most effective for professional development” (p. 32).
- *To develop teachers’ experiences in education in order for teachers to gain new posts in their future career.* Villegas-Reimers (2003) pointed out that PD refers to the development of an individual in his or her job. Kennedy & Clinton (2009) also identified Continuous Professional Development (CPD) needs as “needs relating to career progression and development” (p. 37).
- *To use a systematic PD approach in order to make it effective at the workplace.* In his research, Song (2016) concluded that “the systematic PD implementation might be one of the factors that transformed teachers’ attitudes toward the English language learners” (p. 788). This suggests that PD needs to be systematic for teachers, administrators and other stakeholders in education to achieve PD goals. Guskey (2000) advised that PD has to be “intentional, ongoing, and systematic” (p. 16). Furthermore, if teachers gain systematic support from administrators, they could be systematic in their teaching practices.
- *To support the implementation of teacher practices in assessment, planning, and in evaluation activities.* Various researchers such as (Darling-Hammond & Mclaughlin, 2011) have pointed that teachers need PD support for assessment, planning, implementation and in evaluation of practices. Furthermore, researchers such as Maria and García (2016) claim that the availability of collaboration, time, long term commitment, and resources are important for the successful implementation of PD. As Lee (2005) noted, teachers should be considered as partners throughout the process in planning their own learning experiences, implementing practices, providing feedback, and evaluating the program.
- *To provide more of continuing professional development (CPD) opportunities for teachers.* Researchers such as Girvan, Conneely and Tangney (2016) stressed that CPD is important for teachers to improve educational effectiveness and performance. Kennedy and Clinton (2009) identified PD needs as “a desire for a more flexible and varied range of CPD opportunities” (p. 37).

2.4.3 The documented teacher needs of PD in Oman

Documented research literature was not located regarding teacher needs for PD in Oman. Ministry of Education (2014) noted that teacher needs for PD can enhance the status, morale, and professionalism of teachers.

2.4.4 Summary

The general literature on teacher PD has provided insights into the nature and scope of teacher PD needs. In Oman there appears an absence of research into teacher needs, as well as essential MOE documentation that addresses this PD aspect. However, teacher needs are being implicitly addressed in a way as listed in Table 2.4.

2.5 Practices for the Presentation of PD Programs

2.5.1 Introduction

This section identifies and considers a range of PD presentations' practices described in the literature in general and specifically in Oman.

2.5.2 Identified practices in the literature

Table 2.5 presents main practices as identified in the literature.

Table 2.5 Types of Practices used in PD

Main Practices	Author	Year
Workshops	- Badri, Alnuaimi, Mohaidat, Yang & Al Rashedi	- 2016
	- Desimone	- 2011
	- Reid	- 2007
	- Wilson et al.	- 2006
	- Abadiano & Turner - Guskey	- 2004 - 2000
Conferences	- Badri, Alnuaimi, Mohaidat, Yang & Al Rashedi	- 2016
	- Borg	- 2015
	- Desimone	- 2011
	- Reid	- 2007
Seminars	- Badri, Alnuaimi, Mohaidat, Yang & Al Rashedi	- 2016
	- Messmann, Mulder & Gruber	- 2010
	- Wilson et al.	- 2006
	- Guskey	- 2000
College Courses/ Qualification Program	- Badri, Alnuaimi, Mohaidat, Yang & Al Rashedi	- 2016
	- Borg	- 2015
	- Desimone	- 2011
	- Wilson et al.	- 2006
	- Bowie & Bronte-Tinkew	- 2006
Mentoring	- Badri, Alnuaimi, Mohaidat, Yang & Al Rashedi	- 2016
	- Desimone	- 2011
	- Bailey, Curtis & Nunan	- 2001
Peer Observation and Observation	- Hord & Tobia	- 2012
	- Desimone	- 2011

It can be seen from the table that there are essentially three types of main practices for the provision of PD. These are:

- Group functions. These are workshops, seminars and conferences formal.
- Courses and specific programs for teachers. These are specific courses and degree programs.
- Co-operative/collaborative practices. These are the use of mentoring, peer visitations and observations.

2.5.3 Practices for the presentation of PD programs in Oman

In Oman, MOE uses a number of different practices for the presentation of teacher PD. This includes:

- Continuous coaching for a considerable period, although this is not regularly followed as in research. The Ministry of Education (2013/2014) has stated that it would be better for the teachers to take around 50 hours of instructional training and coaching in order to master new strategies and to have these implemented in the class for teaching purpose. Loucks-Horsley, et al. (2009) confirms this claim in their research. They state, “a substantial amount of time (typically, 50 or more hours) of PD are needed to make substantial changes in teachers’ practices” (p. 7).
- Adoption of practical ways in active learning sessions to assist teachers decipher the concepts, theories, and research-oriented teaching practices. This includes the use of modelling the new practices in roles through role-playing, open discussions, visits to the classrooms and live modelling (Ministry of Education, 2001).
- Seminars and workshops to enhance the teacher’s knowledge and skills (Specialised Centre for Professional Training of Teachers, 2019).
- The establishment of the Oman Online Teacher Training (OOTT) project to provide continuing professional development opportunities for Omani teachers and to modernise both training methods and content. Sales, Al-Barwani and Miske (2008) state that undertaking the project involved a limited pilot test of the development and implementation of e-learning.

2.5.4 Summary

The most common practices identified in general literature were using workshops and seminars to develop learners’ skills and knowledge. The practices of doing PD in Omani literature are similar to those documented and adopted in general literature.

It would appear that MOE has taken the lead in providing practices for PD opportunities. However, it is noted that there is an absence of research to establish the efficacy and appropriateness of present practices.

2.6 Improving teacher PD Practices

2.6.1 Stated teacher practices for improving PD

Table 2.6 overviews ways to improve PD practices identified from the literature.

Table 2.6 Overview of ways to Improve PD Practices

Improved Practices	Author	Year
Making available multiple strategies in providing PD.	- Lee	2005
Building a teacher community based on many schools.	- Lee	2005
Matching purpose and strategies that correspond to the primary purpose of PD.	- Loucks-Horsley, Hewson, Love & Stiles	1998
Adopting the design of professional development practices that improve teaching and learning.	- Ingvarson, Meiers & Beavis - Villegas-Reimers	2005 2003
Considering the importance of PD as a key element in improving the quality of education.	- Joyce and Calhoun	2010
Focusing on core competencies regarding curriculum and pedagogy.	- Lessing and De Witt	2007
Identifying from literature elements to improve presentation of PD practices.	- Guskey and Yoon	2009
Using PD activities that provide teachers with opportunities for active learning.	- Ingvarson, Meiers & Beavis	2005

The main categories that can be identified drawing upon Table 2.6 are as follows:

- Using individually guided staff development.
- Increasing the duration of PD experiences.
- Building a teacher community using many schools.

2.6.2 Improved/new teacher PD practices in the provision of PD in Oman

Within Oman, MOE has progressively emphasised greater use of professional development programs similar to those reported above. Examples include:

- *Implementation of the procedural research* as part of obtaining and utilising research information related to education (Ministry of Education, 2018b).
- *Publishing a monthly bulletin* entitled “Educational Development” prepared in Arabic by teachers and distributed to all education staff in the Sultanate.
- *Use of an online education forum* established to facilitate communication between educational staff and all those interested in educational issues. An example is the availability of the educational portal as a platform for different education stakeholders (Ministry of Education, 2018a).
- *Providing teachers with the opportunity to participate* in regional and international conferences. An example is the MOE educational symposiums.
- *The establishment of the Specialised Centre for Training Teachers* in Muscat in 2014 under the supervision of the Ministry of Education. The centre is accountable for the provision of different types of career development programs for teachers, school principals, deputy principals and supervisors (Specialised Centre for Professional Training of Teachers, 2019).

2.6.3 Summary

In Oman, the ways of improving PD programs by MOE are similar to those reported in the general literature. However, MOE seems to have its own perspectives of improving PD practices. These include:

- adopting the design of professional development practices that improve teaching and learning.
- using PD activities which provide teachers with opportunities for active learning.
- considering the importance of PD as a key element in improving the quality of education.
- adopting multiple strategies which Lee (2005) presented as features for improving PD programs.

2.7 Characteristics of Effective Teacher PD Programs

2.7.1 Stated characteristics of effective teacher PD programmes

Table 2.7 presents overviews of characteristics of effective teacher PD program.

Table 2.7 Overviews of Characteristics of Effective Teacher PD Programs

Characteristics of Effective Teacher PD	Author	Year
Use of content focussed activities	- Ingvarson - Desimone - Darling-Hammond et al.	2005 2009 & 2011 2017
Use of active learning experiences	- Desimone - Darling-Hammond et al. - Archibald, Coggshall, Croft & Goe	2009 & 2011 2017 2011
Use a coherent program	- Desimone	2009 & 2011
Use of variable durations	- Desimone - Wei, Darling- Hammond & Adamson - Darling-Hammond et al.	2009 & 2011 2010 2017
Built PD experience into the day-to-day work of teaching.	- Ingvarson	2005
Use collective participation that is organised around collaborative problem solving.	- Ingvarson - Archibald, Coggshall, Croft and Goe - Klingner	2005 2011 2004
PD needs to be continuous and ongoing, involving follow-up and support	- Ingvarson	2005
Incorporate evaluation of multiple sources of information as a component of PD	- Ingvarson	2005
Gain an understanding of the theory underlying the knowledge and skills being learned.	- Ingvarson	2005
Be connected to a comprehensive change process focussed on improving student learning	- Ingvarson	2005
Engaging high quality professional development	- Hunzicker	2010

Table 2.6 can be used to identify specific characteristics of effective teacher PD programs in general. These characteristics are as follows,

- *Use of content focussed activities.* Effective teacher PD programs need to focus on what students are to learn and how to address the different problems students may have in learning the material.
- *Use of active learning experience.* PD should focus on teacher work and thinking, and include time for analysis, reflection, practice, and observation.
- *Use a coherent program.* PD should focus on content consistent with teacher beliefs and with district/state policies.
- *Use of variable durations.* PD should be of sufficient length and span of time (suggested 20 hours over a semester).
- *Identify teacher PD needs.* Involve teachers in the identification of what they need to learn and in the development of the learning experiences in which they will be involved.
- *Build PD experience into the day-to-day work of teaching.* PD can be a continuous process of enhanced experiences for individuals. Individuals could be updated with innovated approaches and techniques to produce the targeted outcomes.
- *Collective participation should be used and to be organised around collaborative problem solving.* PD should be recognised so teachers can participate with other teachers from the same school or programs.
- *Be continuous and ongoing,* involving follow-up and support for further learning, including support from sources external to the school resources and new perspectives.
- *Incorporate evaluation of multiple sources of information* on learning outcomes for students and the instruction and other processes that are involved in implementing the lessons learned through professional development.
- *Provide opportunities to gain an understanding of the theory* underlying the knowledge and skills being learned.
- *Be connected to a comprehensive change process* focussed on improving student learning.
- *High quality professional development* should engage the participants in authentic and relevant experiences that are supportive, related specifically to their job, instructionally focussed, collaborative and ongoing.

2.7.2 Characteristics of effective PD programmes in Oman

Literature was not located that stated the nature and characteristics of effective PD programs. Also, no research appears to have been done about characteristics of effective PD programs in Oman. However, a number of publications identified aspects associated with effective PD:

- Al Ghafri (2002) indicated that teachers value classroom observation as a resource of PD.
- Al-Bahri (2006) suggested that novice teachers are encouraged and supported by senior teachers and colleagues in the development process.
- Al-Sawafi (2006) identified teachers' perception of supporting the need for collaborative, teacher-centred, non-directive supervisory visits based on negotiation.
- Al-Farsi (2006) concluded that teachers' value classroom research for teachers and identified the reasons for that as lack of time, courage and heavy teaching load and/or administrative duties.
- Al kharusi and Atweh (2008) discovered that one way of doing effective PD practices is in designing learning environments that are more learner-centred. The learning environments consist of practices that improve teachers' performance. These practices include cooperation learning, peer work, field work, inquiry, active dialogue and discussion.

2.7.3 Summary

There appears in the literature considerable information that can be used in Oman for the delivery of effective PD programs. In the absence of this document information in Oman, the general literature is of considerable relevance and use in Oman to enhance PD experience for teachers.

2.8 Impact of Teacher PD

2.8.1 Stated impact of teacher PD

The general literature concerning the impact of teachers doing PD reveals that PD can have an impact on education quality. It can be generalised that professional development can have a positive change on teacher beliefs, knowledge, skills or behaviours as found by Lauer, Christopher, Firpo-Triplett and Buchting (2014).

Table 2.8 identifies some of the cited PD literature of impact of teachers doing PD.

Table 2.8 Cited PD of Impact of Teachers PD

Impact of Teachers PD	Author	Year
Can assist in building an environment of trust and developing a model of supervision.	- Xu	2003
Can enhance teacher knowledge and skills.	- Yoon et al.	2007
Can improve classroom teaching.	- Yoon et al.	2007
Can raise student achievement.	- Yoon et al.	2007
Can improve teacher knowledge and measurable effects on improving teacher instruction.	- Wei, Darling Hammond & Adamson	2010
Can support the use of specific teacher PD program design characteristics.	- Wei, Darling Hammond & Adamson	2010
Can support teachers to keep in touch with the knowledge and performance standards of teacher particular domain.	- Messmann, Mulder & Gruber	2010
Can enhance teacher performance by updating teacher knowledge and skills.	- Messmann, Mulder & Gruber	2010

Table 2.8 identifies ways of impact of teacher PD programs. The impact is as follows:

- Affects PD programs design in specifying considerable characteristics.
- Updates teachers with reflection experiences for future PD planning and enriches teachers with continuous PD opportunities. Xu (2003) suggests “two conditions: Building an environment of trust and developing a model of supervision consistent with professional learning and collaboration” (p. 354).
- Enhances student learning quality and advance achievement level. Teachers gain positive impact of the process of collaboration and learning.

2.8.2 Impact of teachers’ PD in Oman

There is very limited literature in Oman on the impact on teachers doing PD. Al-Lamki (2009) investigated Omani English teachers’ perceptions and practices in relation to continuous PD. His results revealed that there is a degree of disparity between the PD system and teachers’ beliefs and practices. Furthermore, one of Al-Abri’s (2014) suggestion for further research was “the development of schemes that evaluate the impact” (p. 243).

2.8.3 Summary

The general literature has provided insight into the impact of teacher PD through the use of specific PD practices. All of these are of direct relevance to the provision of PD in Oman. Clearly, there is a need for research in this area in Oman.

2.9 Summary and Conclusions

The above review has shown that there is an abundance of research literature regarding the use of teacher PD. Specifically, the PD literature can be examined in terms of six aspects:

- Purposes of PD
- PD needs
- Practices for the presentation of PD programs
- Improving teacher PD practices
- Characteristics of effective teacher PD programs
- Impact of teacher PD

This research utilises the above six aspects to frame the research for addressing the aim of the research as stated in Chapter 1. It is noteworthy that from the above review there is an absence of research in the use of PD in Oman.

In addressing the aim of this research, it will focus on the professional development practices appropriate for use by Omani Post-Basic Education school teachers. This focus will be used to determine the most appropriate PD practices for enhancing the quality of teacher performance in order to result in better student learning outcomes. The aim of the research is considered in terms of two sub-areas as follows:

1. Identify ideas and priorities for teachers doing professional development as perceived by Ds-G, HRDDs, SPs, Ss and Ts; and
2. Explore aspects of the PD provision for teachers that can enhance teaching practices as identified by, Ts, Ss and SPs.

To address the aims, the following research questions are explored in using different participant groups, namely Ds-G, HRDDs, SPs, Ss and Ts.

Research Question 1: How is PD defined and distinguished from training as perceived by different groups of participants?

Research Question 2: What are the ideas and priorities for enhancing a PD program delivery as perceived by the different groups of participants?

Research Question 3: What PD aspects can enhance the provision of PD for Post-Basic Education school teachers?

Research Question 4: How do different authority levels influence the provision of teacher PD as perceived by the different groups of participants?

Research Question 5: What specific PD recommendations arising from the research could enhance present and future practices for Post-Basic Education school teachers?

The following research objectives were used to investigate the research questions as follows:

- Use the Nominal Group Technique to identify participants' perspectives about ideas and priorities for teacher PD use (RQ 2);
- Use focus groups (FG) to examine participants' perspectives about specific aspects of teacher PD use (RQ 3, RQ 4); and
- Use research findings to propose recommendations that could be developed for possible practices and changes in PD (RQ 1, RQ 2, RQ 3 and RQ 4).

The next chapter, Chapter 3, considers the research methods used in this research.

Chapter 3

Research Methodology and Design

3.1 Introduction

This chapter presents details of the methodology and research design used to address the research questions stated in Chapter 1. The chapter begins by exploring the ontological and epistemological assumptions that underpin the research approach adopted in this investigation. This is followed by details of the research design, data collection methods used, and details of the research sample and data analysis processes used. Finally, the chapter concludes with details of the ethics approvals associated with this research.

3.2 Research Underpinnings

3.2.1 Introduction

This section seeks to situate aspects of this research within an appropriate method aligned to address the research questions. In this respect, the researcher needed to consider the philosophical assumptions, the paradigm adopted, and the methodological approach and research design adopted. The essential reason for this is that it is well documented in the literature that the researcher must have an understanding of the philosophical foundation of their chosen research method (Creswell & Plano Clark, 2011). In addition, the research must be reinforced by an explicit philosophical paradigm (Neuman, 2003). Thus, understanding the underlining assumption helps clarify a researcher's theoretical frameworks (Cohen, Kahn & Steeves, 2000). According to Myers (1997), research design is referred to as the approach that a researcher adopts to conduct the research. Furthermore, according to Silverman (2005), it is important to understand perceptions, beliefs and assumptions about the nature of reality and truth, as they can influence the research process from design through to conclusion. Therefore, the ontology and epistemology which inform the paradigm to be used in the research along with the stance that has been adopted by the researcher are considered in the remainder of this section.

3.2.2 Ontological and epistemological considerations

Ontology is referred to as the researcher's preferences towards views about the nature of reality while epistemology is the relation between the variables. Creswell (2012) explains that questions

of an ontological nature focus on what exists, what is reality and how entities are organised in that reality. In this research the researcher's ontology is concerned with teachers and other stakeholder's perceptions of teacher professional development and how professional development can be improved to result in better teaching outcomes. In this context, the participants have different views of reality. For example, the Directors General involved in the research are at the top level of the educational hierarchy system and can be expected to have different views when compared to teachers who are at the bottom level in the system.

Denzin and Lincoln (2000) explain that epistemology centres on exploring what counts as knowledge and how this knowledge can be proven true. In this research, epistemology is concerned with how data is collected to inform the research and to consider the ways of obtaining data from participants. In the context of this research, knowledge is obtained about what or how professional development is viewed according to the understanding of a diverse group of participants. This research examined the views of Directors General (Ds-G), Human Resources Development Directors (HRDDs), School Principals (SPs), Supervisors (Ss) and Teachers (Ts) and explored how the information obtained can be used to enhance PD practices.

In this respect, concerning the knower, the Ds-G and HRDDs, for example, may use the knowledge of professional development to frame rules for implementing enhanced practices. In their roles, the SPs facilitate a good atmosphere for implementation of such practices. On the other hand, the Ss and curriculum officials may give advice on doing so. Ts could participate in effective professional development practices to implement changes.

In summary, ontology informs the methodology about the nature of reality and what is supposed research and epistemology informs the methodology about the nature of knowledge to be gathered.

3.2.3 Research paradigms

The term paradigm is often used synonymously with worldview (Creswell, 2012). Denzin and Lincoln (2005) explain a paradigm as the "basic belief system or worldview that guides the investigation, not only in choices of method, but also in ontologically and epistemologically fundamental ways" (p. 105). Therefore, the paradigm guides the entire research process and provides directions and principles regarding the approach, methods and techniques of carrying

out research within its philosophical framework. In addition, Denzin and Lincoln (1994, p. 108) endorsed the following:

- *Ontological.* What is the form and nature of reality and, therefore, what is there that can be known about it?
- *Epistemological.* What is the nature of the relationship between the knower and what can be known?
- *Methodological.* How can the inquirer (would-be Knower) go about finding out whatever he or she believes can be known?

According to this view, the researcher's responses to these questions have determined the paradigm choice.

Each worldview imposes demands on the researcher, including the questions asked by the researcher. Lincoln and Guba (2000) assert that today's plethora of paradigms provides the opportunity "for interweaving of viewpoints, for the incorporation of multiple perspectives, and for borrowing or *bricolage* where borrowing seems useful, richness enhancing, or theoretical heuristic" (p. 167). Therefore, the researcher needed to choose the worldview of different participant groups as a founding principle to inform the research.

There are two main worldviews that usually prevail: a positivist or scientific paradigm and the constructivist paradigm. The positivist paradigm is associated with quantitative research and the constructivist is concerned with qualitative research. In the positivists' ontology, there is one reality that exists, and it is the researchers' task to discover that reality. In the interpretivist ontology point of view, reality is socially constructed (Neuman, 2003). Specifically, Denzin and Lincoln (2018) state that:

the constructivist paradigm assumes a relativist ontology (there are multiple realities), a subjectivist epistemology (knower and respondent co-create understandings) and a naturalistic (in the natural world) set of methodological procedures. (p. 20)

These authors also highlight that the criteria used in the interpretive paradigms in regards to the constructivist paradigm are trustworthiness, credibility, transferability and confirmability while the type of narration is interpretive, case study or ethnographic fiction.

In this research, to explore the research questions, a constructive philosophy has been adopted as this approach allows the researcher to explore the world as encompassing the multiple realities constructed by the different groups of participants, namely, Ds-G, HRDDs, SPs, Ss and Ts. This reality needed to be investigated as it relates to the perspectives of these groups regarding professional development. For instance, what PD activities exist at the secondary school level? How can these be improved through knowing worldview? The epistemology of the research needed to be a qualitative paradigm because it appears to be dependent on our perceptions of “what real world truth is” (ontology) and “how we know it to be real truth” (epistemology). The knowledge through this lens is constructed through social interactions within cultural settings. For example, the participants’ PD experiences encountered during their work occurred according to their level of understanding of the complexities of the world. In other words, their understanding of PD is gained through the social interaction with other colleagues or their superiors as well as their personal experiences (Creswell, 2012; Cleary, Horsfall & Hayter, 2014). In this respect, participants’ perceptions and their knowledge is moulded and developed (Denzin & Lincoln, 2000; Creswell & Plano Clark, 2011).

3.2.4 Qualitative research

It follows from the foregoing that aspects of this research involving contextualising, interpreting and understanding participants’ experiences can be appropriately examined through qualitative research methods. Use of this approach enables a deep understanding and knowledge of perceptions about teacher professional development.

Qualitative research methods used in this research to address the research questions comprise the use of the nominal group techniques (NGT) and focus group discussions; both of these methods are discussed in Section 3.4. According to Creswell (2009) “a qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants and conducted in a natural setting” (p. 20). As such, the qualitative research methodology treats people as research participants and not as objects as in the positivist approach. This emphasis can be an empowering process for participants in qualitative research, as the participants can be seen as the writers of their own history rather than objects of research (Casey, 1993). This process can be seen as enabling or empowering research participants to freely express their views, which they may not have a chance to do with someone outside of the school system (Cohen, Manion & Morrison, 2011).

3.2.5 Researcher role

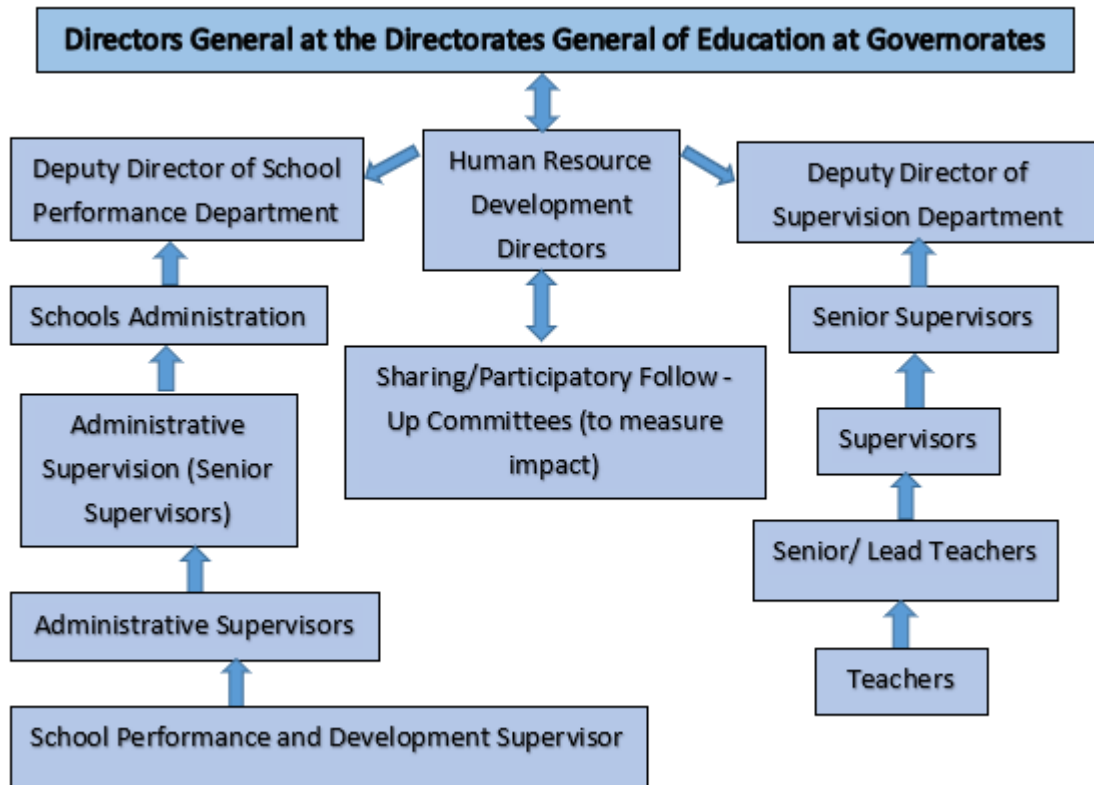
In the context of this research, the participant groups have a significant role in investigating the policy and implementation of teacher professional development in Oman. In Oman, the researcher works at the Diwan of Royal Court, at the Sultan Qaboos Higher Centre for Culture and Sciences, in the administration of Educational affairs and training as a First Educational Specialist. This researcher works in the area of teacher professional development in education. During work, this researcher identified a need to explore the PD practices and priorities for PD as a way of enhancing the teachers' performance to improve the student learning outcomes.

Further contextualising my position in Oman, First Specialist Education Affairs at the Diwan of Royal Court are well respected in the society and the government values their professionalism. However, in this research the researcher was considered by the participants as a student seeking data for a PhD investigation concerning teacher PD. In this respect, in this research the researcher was acting as an investigator addressing research questions stated in Chapter 2. This concerned the development and use of data collection instruments detailed in Chapter 4, analysing the data and making conclusions and recommendations.

3.2.6 The stakeholders' roles within Ministry of Education

The stakeholders involved in this research have important roles in the process of PD delivery. There are five groups of participants as mentioned before. They represent participants from top-level authorities to classroom teachers. Within their roles, each group of participants has different responsibilities as shown in Appendix A. In respect to teacher PD use, a limited reference is clarified within the stakeholder's responsibilities. This situation could cause the participants in PD use to adopt a holistic approach in specifying and in implementing the PD programs. Figure 3.1 presents the connection between these different groups of participants in coordinating the issues of the delivery of PD practices. It is noted in the figure that there is the Sharing/Participatory Committee named (Sharing Follow-up Committee) which assesses the impact of PD programs within the MOE through meetings between stakeholders.

Figure 3.1 The Process of Connection between the Groups of Participants in this Research



(Adapted by agreement with the MOE)

3.3 Research Design

According to the research literature, the research design should be shaped by the research questions that are to be addressed (Cresswell, 2007; Tashakkori & Teddlie, 2010). This approach has been adopted as shown in Figure 3.2 and addresses the five Research Questions, namely:

Research Question 1: How is PD defined and distinguished from training as perceived by different groups of participants?

Research Question 2: What are the ideas and priorities for enhancing a PD program delivery as perceived by the different groups of participants?

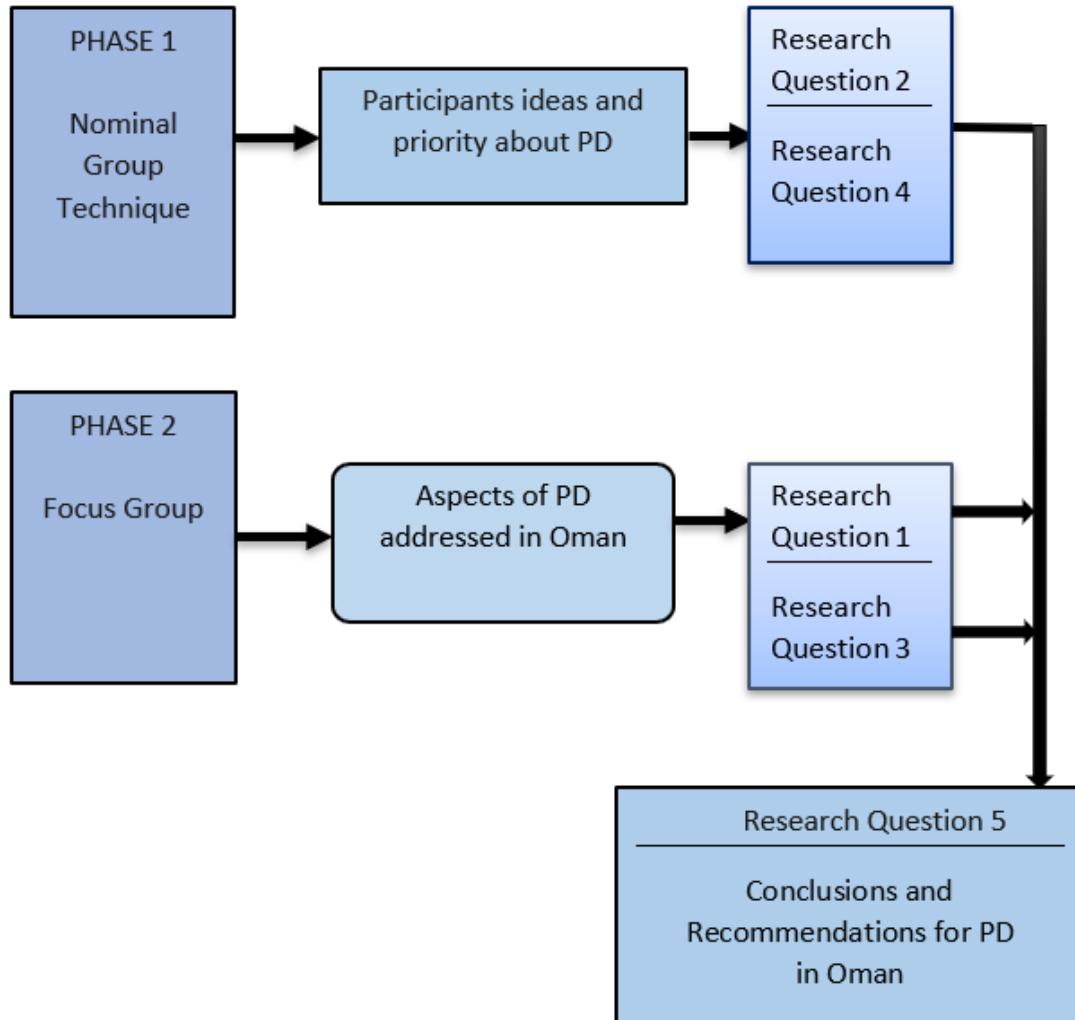
Research Question 3: What PD aspects can enhance the provision of PD for Post-Basic Education school teachers?

Research Question 4: How do different authority levels influence the provision of teacher PD as perceived by the different groups of participants?

Research Question 5: What specific PD recommendations arising from the research could enhance present and future practices for Post-Basic Education school teachers?

Figure 3.2 presents the research design developed and adopted for this research. It can be seen from the figure that the research design has two distinct Phases. In Phase 1, the NGT is used to determine priorities and ideas of teacher PD. Phase 2 used focus group sessions to identify aspects of PD addressed in Oman associated with PD provision. Each of the two phases specifically addresses all the Research Questions stated in Chapter 2. The results of Phase 1 and Phase 2 of this research are used to discuss the possibilities of establishing recommendations for PD in Oman. In Phase 1, there were five groups of participants: DS-G, HRDDs, SPs, Ss and Ts to establish the priority of PD needs. As well, in Phase 1, the influence of different authority levels is established. Another purpose of using the NGT in Phase 1 was to inform the Focus Group Sessions to ensure greater relevance of the questions to the target population. In Phase 2, there were three groups of participants: Ts, Ss and SPs. The interviews were concerned with the gathering of information about teacher PD practices.

Figure 3.2 Research Design



3.4 Data Collection Methods

3.4.1 Introduction

This section presents an overview of the two data collection methods used in this research namely, the use of NGT and FG sessions. Specific existing data collection instruments were not available for each of these data collection methods and are detailed in Chapter 4.

3.4.2 Nominal group technique

Description

The NGT is an evaluation tool that can be used for a wide range of purposes, such as program development and problem solving. It involves a group of people making decisions about aspects of a topic where identified themes and judgements are needed, but also where a group consensus is a defined outcome. Islam (2009) states that “NGT is a management tool that is being increasingly used to generate a large number of ideas. The technique is helpful in identifying problems, exploring solutions and establishing priorities among the solutions generated” (p. 126). NGT was originally conceived by Delbecq, Van de Ven and Gustafson (1975) as a “participation technique for social planning situations” (p. 108).

Horton (1980) describes the NGT as:

a structured method of group decision-making which allows a rich generation of original ideas, balanced participation of all members of the group, and a rank-ordered set of decisions based on a mathematical voting method. (p. 811)

The NGT process summarises group ideas and opinions through the use of nominal groups, which share same experiences about the same topics. Willis (1979) stated that “nominal group processes [are those] in which members of the group operate completely independently” (p. 172). Thus, there is no interaction between the different groups of participants at certain stages of the process, which depends on individual contribution of ideas. A major assumption in the use of NGT is that members of the group have different backgrounds and abilities, and collectively can generate more alternatives. Harvey and Holmes (2012) state that the NGT can be termed as an information-creating tool that produces qualitative findings. It is recommended that in the use of NGT, researchers use a structured discussion group of participants who have the same interests, perceptions and expertise (Van de Ven & Delbecq, 1972).

Rationale and use of NGT in this Research

Van de Ven and Delbecq (1972), who established this technique, consider NGT as a problem-solving method, based on the development of a consensual representation of the problem:

a structured meeting which seeks to provide an orderly procedure for obtaining qualitative information from target groups who are most closely associated with a problem area. (p. 338)

In this research, the NGT was used as a means of identifying priorities to seek an insight into multiple views of different aspects of professional development from the participants involved in teacher's professional development in Post-Basic Education schools in Oman.

Lloyd (2011) states that, “the technique allows a better understanding of the group dynamics that affect individuals’ perceptions, information processing and decision making” (p. 107). In particular, this researcher sought data which would ensure that the Focus Group sessions would be informed and relevant to the target population. The NGT approach therefore appeared to be the most suitable methodological approach in terms of both time and cost. In addition, the structure of NGT was useful in allowing each member in each of the groups in the sessions to participate in the process in a structured way. In this research, the NGT was used to obtain consensus in nominal groups’ priorities of ideas and aspects of professional development through interaction in a structured way. The use of NGT offers the opportunity for all of the participants to contribute equally and to rank ideas individually and collectively.

Coker, Tucker and Estrada (2013) confirm that “the NGT method provides equal participation, eliminates the effects of dominant or shy personalities, and allows the efficient acquisition of ranked responses” (p. 1145). In this research, the use of the NGT technique was deemed a time-effective way of generating data of identifying participants’ perspectives about aspects of teacher PD.

The NGT Process used in this Research

The NGT is a highly structured process typically incorporating five distinct steps as detailed in the literature (Potter, Gordon & Hamer, 2004; Kennedy & Clinton, 2009; McMillan, Kelly, Sav, Kendall, King, Whitty & Wheeler, 2014). The steps are as follows:

- Silent/independent generation of ideas in response to a stimulus question for each group.
- Round robin recording of ideas with no discussion to create a master-list.
- Clarification and discussion of ideas.
- Individual voting on the importance of ideas.
- Ranking/final voting to prioritise ideas or to determine the group consensus.

Further elaboration of the use of the NGT process is presented in Chapter 4.

3.4.3 Focus group schedule

Description and Use

In the research literature there is consensus in identifying a focus group as an informal discussion among a group of selected individuals discussing their shared interests about a topic (Hennink, 2007; Marczak & Sewell, 2013). Focus groups usually have a small number of participants and have structured groups of selected participants organised to explore individuals' views and experiences (Morgan, 1996). Focus group sessions are focussed in the sense that the participants respond to and build on the ideas and perceptions expressed by others in the group. This can occur through examining participants' shared understandings of a particular event enlightened through collaborating the beliefs, experiences and feelings of the participants that are not feasible using methods such as individual interviews, observations or surveys. An insight can be obtained from multiple views about certain activities of long duration. Focus groups, therefore, rely on interaction within the group, based on topics that are supplied by the researcher (Morgan, 1997).

Rationale for Use

Patton (1990) stated that highly efficient data can be generated by using a focus group as a data collection technique. As a technique, Morgan (2002) purports that focus groups are a way of listening, learning and generating a richer understanding of participants' experiences and beliefs among people. He also suggests that focus groups can provide an opportunity for participants to create conversations about the topic being discussed. According to Sim (1998), some key reasons for using focus groups as part of research include:

- they are an economical way of tapping the views of a number of people.
- they provide information on the “dynamics” of attitude and opinions in the context of the interaction that occurs between participants.
- they may encourage a greater degree of spontaneity in the expression of views.
- participants may feel supported and empowered by a sense of group membership and cohesiveness. (p. 346)

The Use of Focus Groups in this Research

The purpose of using focus groups in this research was to provide in-depth views of Ts, Ss and Ps about PD needs and requirements of teachers for professional development. In this respect,

the FGs are used to identify themes and categories associated with PD needs based on participants' perceptions on teacher PD. As previously stated, Section 3.4.2, the participants in NGT interact between each other in a structured way within the framework of NGT steps. However, in the FG, the participants interact differently. Participants can ask questions and they can comment on different issues related to the topic in an open discussion. Thus, the procedure plays an important role in gathering information about the aspects of the topic and classifying needed data in specific areas of interest. For example, in this research participants could comment on ways of enhancing the practices, needs and purposes for doing PD. They could also highlight their desire about their future development issues.

In the design of the FG schedule for this research, the researcher followed Morgan's (1996) approach. This author states that FGs mostly:

- use homogeneous strangers as participants
- rely on a relatively structured interview with high moderator involvement
- have 6 to 10 participants per group
- use a total of 3 to 5 groups per project. (p. 35).

3.5 Data Analysis

3.5.1 Translation and verification of Arabic language to English for NGT and FG data

The data were collected in Oman for both the NGT and FG data collections using the Arabic language. As the dissertation needed to be presented in English language, the data gathered needed to be translated from the Arabic language to English language. The researcher used the Translation Offices in Oman to translate the data from Arabic to English. All of the translation was done by this researcher as he was a former Oman English teacher from the year 1991 to 2006. The translation was verified by the researcher using the following process:

- The translated version of the document was perused by the researcher to check the readability of the translation in terms of literal sense.
- Each sentence was checked for sense rather than word by word translation.
- Where the translation did not make sense, the translated version was revised by the researcher.

It needs to be noted that translation from Arabic to English is difficult because direct word-by-word translation is not always possible.

3.5.2 The NGT data analysis

The analysis of the nominal group technique (NGT) data was conducted in four steps as follows:

Step 1 - Silent/independent generation of ideas in response to a stimulus question for each group as follows:

- Listing responses or ideas that participants offered in a list of priority ideas.
- Presentation of the ideas by participants for each group.

Step 2 - Round robin recording of ideas with no discussion to create a master-list as follows:

- Organising a master list developed from the data collection stage to prepare tables for each of Ds-G, HRDDs, SPs, Ss and Ts of participants.

Step 3 - Clarification and discussion of ideas as follows:

- Presentation of the clarified scored ideas by participants for each group.
- Use tables to clarify scores given for each idea for each group.

Step 4 - Individual voting on the importance of ideas:

- Present the scores for the important ideas for each question for each group.
- Rank of ideas according to the five top most important ideas in each of the five groups.
- Present the collective ranking score and the final votes for the five most important ideas in tables.
- Present the ideas in figures of the voting and ranking summary for each group in Arabic and tables of translation for them in English in tables.
- Present the outcome of voting and ranking of summary for each idea for each of the groups by presenting the ideas, the priorities, sum of scores and the relative importance in tables.

Step 5 - Ranking/final voting to prioritise ideas or to determine the group consensus:

- Summarise the results of each group in a table.

3.5.3 The FG data analysis

The analysis of the data by the researcher was managed using NVivo 11 software. In this process, this researcher sought to identify patterns of recurring themes about teacher PD within Post-Basic Education school teachers' practices.

It is noted by researchers such as Leech & Onwuegbuzie (2011) that:

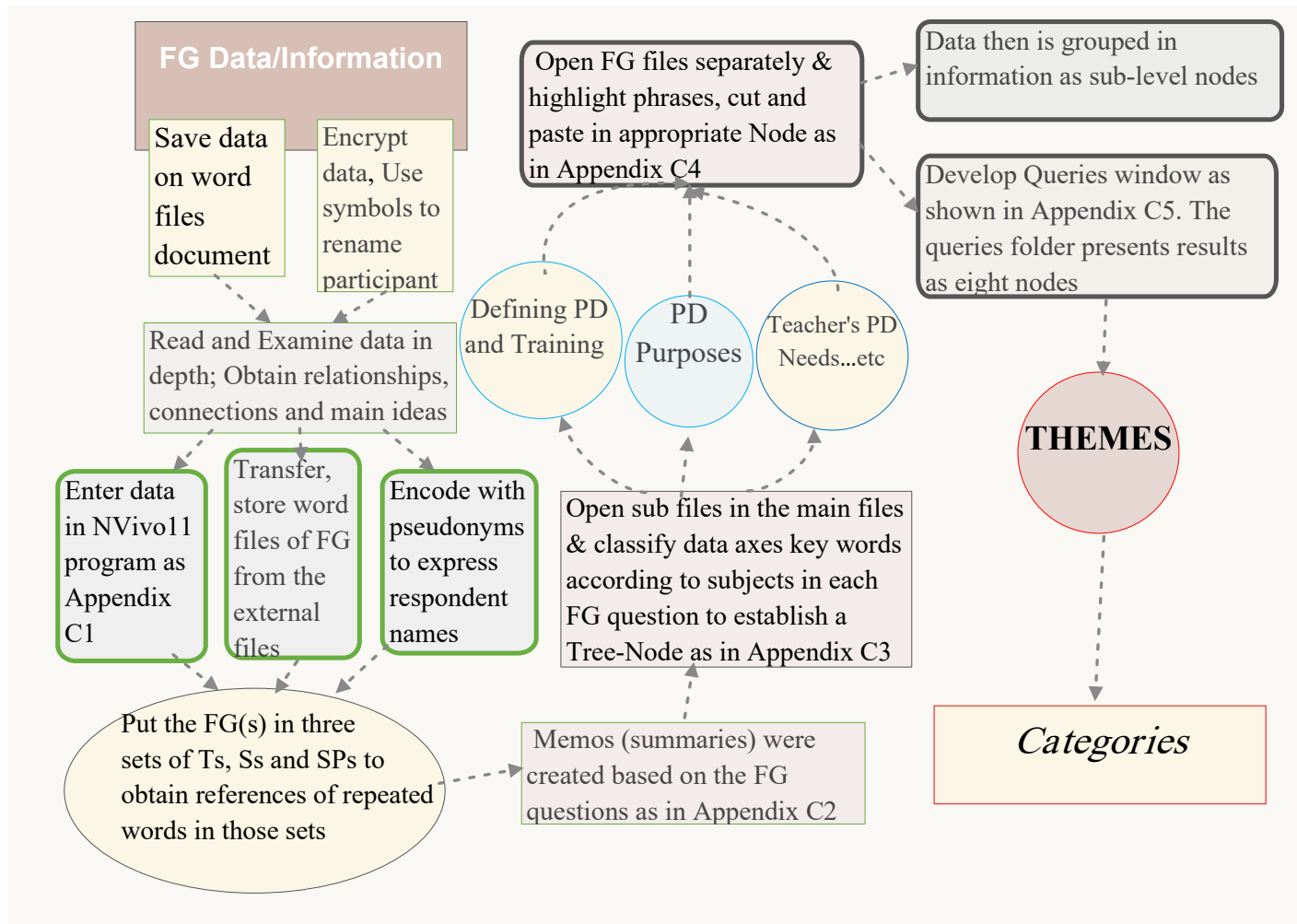
it is important to keep in mind that when conducting qualitative research, the researcher is the main tool for analysis ... rather, the researcher utilizes the computer program to assist in the analysis. (p. 71)

NVivo has capabilities to present different types of data such as word frequency searches and matrix queries in the forms of figures, tables, graphs and matrices. Also, NVivo software was used as a tool to assist in determining the themes and categories with the use of word frequency counts and word clusters.

In this research, digital recording of the focus group meetings was transcribed and analysed using NVivo Version 11. A sample transcript is shown in Appendix B1. NVivo was used in assisting the researcher to search the data of the FG discussions line by line and to identify themes and patterns within the FG schedule for the different groups of participants.

The steps involved in FG data analysis were used in NVivo for data analysis as shown in Figure 3.3 and further detailed in Appendix B2.

Figure 3.3 Steps in FG Data Analysis Using NVivo11



3.6 Research Sample

3.6.1 Introduction

This research examined the ideas, priorities and practices from the perspectives of five different participant groups, namely, DS-G, HRDDs, SPs, Ss and Ts. The limitations of the sample are considered in Chapter 8.

Table 3.1 provides details of the total research sample for NGT and for FG data collections.

Table 3.1 The Research Sample for NGT and FG Data Collection

The Participants	NGT		Focus Group	
	Size of the Sample	No of Groups	Size of the Sample	No. of Group
Directors General	6	1	---	---
Human Resources Development Directors	5	1	---	---
Supervisors	5	1	12	2
School Principals	9	1	17	2
Teachers	8	1	21	2
Total	33	5	50	6

The table shows the number of participants for the NGT and the FG data collections. The total number of participants involved in the NGT data collection was 33 participants using five participant groups according to their posting. In the FG data collection, there were 50 participants distributed within three different groups. There were two FG groups in each of the three participants groups for Ss, SPs and Ts.

They were selected purposefully upon their desire and their availability to participate in the data collection process. They were selected randomly as a purposeful sample.

Most of the NGT 33 participants had 10 to 29 years of work experience in education with the most common years of work experience being between 10 and 24 years. On the other hand, the

ages of the 50 FG participants ranged between less than 31 to more than 50 years but most of the ages were from 31 to 50 years old. The participants had 5 to 29 years of work experience in education with the most common years of work experience being between 10 and 24 years.

3.6.2 NGT sample characteristics

In Oman, there are eleven educational districts. For the purpose of the research, the researcher conducted the research in six of these districts, namely, Muscat, Al Batinah North, AL Dhahirah, AL Batinah South, Al Sharqiah North and Al Sharqiah South.

It can be seen from Table 3.3 that 33 participants were involved in the NGT process. They were selected purposefully upon their desire and their availability to participate in the data collection process. Table 3.2 below shows the breakdown of participant profiles across all the five NGT groups.

Table 3.2 Characteristics of the NGT Research Sample

Characteristics	Ss No=5	SPs No=9	HRDDs No=5	Ds-G No=6	Ts No=8	Total No. 33
<u>Age</u>						
Less than 30 years	0	0	0	0	0	0
31-40 years	3	4	2	0	8	17
41 and above	2	5	3	6	0	16
<u>Work experience (years)</u>						
1-4	0	0	1	0	0	1
5-9	0	0	1	0	1	2
10-19	3	5	0	0	7	15
20-24	2	3	2	3	0	10
25-29	0	1	1	3	0	5
30+	0	0	0	0	0	0
<u>Gender</u>						
Female	1	1	1	0	0	3
Male	4	8	4	6	8	30

It can be seen from the table that participants ages are between 31 to 40 years. Most of the participants had 10 to 29 years of work experience in education with the most common years of

work experience being between 10 to 24 years. The sample is generally representative of the education workforce in Oman.

3.6.3 Focus group sample

The focus group sessions involved 50 participants. The participants were represented and distributed across different Directorates in Governorates in Oman as explained in Chapter 1, namely Muscat, Al Batinah North, AL Dhahirah, AL Batinah South, Al Sharqiah North and Al Sharqiah South Governorates. Participants were chosen purposefully from different governorates to represent different stakeholders' perspectives among the eleven Governorates. Participants were involved according to their work experience and their availability at the time of data collection stage during the school year. Table 3.3 presents characteristics of the FG participants' details. There were three FG participant groups, namely, Ts, Ss and SPs. Ds-G and HRDDs participant groups were not involved because engagement in this data collection stage was at the implementation level of the educational field. Thus, implementation, evaluation and feedback from different participants about PD practices could be reported and enhanced.

Table 3.3 Characteristics of the FG Research Sample

Characteristics	Ts		Ss		SPS		Total
	No=10	No=11	No=6	No=6	No=9	No=8	No. 50
Age							
Less than 30 years	0	0	0	0	0	0	0
31-40 years	7	11	4	5	4	0	31
41-50 years	3	0	1	1	5	7	17
50+	0	0	1	0	0	1	2
Work experience (years)							
1-4	0	1	0	0	0	0	1
5-9	0	0	0	1	1	1	3
10-19	7	10	4	4	6	4	35
20-24	3	0	1	1	2	3	10
25-29	0	0	1	0	0	0	1
30+	0	0	0	0	0	0	0
Gender							
Female	3	6	2	2	6	4	23
Male	7	5	4	4	3	4	27

The table shows the characteristics of the FG participants for the six FG participant groups. It can be seen that ages range between less than 31 to more than 50 years but most of the ages were from 31 to 50 years old. The participants had 5 to 29 years of work experience in education with the most common years of work experience being between 10 to 24 years.

3.7 Ethical Issues

Ethics clearance was granted by Central Queensland University using the Low Risk application form in March 2016 (approval no. H15/11-255) as shown in Appendix D1.

It is important to state that this researcher has undertaken this study supported by a scholarship provided by the Omani government, Diwan of Royal Court (DRC) in Muscat and the Ministry of Education (MOE), who also approved the research (See Appendix D2). It is noted that all documentation from the Omani government is in Arabic and was translated to English where necessary. The researcher used pseudonyms in order to protect the anonymity of the NGT and FG participants as a procedure to comply with the ethical requirements.

The researcher also used a meeting package involved in the process of conducting data collection. The package contained several Appendices as stated in Chapter 4 which was used at the “pre-session information for participants” stage.

3.8 Summary

This chapter has justified the selection of the interpretivist paradigm as appropriate to address the Research Questions stated in Chapter 2. It has detailed the use of two data collection methods for addressing the RQs, namely using the nominal group technique and focus group sessions. It also overviewed the data analysis process used. The following chapter describes the development, design and administration of the instruments that have been used.

Chapter 4

The Use of Nominal Group Technique and Focus Groups for Data Collection

4.1 Introduction

As revealed in Chapter 3, the research adopted a qualitative interpretive methodological framework and used two research methods, namely the Nominal Group Technique and focus groups. These two methods were used to collect data to explore participants' ideas and aspects in the provision of teacher professional development (PD) for Post-Basic Education school teachers in Oman.

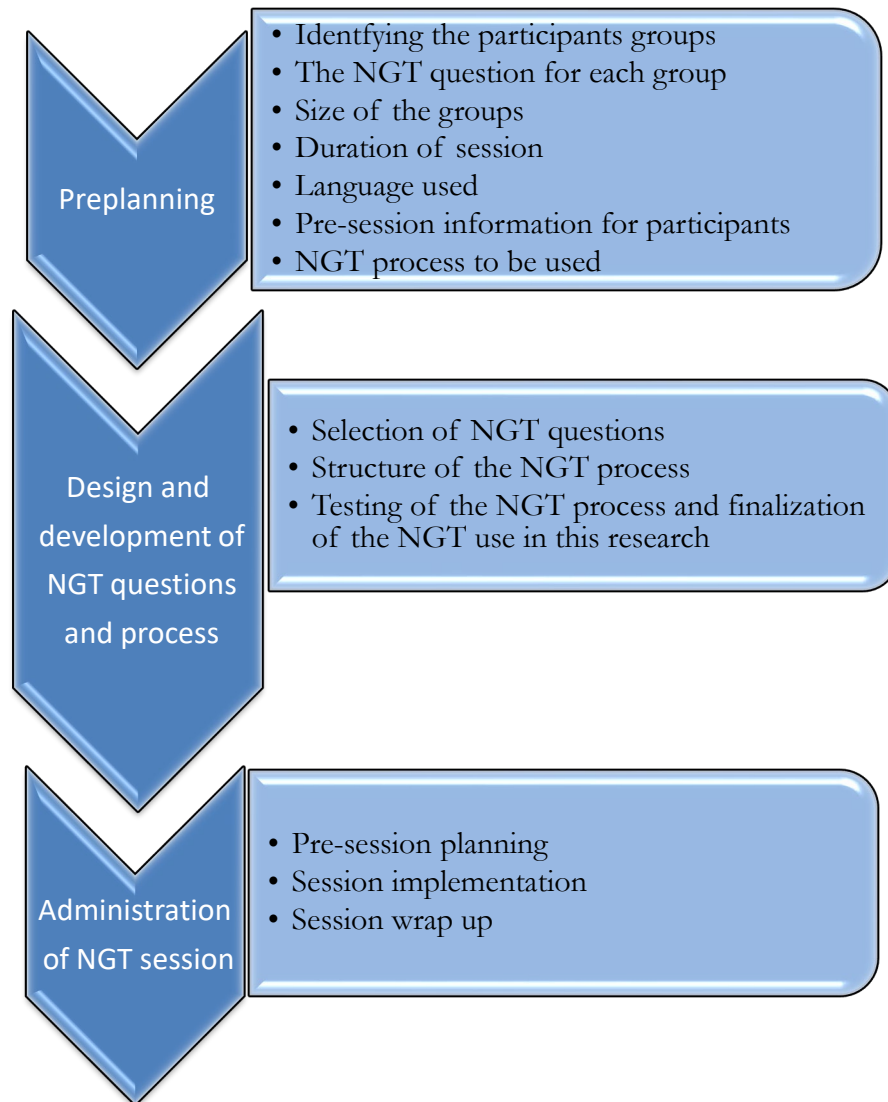
This chapter details the implementation and use of the Nominal Group Technique (NGT) for data collection used in this research and then the use of a focus group (FG) schedule to collect data.

4.2 Use of the Nominal Group Technique (NGT)

4.2.1 Introduction

This section presents detailed considerations that were made with respect to the use of NGT. This has been done because this research method is new in the Middle East and Gulf Region. Figure 4.1 presents the framework for the process used in the preplanning, design and development of the NGT questions and the administration of the NGT sessions.

Figure 4.1 Framework used for the Implementation of NGT Process



4.2.2 Pre-planning stage for the NGT sessions

Introduction

The researcher undertook a detailed review of the use of NGT in the research literature. The NGT pre-planning process used was that as documented in the literature by Delbecq, Van de Ven and Gustafson (1975).

Identifying the Participant Groups

A major assumption in the use of NGT is that members of the group have different backgrounds and abilities, and collectively can generate more alternatives or supply more inputs than any one individual. Hutchings et al. (2013) stated that “traditionally, the NGT is applied to homogenous groups of individuals” (p. 499). The purpose of using the NGT in this research was to seek insights regarding PD use from multiple groups. These groups were identified by the researcher according to the hierarchy classification of administrative posts in the Ministry of Education as described in Chapter 1. As such, the NGT meetings were undertaken for different groups of participants representing and descending from the higher administration hierarchy at the Ministry of Education, which is the upper level represented by Directors General at the governorates to the bottom level which is represented by school teachers. The NGT was used with five NGT groups, namely, Directors General (Ds-G), Human Resources Development Directors (HRDDs), School Principals (SPs), Supervisors (Ss) and Teachers (Ts) as detailed in Chapter 3. They were selected randomly as a purposeful sample as mentioned in Chapter 3 Section 3.6.1.

The NGT Question for each Group

In the identification of the NGT question for the participant groups, a general question was used. This was “How can professional development practices be enhanced for the Post-Basic Education school teachers in Oman to obtain better student learning outcomes?” This question represents the enhancement that could be involved in the implementation of PD practices. From this general question, the researcher developed the nominal group question for each group of participants according to their level of involvement; this is further detailed in Section 4.2.3.

The questions were prepared based upon the use of the NGT process and research by Delbecq, Van de Ven and Gustafson (1975) who stated that “NGT can provide a great deal of detail about the matter of concern to you” (p. 74). Moreover, these researchers claimed that the NGT questions are required to be clearly expressing the participants experience about the topic.

NGT is like a microscope. Properly focused by a good question, NGT can provide a great deal of conceptual detail about the matter of concern to you. Improperly focused by a poor or misleading question, it tells you a great deal about something in which you are not interested. (p. 19)

Size of the Groups

Research suggests that group participants should be on a similar level of hierarchy appointment regarding their profession and experience. In addition, the size of the group can vary from six to 15 individuals per group (Delbecq, Van de Ven & Gustafson, 1975; Thomas, 1983; Glasper, Prudhoe & Weaver, 2007). In this research, the size of each group used varied from five to nine participants.

Duration of Session

An NGT session typically takes between one and a half to two hours in time (Gibson & Soanes 2000). This duration information was taken as a guide in planning the use of NGT in this research.

Language Used

The NGT sessions were conducted in Arabic language because it involved participants who were not necessarily proficient in the use of English language. Besides that, the participants did not have knowledge about the NGT method and its process. In addition, such a method was unfamiliar to most of the participants in this research. Thus, the researcher had to provide most of the required explanation in Arabic to ensure that it was clearly understood by all the participants. Therefore, the researcher conducted the sessions in Arabic and after that the researcher translated the recorded NGT sessions into English as explained in Chapter 3.

Pre-session Information for Participants

The researcher prepared an information folder about the use of NGT for each participant. This was done because the researcher deemed it necessary to introduce the related documents to assist participants to become familiar with the use of the NGT. A meeting package was provided to each participant that contained the following information both in English and in Arabic:

- An introduction document that included a welcome statement, information about the researcher, the research topic, and directions to the meeting room of the NGT session.
- A project summary included an information sheet which contained the researcher's contact details to participants in case the participants had any further questions about the research and information about the NGT session (Appendix E1).
- A Ministry of Education, Oman, approval letter to conduct research (Appendix D2).
- Process used in the NGT session (E2).

- A consent form that the participants needed to complete and sign (E3).

The NGT Process to be used

As indicated in Chapter 3, the researcher deemed that the NGT is a research method that can be used to obtain participants' ideas about teacher professional development in Oman at the Post-Basic Education level. The process specifically used has five main steps and is presented in the next section.

4.2.3 Design and development of NGT questions and process used

Introduction

This section presents details of the design and development of the NGT process as shown in Figure 4.1.

Selection of NGT Questions

As previously stated in Section 4.2.2 the general NGT question was first developed based on the research topic, research questions and researcher experience, in addition to the literature that was considered in Chapter 2. This question was then used to generate the nominal question for each of the five groups of participants according their level of involvement. The question needed to be stimulating and clear in a way that inspired the participants to make a meaningful contribution (Thomas, 1983). The five groups' questions were generated by this researcher based on the researcher knowledge about teacher professional development practices in Oman and supported by the PD literature presented in Chapter 2.

The questions used for each group are shown in Table 4.1.

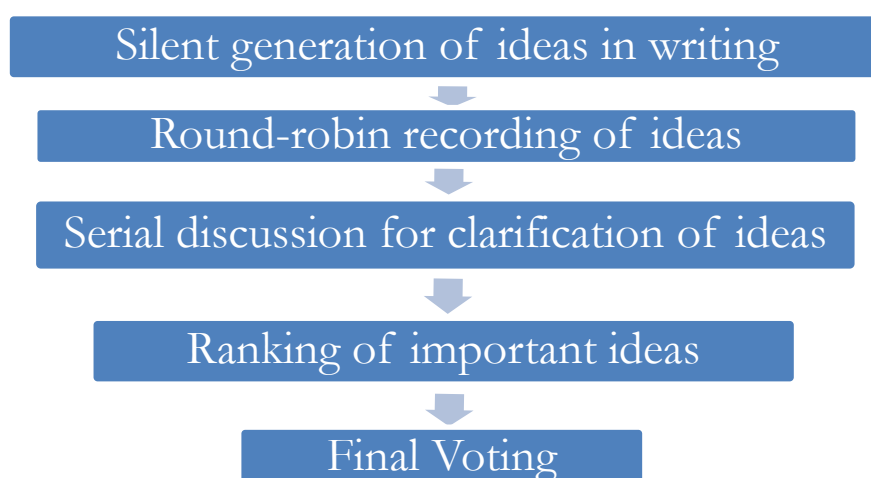
Table 4.1 NGT Groups Questions

Group	Questions
Directors General (Ds-G)	In our educational system, what particular policies are needed for the use of teacher PD to improve/obtain better student learning outcomes for Post-Basic Education?
Human Resources Development Directors (HRDDs)	What specific PD needs to be provided for teachers to improve student-learning outcomes for the Post-Basic Education schooling?
School Principals (SPs)	What specific PD support needs to be provided for teachers at your school to help improve student-learning outcomes?
Supervisors (Ss)	How do we achieve our goals in developing and in implementing teacher professional development to improve our students learning outcomes for the Post-Basic Education schooling?
Teachers (Ts)	How can we best use teacher PD to improve our student learning outcomes at the Post-Basic Education school?

Structure of the NGT Process

As indicated in Chapter 3, the number of steps used in the NGT process can vary. For instance, eight steps were used by Gallagher et al. (1993) and Gibson and Soanes (2000) while five steps were used by Lloyd-Jones et al. (1999). In this research, Gibson and Soanes' (2000) five step process was used as shown in Figure 4.2. The researcher used a five steps scheme as the main NGT steps descending from generating ideas, eliciting ideas, discussing ideas, ranking ideas to voting the most important ideas.

Figure 4.2 The NGT Process



The first step was silent generation of ideas where the participants received the nominal question and were asked to document their ideas in writing. The second step was a Round Robin in which the participants offered their ideas for recording on a board/flipchart. The Round Robin was anticlockwise, and each participant was given several turns to generate a list of ideas. The third step was a serial discussion where participants clarify the listed ideas into a master list of ideas, as a final list. The fourth step was the ranking of important ideas in which the participants rank their ideas according to the level of importance. The final step was the voting of ideas where the participants prioritise the five most important ideas.

Pilot Testing of the NGT Process and Finalisation of the NGT Process to be used

The NGT session development was pilot tested so that this researcher could review the structure/efficacy of the nominal questions. The testing was carried out with a group of academics. The documentation, the NGT questions and NGT steps previously described were used. A sample nominal question used was, “How can professional development practices be improved to enhance the students’ learning outcomes at the Post-Basic Education for school teachers in Oman?” The researcher acted as a facilitator for the NGT session.

After the NGT testing, participants were asked to give feedback about the NGT session. The feedback received from the development testing group was very positive and only minor issues in the presentation of the use of the NGT were identified. The following modifications in the process were suggested:

- Showing NGT steps to the participant on slides
- Showing the order of ideas when some ideas were deleted
- Explaining the NGT question to participants to make sure that each participant understood it
- Organising a whiteboard in advance for eliciting ideas
- Individuals to give three ideas only
- Demonstrating examples of ranking cards.

The above points were considered by the researcher and the supervisors and all suggestions were adopted. As well, it appeared that the feedback indicated that the session process:

- evidenced that appropriate documentation was used in the use of NGT
- showed that the use of NGT process developed would be manageable by the participants in the research

- the process used in this research was modified to incorporate the suggested changes by the tested NGT group.

The amended NGT process was used in this research as shown in Appendix F.

4.2.4 Administration of NGT session

Introduction

A list of administrative tasks was used by this researcher for each NGT session. These included preplanning and session presentation components.

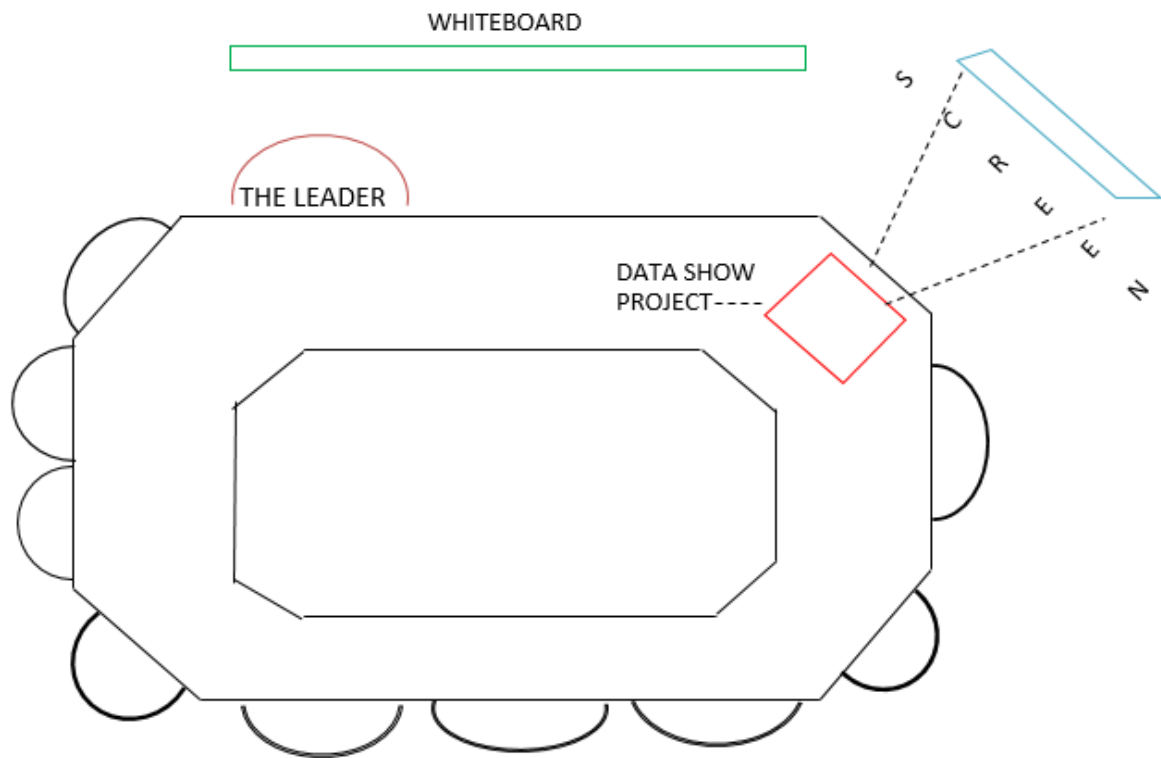
Pre-session Planning

The tasks and protocols that the researcher prepared before NGT session were to ensure easy participation of the groups. They included:

- Booking a quiet meeting space where the NGT sessions could be conducted
- Confirmed NGT session times with participants
- Confirmed likely duration of the NGT session (1 ½ to 2 hours)
- Provided NGT meeting package to participants
- Provided participants with the meeting room details.

It is notable to mention that a typical NGT meeting involved six to nine individuals seated around a table with a session leader (the researcher in this case). Each participant was given a paper and pencil for recording ideas and cards, which were used as a Form for voting. This form contained a space to write on in the middle, a small box to write the number of ideas on the right side of the form and a small box to write the rank number of ideas at the bottom left of the form. The room arrangement used at the NGT meeting is shown in the Figure 4.3.

Figure 4.3 Room Arrangement for the NGT Meeting



It can be seen from the figure that the participants were seated around a table in order to ensure eye contact for all. A whiteboard was also used and kept in front of the participants in order to have a clear vision when recording ideas. The meeting room used was well lighted, airy, and free of distractions such as air-conditioning or traffic. Such arrangements were intended to stimulate an atmosphere of informality among participants. Other advance preparation included:

- Detailed directions to the meeting place were given.
- A data projector was used to explain the research topic, the NGT process and familiarise participants with its steps till the end of the process.
- Whiteboards and flip charts were provided to record the ideas during the round robin stage.
- Refreshments were provided throughout the meeting and after the session.

The Session Presentation

Table 4.2 details the protocol used for each session by the researcher.

Table 4.2 Protocol used in Session Information for Participants

Steps	Researcher Actions
1	Welcome the participants
2	Introduce the researcher and the research topic
3	Chat briefly about their interest to develop teacher PD
4	Draw attention to the information sheet (see Appendix E1 and E2)
5	Explain the process to be used during the session
6	Explain the purpose of using NGT session
7	Explain the use of nominal questions and ranking of ideas to encourage participants responses
8	Ask participants if they had any questions
9	Use the data show to explain NGT steps; step by step along the session
10	Use whiteboard for recording data/information
11	Commence with the session

The same steps were followed by the facilitator for each group of participants.

Session Wrap-up

The researcher concluded the session by providing the participants with agreed upon final consensus of ideas as outcomes, including voting for clarified ideas and the presented ranking of the five most important ideas as participants suggested.

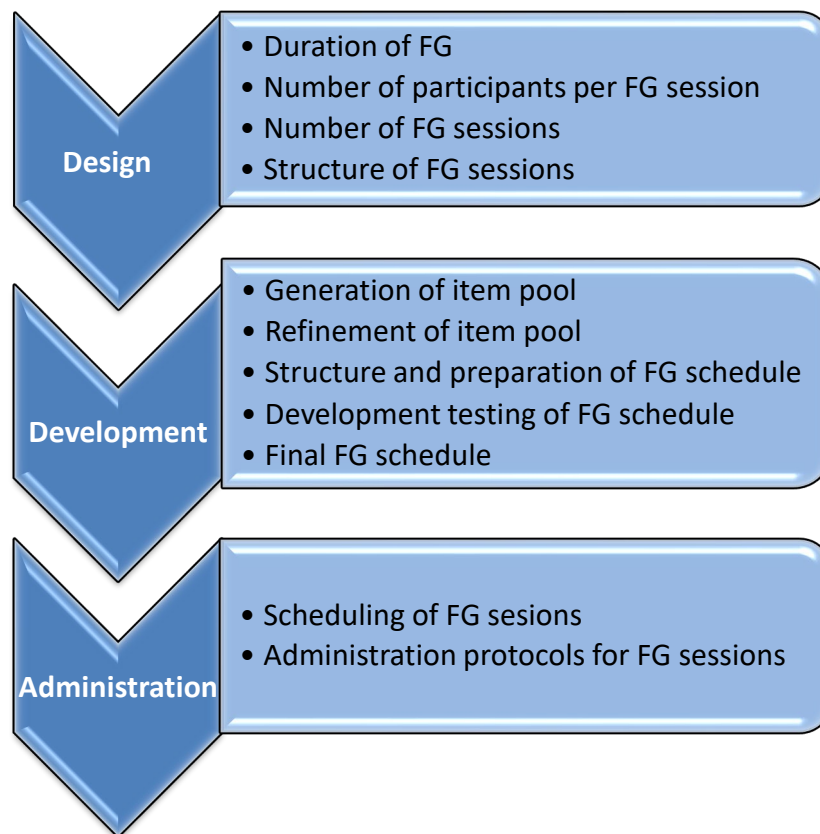
4.3 Design, Development and Administration of the Focus Group Schedule

4.3.1 Introduction

This section details the process used in the design, development and administration of the focus group (FG) schedule. Figure 4.4 provides a flow chart detailing the process employed for the FG schedule used in this research. It presents a summary of the three stages and steps

considered in each stage in the process used. A discussion of each of the identified steps follows.

Figure 4.4 Flow Chart of the Stages for the Focus Group Schedule, Design, Development and Administration



4.3.2 Design of focus group

Introduction

As shown in Figure 4.4 the design of the FG schedule used in this research considered four steps. These are the duration of the focus group session, the number of the participants per focus group, the number of the FG sessions and the structure of the focus group session.

Duration of the FG Sessions

In the literature, researchers such as Gibbs (1997) considers that a session usually lasts from one to two hours. For this research, the maximum duration was intended to be about 90 minutes.

However, taking into account the questions being asked, the duration of the session depends on the participants' understanding of the questions and the time they need to respond; therefore, participants may need less or extra time (Gibbs 1997).

Number of Participants for each FG Session

Morgan (2002) recommended that in light of both practical and substantive considerations for focus group session, a range of six to ten participants is optimal. Although the author maintains that fewer than six participants in each group is acceptable as long as the group is relatively homogenous (Morgan, 1998). However, research shows that there is generally no consensus among researchers regarding the right number of participants for a successful focus group session. The number of participants can be as high as fifteen people or as few as four. Lindlof (1995) recommends six to twelve people; Kitzinger & Barbour (1999) eight to twelve participants and Krueger (1988) six to eight participants. Morgan (2002) claims that “small groups are more useful when the researcher desires a clear sense of each participant’s reaction to the topic simply because they give each participant more time to talk” (p. 42). Subsequently, on the basis of the information, the researcher concluded that in the context of this research, eleven was deemed to be the upper limit for the number of FG participants in each focus group.

Number of Focus Group Sessions

The literature (Israel & Galindo-Gonzalez, 2008; Morgan, 1998; Stewart et al., 2007) suggests that there is no minimum or maximum number of focus group sessions recommended. However, Stewart et al. (2007) argues that the complexity of the questions and the composition of the sample should be considered by a researcher when deciding the number of focus group sessions. These authors suggest that complex questions and heterogeneous samples require more focus group sessions. As such, in deciding the number of focus groups, this researcher considered this viewpoint and two focus group sessions were used for each of the three different participant groups.

Structure of the FG Sessions

The researcher followed Morgan’s (2002) identification of key considerations in the structure of the FG sessions. According to Morgan (2002), the FG sessions are usually designed to explore the relevant RQs and to clarify “open, interactive dialogue between participants” (p. 43). The FG schedule used in this research was structured around six PD aspects as noted in Section 2.9 in Chapter 2.

4.3.3 Development of FG schedule

Introduction

In the development of the focus group schedule, there were five steps followed as shown in Figure 4.4.

Generation of Item Pool

As indicated in Chapter 3, six main aspects were used by this researcher to generate an item pool of questions. Identified aspects of PD in the literature were used for generating an initial pool of FG questions about the PD in Oman as shown in Table 4.3.

The table shows that a pool of 32 questions were generated to seek specific responses about the six aspects of teacher professional development practices, for example, within the aspect, Purposes of PD, the questions listed are questions about why a teacher would undertake PD.

Table 4.3 FG Session Aspects and Sample Questions

Aspects	Sample Question
Purposes of PD	<ul style="list-style-type: none"> • What do you think are the purposes of doing PD? • For what purposes would you like to do PD? • What would you like to get from PD?
Teacher PD Needs	<ul style="list-style-type: none"> • What are your needs for doing PD? • What needs are there in regards to school administration needs? • What needs are there in regards to the reality of classroom situations? • What are your areas in needs? • Can you identify the area of PD needs?
Practices for Presentation of PD Programs	<ul style="list-style-type: none"> • What types of PD practices have you experienced? • What form of presentations PD practices is used? • How should PD programs be presented? • Who should present PD sessions? • Should we use experts or specialised cadres in PD? • When should it be presented?
Improving PD Practices	<ul style="list-style-type: none"> • Who should have access to the PD programs? • What is the the criteria for doing PD? • How often should teachers be able to attend PD programs? • How often each teacher should attend PD programs? • How should PD be delivered or accessed? • How often you do or go to PD programs?
Characteristics of Effective PD Programs	<ul style="list-style-type: none"> • Should there be regulations for doing PD programs? • Who assesses the PD program? • How can it be assessed? • How often should it be assessed? • Should PD programmes be compulsory? • Should there be appraisal as an outcome? • Who should decide teacher attendance at PD programmes?
Impact of PD	<ul style="list-style-type: none"> • What can be the effects that PD has on teachers? • What implications has PD on the students? • How do we measure impact of PD?

Refinement of Item Pool

The next step in the development of the FG schedule was the refinement of the item pool. Stewart, Shamdasani and Rook (2014) suggest that most focus group interviews “consist of fewer than twelve initial questions” (p. 96). Thus, the thirty-two specific questions/items were

considered to be too many to be reasonably addressed within the pre-determined timeframe of ninety minutes allocated to the FG session. Morgan (2002) purports that “a key consideration for FG development is the researcher choices made about interview standardisation and moderator involvement” (p. 39). The extent to which the content of the FG session is either pre-determined or flexible is referred to as interview standardisation. The extent to which the moderator either controls the discussion or allows relatively free participation is referred to as moderator involvement. In the case of this research into the use of PD in Oman, a compromise between the two was required by this researcher. That is, a reliable approach across focus groups that engaged the same content, as well as a flexibility to accommodate the predictable diverse responses from participants within individual focus group sessions, was sought.

With that in mind, and in consultation with research supervisors, a number of changes to the initial item pool were actioned. Table 4.4 indicates the changes, as well as a justification for the action. It can be seen from the table that the changes to the item pool were actioned by:

- reducing the number of questions
- developing questions and prompts to facilitate dialogue
- re-using some of the questions as prompts or sub-questions to specifically guide participants’ responses.

Table 4.4 Changes for Refinement of Key Questions

Suggested Modifications	Researcher Response	Researcher Justification
Reduce the number of questions to better manage time constraints	32 questions were pared back to 16. An open-ended question that would encourage diverse responses was formed by clustering and re-clustering the questions to shape the intended questions.	Reducing the number of questions to be consistent with the available timeframe associated for participants.
Develop open-ended questions to facilitate dialogue	In order to encourage discussion, questions were reformulated into more open-ended types.	Obtaining more relative content responses, therefore questions needed to reflect the intent of the research.
Re-use some of the questions as prompts or sub-questions	For the purpose of encouraging discussion for the open-ended question, some of the questions which were omitted previously were re-used as prompts.	Using prompts as a way to facilitate and promote discussion.

The refinement process happened in response to the intended developed changes described in Table 4.5 involving the refined item pool, questions and prompts. It can be seen from the Table that the initial item pool of 32 questions has been reduced to 16 questions.

Table 4.5 Refined Item Pool, Questions and Prompts

Aspects: Purposes of doing PD – 1 Question	
What do you think are the purposes of doing PD?	Prompts/sub-questions For what purposes would you like to do PD? What would you like to get from PD? Can you tell an example of them? <ul style="list-style-type: none"> • to develop new knowledge, skills and values? • to enhance student-learning performance in order to get high marks? • for developing research skills or self-awareness about teaching and learning?
Aspects: Teachers' PD needs – 2 Questions	
What are your needs to do PD? What are your areas in needs?	Prompts/sub-questions If you were to be asked, what PD you want, what would you ask for? What needs are there in regards to School administration needs? What needs are there in regards to the reality of classroom situation? Can you identify the area of PD needs? What activities you want? For example, continuous assessment methods in evaluation process?
Aspects: Practices for presentation of PD – 4 Questions	
What types of PD practices have you experienced? How should PD programs be presented? Who should present PD sessions? When should it be presented?	Prompts/sub-questions What form of presentation is it? In private or in group? Is it for usage of teaching practices? Is it using a peer/pairing method? Is it about self-active learning? Is it about active learning? Is it about technology usage or involving community? Is it for enhancing technology usage? Seminar/one-day workshop/conferences? Online programme or face to face? Are they supervisors, training employers or academic members from universities or colleges? Should we use experts or specialised cadres in PD? During school time or after school or during holidays?
Aspects: Improving PD Practices – 3 Questions	
Tell me, whom should attend the PD programs? How often should teachers be able to attend PD programs? How should PD be delivered or accessed?	Prompts/sub-questions Who should have access to the PD programs? What is the base for doing PD? What should be the policy for PD access? How often each teacher should attend PD programs? Once a year or per semester or 3 days a year? How? How often do you do or go to PD programs? Is it part of your program development?

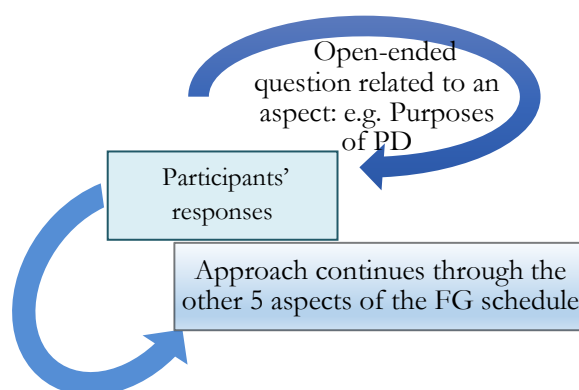
Table 4.5 Refined Item Pool, Questions and Prompts (cont'd)

Aspects: Characteristics of Effective PD Programs – 4 Questions	
<p>Should there be regulations for doing PD programs? Should PD programmes be compulsory?</p> <p>Should there be appraisal as an outcome? Who decides the attendance at PD programmes?</p>	<p>Prompts/sub-questions Who assesses the PD program? How can it be assessed? How often should it be assessed? Is PD classified as one of school or ministry requirements or necessity to perform yearly? Should it be compulsory? If your school's policy allows the process to be optional for teachers, would you still be willing to attend PD activities? Why? Is there a defined appraisal as an outcome for doing PD? Is it available for you as teachers or a demand you ask for? Are you asked to go or does the ministry of school direct you to go?</p>
Aspects: Impact of teacher PD – 2 Questions	
<p>What can be the affects that PD has on teachers? How do we assess major impact of PD?</p>	<p>Prompts/sub-questions What implications PD has on the students learning? What about impact of teacher doing PD? Is there a systematic approach to assess PD returns?</p>

Structure of the FG Schedule

In the preparation of a FG schedule, Stewart et al. (2014) maintain that the researcher must consider how to accomplish the following concerns: “keeping the discussion on track, managing the constraints of time and ensuring the active participation of all group members” (p. 95). This approach was adopted and used in conjunction with Morgan’s (1998) identification of key considerations for FG schedule development and FG implementation, namely, using an introduction and explanation to start the FG session that establishes ground rules and protocols for the discussion. Figure 4.5 presents the approach to the FG session structure.

Figure 4.5 Approach to FG Session Structure



It can be seen from the figure that the approach starts from using an aspect, for example, Purposes of PD. The participants then provide responses. The approach continues in the same way along the FG schedule.

It can be seen from the figure that this researcher structured the session in the following way:

- An open-ended question that was directly linked to each one of the six aspects.
- Dialogue/discussion was invited in response to that question.
- Specific prompts or questions were presented to participants in response to the participants' view to the specific prompts and sub-questions.

Draft 1 of FG Schedule

Draft 1 was developed following the refinement of the item pool, questions and prompts in response to the key considerations presented through the research background (Morgan, 1998). Draft 1 of the FG schedule is presented as Table 4.6.

As presented in the table, the schedule has a warm-up question at the beginning and wrap up questions at the end and the timeframe is also specifically shown. The schedule also included six main aspects together with exploratory questions and prompts.

Table 4.6 Draft 1 FG Schedule

Key Questions	Prompts/sub-questions	Time
A Warm-up Question	Prompts/sub-questions	5 min
Is there a difference between professional development (PD) and training and which is more relevant to you?	<ul style="list-style-type: none"> • What is training? • What is PD? • Do you learn from training? • Are teaching strategies considered PD or training? • Learning computer skills is considered as training? 	
1. Purposes of PD	Prompts/sub-questions	10 min
What do you think are the purposes of doing PD?	<p>For what purposes would you like to do PD? What would you like to get from PD? Can you tell an example of them?</p> <ul style="list-style-type: none"> • to develop new knowledge, skills and values? • to enhance student-learning performance in order to get high marks? • for developing research skills or self-awareness about teaching and learning? 	
2. Teachers' Needs	Prompts/sub-questions	10 min
What are your needs to do PD?	<p>If you were to be asked, what PD you want, what would you ask for? What needs are there in regards to:</p> <ol style="list-style-type: none"> 1. School administration needs? 2. The reality of classroom situation? <p>Can you identify the area of PD needs? What activities do you want? For example, continuous assessment methods in evaluation process?</p>	
What are your areas in needs?		
3. Practices for the Presentation of PD	Prompts/sub-questions	20 min
What types of PD practices have you experienced?	<p>What form of presentation is it? In private or in group? Is it for usage of teaching practices? Is it using a peer/pairing method? Is it about self-active learning? Is it about active learning? Is it about technology usage or involving community? Is it for enhancing technology usage? Seminar/one-day workshop/conferences? Online programme or face to face? Supervisors, training employers or academic members from universities or colleges? Using experts or specialised cadres in PD? During school time or after school or during holidays?</p>	
How should PD programs be presented?		
Who should present PD sessions?		
When should it be presented		
4. Improving PD Practices	Prompts/sub-questions	10 min
Tell me, who should attend the PD programs?	<p>Who should have access to the PD programs? What are the criteria for doing PD? What should be the policy for PD access? How often should each teacher attend PD programs? Once a year or per semester or 3 days a year? How? How often do you do or go to PD programs? Is it part of your program development?</p>	
How often should teachers be able to attend PD programs? (policy)		
How should PD be delivered or accessed?		

Table 4.6 Draft 1 FG Schedule (cont'd)

5. Characteristics of Effective PD Programs	Prompts/sub-questions	5 min
<p>Should there be regulations for doing PD programs?</p> <p>Should PD programmes be compulsory?</p> <p>Should there be appraisal as an outcome?</p> <p>Who decide the attendance at PD programmes?</p>	<p>Who assesses the PD program?</p> <p>How can it be assessed?</p> <p>How often should it be assessed?</p> <p>Is PD classified as one of school or ministry requirement or necessity to perform yearly?</p> <p>If your school's policy allows the process to be optional for teachers, would you still be willing to attend PD activities? Why?</p> <p>Should it be compulsory?</p> <p>Is there a defined appraisal as an outcome for doing PD?</p> <p>Is it available for you as teachers or a demand you ask for?</p> <p>Are you asked to go or does the ministry of school direct you to go?</p>	
6. Impact of PD	Prompts/sub-questions	5 min
<p>What can be the effects that PD has on teachers?</p> <p>How do we assess major impact of PD?</p>	<p>What implications PD has on the students?</p> <p>What about for the teachers?</p> <p>Is there a scientific mechanism to assess returns?</p>	
Wrap-up Questions	Prompts/sub-questions	10 min
<p>What framework for TPD should be used by the ministry of education?</p> <p>What is the new big change you want in implementing the PD programs within the MOE to improve the students learning outcomes now?</p> <p>What change for PD for teachers are needed?</p> <p>What is the extent of support that you want to develop that would enhance the students learning outcomes directly?</p>	<p>If you are given the chance to change, what is a modern and updated framework for current practices you want to implement as teachers based upon your experience? You are like doctors, you know, and you can examine the situation precisely?</p> <p>What changes do you suggest based upon the existing old practices?</p> <p>What TPD needs to perceive now?</p> <p>How do you want it to be delivered?</p> <p>How could it be done?</p> <p>How can the system support your effort in enhancing the students' learning outcomes?</p> <p>What do you want as teachers?!!!</p>	
Thank you very much		

Draft 2/Final Draft of the FG Schedule

In consultation with the supervisors' modifications were made to Draft 1 to produce a final FG schedule which is presented in Appendix G. The final schedule includes the introduction, which has information about welcoming the participants and giving information about the research, introducing the instrument used and a warm-up question, key questions and a wrap-up question.

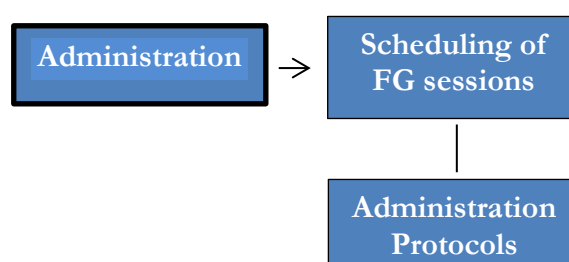
The final form of the FG schedule includes:

- a scripted preamble statement to introduce the key themes and the discussion protocols (Stewart et al., 2014)
- open-ended empirical questions that were linked to the six themes (Morgan, 1998)
- a series of positive/confirmatory prompts and comments that supported the open-ended questions (Morgan, 1998)
- a final concluding prompt for participants to offer additional points of interest with reference to teacher professional development practices.

4.3.4 Administration of FG schedule

The administration of the FG schedule has two components as presented in Figure 4.6.

Figure 4.6 Administration of FG Schedule



Scheduling of FG Sessions

Focus group sessions were planned as once-only sessions, organised at equally suitable times and days for both participants and the researcher. This was an effort to maximise participation and minimise inconvenience to potential participants.

Administration Protocols

Table 4.7 presents a summary of the use of the FG schedule with six focus groups and the number of participants in each group. The table shows the protocols that were used before, during and after the administration of the FG schedule.

Table 4.7 Administration Protocols for FG used Before, During and After

Focus Groups			Protocols Used
Coding for FG	Number of participants per FG	Before FG	An appropriate and convenient meeting place was arranged. Invitations and reminders were distributed to the participants. Individual participant folders were organised. Refreshments were organised and set up.
FG1	10	During FG	The focus group schedule was followed. Specific allocated timeframes were committed to. Focus group sessions were voice recorded. Reasonable and focussed individual participation was encouraged and maintained by abiding to group protocols. Involvement from the researcher was limited to key questions, prompts and comments.
FG2	11		
FG3	6		
FG4	6		
FG5	9		
FG6	8	After FG	Feedback was sought from participants considering the efficacy of the focus group.

4.4 Summary

This chapter has detailed the way both NGT and FG have been used as data collection methods in this research.

Chapter 5 presents the NGT results gathered in Phase 1 of data collection, followed by presentation of FG results of Phase 2 in Chapter 6.

Chapter 5

Participants' Ideas and Priorities for Teacher PD

5.1 Introduction

Chapter 4 presented details for the design, development and administration of nominal group technique (NGT) and the focus group schedule. This chapter presents the NGT results presented as follows:

- The ideas from the participants that address the NGT questions
- Identification and voting on the five most important ideas by the participants in each group
- Rankings of ideas.

5.2 Ideas from each Group that Address the NGT Questions

This section presents the results of the participants' ideas for the question allocated for each of the five groups of participants, namely, Directors General (Ds-G), Human Resources Development Directors (HRDDs), School Principals (SPs), Supervisors (Ss) and Teachers (Ts). All generated ideas for each of the NGT questions used for each group presented included in Appendix I.

5.2.1 The Directors General's ideas

The question posed to the Ds-G was:

In our educational system, what particular policies are needed for teacher PD to improve/obtain better student learning outcomes for Post-Basic Education?

Initially, the six participants generated 15 ideas, however, after the clarification process as described in Chapter 4, ten ideas remained.

Table 5.1 presents the ten ideas the Ds-G generated in response to the question.

Table 5.1 The Directors General's Clarified Ideas (N=6)

Item No.	Items
1	Use more in-service training
2	Measure impact of PD
3	Link the career path with PD use
4	Prepare and list competencies for the PD and training of teachers
5	Use a Specialised Centre for PD and Training of teachers
6	Benefit from international and local reports to raise the efficiency of PD
7	Adopt a teaching profession license
8	Use knowledge of modern developments in education
9	Prepare training packages for each teacher
10	Identify the PD needs of teachers

It can be seen from the table that the ideas varied considerably; some ideas were very specific while others were of a general nature.

5.2.2 The Human Resources Development Directors' ideas

Five HRDDs participated in this session. Twenty ideas were generated. After the clarification process, thirteen ideas remained. Table 5.2 presents these thirteen clarified ideas in response to the HRDDs' meeting question:

What specific PD needs to be provided for teachers to improve student-learning outcomes for the Post-Basic Education schooling?

It can be seen from the table that the HRDDs had a range of different ideas about professional development (PD). A number of these ideas are current policies that should be adopted regarding the use of PD practices for teachers. It appears that the HRDDs have ideas concerning existing—and the introduction of new—PD policies.

Table 5.2 The Human Resources Development Directors' Clarified Ideas (N=5)

Item No.	Items
1	Find a systematic approach to monitor the impact of PD use in the field of education
2	Activate the school as a unit for professional development
3	Support and encourage the activation of active learning style
4	Use academic specialist teacher programs
5	Find a unified framework to guide training centres
6	Focus on e-learning
7	Create effective learning communities in the school environment
8	Train teachers on professional development methods
9	Identify the PD needs of the teachers
10	Link career path with PD use and qualification
11	Strengthen the curriculum with activities in different school subjects
12	Have specialised cadres for PD use
13	Strengthen the position of the teacher in society

5.2.3 The School Principals' ideas

There were nine participants who participated in this session. Twenty-eight ideas were generated. Table 5.3 presents seventeen clarified ideas that the SPs produced in reply to the meeting question:

What specific PD support needs to be provided for teachers at your school to help improve student-learning outcomes?

Table 5.3 The School Principals' Clarified Ideas (N= 9)

Item No.	Items
1	Adopt advanced and modern techniques
2	Use more highly qualified coaches in the academic field for PD activities
3	More support for the PD trainees and the trainers
4	Provide different learning resources
5	Provide updated target data base of the participants in PD
6	Knowledge-based support in all disciplines
7	Develop specific effective professional plans in time
8	Collaboration administrative Cadres/staff
9	Provide a PD content database
10	Focus on classroom practices of the presented papers
11	Diversity development programs for teachers
12	Use the right time for teacher PD use
13	Create PD programs outside of school schedule
14	Train teachers to become qualified trainers
15	Determine the PD needs for teachers
16	Provide the necessary support for PD programs
17	Use ideas for coaches for enhancing PD practices

It can be seen from the table that the SPs recommended different suggestions about PD support issues regarding the implementation of PD practices. These suggestions covered the content, the procedures and PD personnel.

5.2.4 The Supervisors' ideas

Five Ss participated in this session. The participants generated twelve ideas. Table 5.4 presents eleven clarified ideas that the Ss generated in response to the meeting question of PD policies adopted for the delivery of the PD process:

How do we achieve our goals in developing and in implementing teacher professional development to improve our students' learning outcomes for the Post-Basic Education schooling?

Table 5.4 The Supervisors' Clarified Ideas (N=5)

Item No.	Items
1	Monitor the PD needs for teachers from the reality of the classroom situation
2	Identify/determine PD needs within school administrations
3	Diversify teaching methods
4	Use of peers in PD programs
5	Diversify sources used in determining PD programs
6	Provide sabbatical leave for teachers to improve their skills every four years
7	Link PD to the work system at school
8	Use of a systematic approach at school to assess the PD outcomes
9	Presence of regular times in school for PD program implementation
10	Use specialised intensive courses outside official working hours
11	Link career/professional path with PD implementation and delivery

It can be seen from the table that the participants recommended ideas that assist the adaptation of PD processes.

5.2.5 The Teachers' Ideas

The Ts generated thirty-one ideas. Table 5.5 presents sixteen clarified ideas from thirty-one ideas generated by eight Ts for the meeting question:

How can we best use teacher professional development to improve our student learning outcomes at the Post-Basic Education schools?

Table 5.5 The Teachers' Clarified Ideas (N=8)

Item No.	Items
1	Give ideal/typical classes to teachers
2	Align development programs with the curriculum being used
3	Provide and use the right time for PD use
4	Use of active learning methods in PD programs
5	Implement academic programs to enrich teachers' knowledge
6	Train teachers on problem-solving using scientific methods
7	Consider the psychological aspect for teachers and students
8	Use modern technology in PD implementation and delivery
9	Assess and follow-up the impact of PD programs
10	Involve the community in raising the motivation of education
11	Use notes of supervisory visits for teachers in planning PD practices
12	Use experienced professionals to present PD programs
13	Link the curriculum to the surrounding environment
14	Determine the PD needs of teachers
15	Design the PD plan according to the development priorities
16	Use and keep up with modern teaching methods

It can be seen from the table that Ts have given ideas in broad areas for the revision of PD policy. They mentioned such aspects as developing teachers' practices using typical classes through active learning methods, academic programs, involving technology and community awareness and making use of the surrounding environment. They also suggested taking advantage of supervisor visits, and from experienced professionals to determine PD needs.

5.3 Identification and Voting on the Five Most Important Ideas by Participants in Each Group

5.3.1 Introduction

This section presents the voting that occurred on the rating of the five most important ideas from the master list of the ideas as detailed in Chapter 3. A scale of 5 points descending to 1 point was used. The score 5 represents the most important idea and the score 1 represents the least important idea. Moreover, participants in each group chose the five most important ideas and in their point of view ranked them according to the level of importance.

5.3.2 Directors General votes for each idea

Figure 5.1 presents the voting and ranking summary of the ideas developed by the Ds-G as a response to the meeting question. Figure 5.1 is a summary of the voting and ranking for the Ds-G ideas which was translated to English as is shown in Table 5.6. Similar summaries for the other groups of participants are shown in Appendices H1–H4.

The table shows the generated ideas by the participants after the clarification phase as described in Chapter 3. The priorities column represents the score allocated by each participant. The third column presents the sum of the scores for each idea for the group. The last column presents the relative importance of the idea. Results were calculated using the equation recommended by Gastelurrutia et al. (2009), namely, using the formula $(\text{score achieved for the item} / \text{maximum possible score}) \times 100$. The relative importance of ideas is calculated to identify the similarities between two score ideas to determine the greater importance of one idea over other. It is noted that the last four ideas in the table have a very low score. Similar tables to Table 5.6 were generated for each of the other groups of participants.

Figure 5.1 Voting and Ranking Summary for the Directors General in Arabic

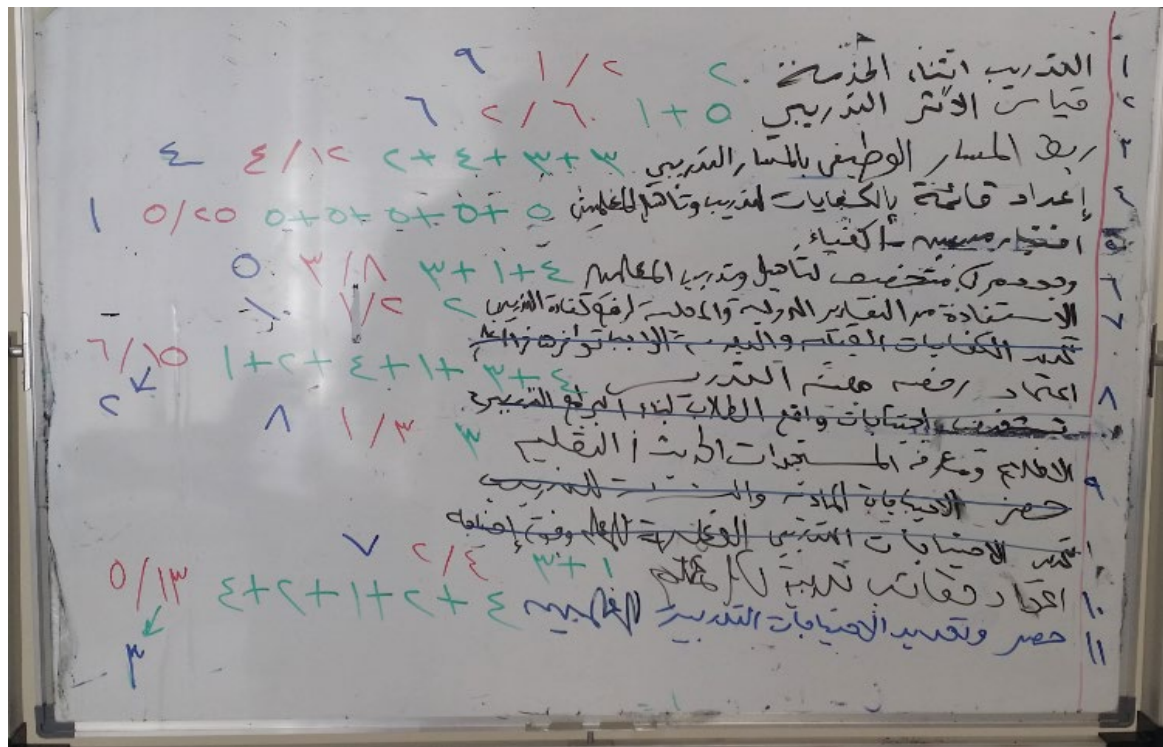


Table 5.6 Relative Importance of Level of Ideas for Directors General's Meeting Question

Ideas No.	Ideas (after clarification phase)	Priorities Scores from each Participant						Sum of Scores for each Idea	Relative Importance (%)
		1	2	3	4	5	6		
1	Prepare and list competencies for the PD and training of teachers	5	5	0	5	5	5	25	27.7
2	Adopt a teaching profession license	4	3	1	4	2	1	15	16.6
3	Identify the PD needs of teachers	4	2	1	0	2	4	13	14.4
4	Link the career path with PD use	3	3	4	0	2	0	12	13.3
5	Use a Specialised Centre for PD and training of teachers	0	4	0	0	1	3	8	8.8
6	Measure impact of PD	1	0	0	5	0	0	6	6.6
7	Prepare training packages for each teacher	1	0	0	0	3	0	4	4.4
8	Use knowledge of modern developments in education	0	0	0	3	0	0	3	3.3
9	Benefit from international and local reports to raise the efficiency of PD	0	0	0	2	0	0	2	2.2
10	Use more in-service training	0	0	2	0	0	0	2	2.2

It can be seen from the table that the highest voted idea was “Prepare and list competencies for the PD and training of teachers” which has a score of 25 points for the level of importance according to the Ds-G responses. The ideas of “Adopt a teaching profession license”, “Identify the PD needs of teachers”, and “Link the career path with PD use” have almost the same level of importance. It was also noticed that the last five items were all of limited importance according to the Ds-G participants responses.

5.3.3 Human Resources Development Directors' votes for each idea

Table 5.7 shows the relative level of importance of ideas for the HRDDs' meeting question. The table shows the five most important scores for each of the participants on the scale of 5 to 1.

Thirteen of the twenty HRDDs' ideas were scored. The seven remaining ideas were not scored as important according to participants' views, thus are not included.

Table 5.7 Relative Level of Importance of Ideas for Human Resources Development Directors' Meeting Question

Ideas No.	Ideas (after clarification phase)	Priorities Scores from each Participant					Sum of Scores for each Idea	Relative Importance (%)
		1	2	3	4	5		
1	Find a systematic approach to monitor the impact of PD use	0	1	5	3	3	12	16.0
2	Identify the PD needs of the teachers	4	2	0	0	5	11	14.6
3	Link career path with PD use and qualification	0	4	4	2	0	10	13.3
4	Have specialised cadres for PD use	5	0	1	2	0	8	10.6
5	Use academic specialist teacher programs	3	0	0	0	4	7	9.3
6	Train teachers on professional development methods	2	0	0	0	4	6	8.0
7	Strengthen the curriculum with activities in different school subjects	5	0	0	0	0	5	6.6
8	Strengthen the position of the teacher in society	0	0	0	5	0	5	6.6
9	Support and encourage the activation of active learning style	0	1	0	3	0	4	5.3
10	Activate the school as a unit for professional development	2	0	0	0	0	2	2.6
11	Focus on e-learning	0	0	0	3	0	3	4.0
12	Find a unified framework to guide training centres	0	0	0	0	1	1	1.3
13	Create effective learning communities in the school environment	0	0	1	0	0	1	1.3

The table shows that the highest voted ideas are “Find a systematic approach to monitor the impact of PD use in the field of education”, “Identify the PD needs of the teachers” and “Link career path with PD use and qualification”. Moreover, the ideas of “Have specialised cadres for PD use”, “Use academic specialist teacher programs” and “Train teachers on professional development methods” have similar levels of importance. The remaining ideas have very low levels of importance.

5.3.4 School Principals’ votes for each idea

Table 5.8 shows the relative level of importance of ideas for the SPs’ meeting question. The table shows the relative level of importance of the ideas scores for each SP’s selection for the five most important ideas on a scale from 5 to 1 for the meeting question. Seventeen of the twenty SPs’ ideas were scored because the remaining three ideas had only limited levels of importance according to participants.

Table 5.8 Relative Level of Importance of Ideas for School Principals' Meeting Question

Ideas No.	Ideas (after clarification phase)	Priorities, Scores from each Participant									Sum of Scores for each Idea	Relative Importance (%)
		1	2	3	4	5	6	7	8	9		
1	Use more highly qualified academic coaches for PD activities	5	4	0	4	5	0	5	0	1	24	15.56
2	Use the right time for teacher PD use	5	0	5	3	0	4	0	3	2	22	14.4
3	Adopt advanced and modern techniques	0	4	3	0	0	3	5	2	0	17	11.0
4	More support for the PD trainees and the trainers	4	0	2	0	0	0	5	0	3	14	9.1
5	Determine the PD needs for teachers	0	0	2	1	0	0	3	5	0	11	7.1
6	Provide updated target data base of the participants in PD	0	0	5	0	4	0	0	0	2	11	7.1
7	Create PD programs outside of school schedule	0	0	0	4	4	0	0	2	0	10	6.5
8	Diversity development programs for teachers	0	5	0	0	0	0	4		0	9	5.8
9	Provide different learning resources	0		1	0	3	0	0	0	3	7	4.5
10	Provide a PD content data-base	0	1	0	1	0	0	0	4	0	6	3.9
11	Focus on classroom practices of the presented papers	0	0	3	0	0	0	0	3	0	6	3.9
12	Provide the necessary support for PD programs	0	0	0	0	0	0	5	0	0	5	3.2
13	Develop specific effective professional plans in time	0	0	0	0	0	0	2	2	0	4	2.6
14	Collaboration administrative Cadres/stuff	0	0	0	0	2	0	0	1	0	3	1.9
15	Knowledge-based support in all disciplines	0	0	0	1	0	0	1	0	0	2	1.3
16	Train teachers to become qualified trainers	0	0	0	2	0	0	0	0	0	2	1.3
17	Use ideas for coaches for enhancing PD practices	0	0	0	1	0	0	0	0	0	1	0.7

It can be seen from the table that the highest scored idea for the SPs' responses is "Use more highly qualified coaches in the academic field for PD activities". This is followed by "Use the right time for teacher PD use" and "Adopt advanced and modern techniques". These results suggest or reflect the importance for teacher PD as perceived by SPs. The next most important ideas according to the participants' views are "More support for the PD trainees and the trainers", "Determine the PD needs for teachers", "Provide updated target data base of the participants in PD", "Create PD programs outside of school schedule", "Diversity of development programs for teachers" and "Provide different learning resources" which have similar level of importance of scores. The remaining ideas in the table share the similar level of low importance.

5.3.5 Supervisors' votes for each idea

Table 5.9 shows the relative level of importance of ideas for Ss' meeting question. The table indicates the importance of the ideas scores for each Ss' selection for the five most important ideas on a scale from 5 to 1 for the meeting question. Eleven clarified ideas from twelve generated ideas listed in the table were scored by the participants according their relative level of importance.

Table 5.9 Relative Level of Importance of Ideas for Supervisors' Meeting Question

Ideas No.	Ideas (after clarification phase)	Priorities, Scores from each Participant					Sum of Scores for each Idea	Relative Importance (%)
		1	2	3	4	5		
1	Linking career/professional path to PD implementation and delivery	3	5	2	2	3	15	20.0
2	Monitor the PD needs for teachers from the reality of the classroom situation	4	0	0	5	5	14	18.7
3	Use a systematic approach at school to assess the PD outcomes	0	4	2	4	4	14	18.7
4	Identify/determine PD needs within school administrations	5	0	5	0	0	10	13.3
5	Use of peers in PD programs	4	0	0	0	2	6	8.0
6	Diversify sources used in determining PD programs	0	0	3	0	1	4	5.3
7	Use specialised intensive courses outside official working hours	0	1	0	0	3	4	5.3
8	Provide sabbatical leave for teachers to improve their skills every four years	0	2	1	0	0	3	4.0
9	Presence of regular times in school for PD program implementation	0	0	0	3	0	3	4.0
10	Link PD to the work system at school	0	0	0	1	0	1	1.3
11	Diversify teaching methods	1	0	0	0	0	1	1.3

The table shows that the highest important idea for Ss is “Link career/professional path to PD implementation and delivery”. The next two high important ideas “Monitor the PD needs for teachers from the reality of the classroom situation” and “Use a systematic approach at school to assess the PD outcomes” share similar levels of importance. The fourth high important idea is “Identify/determine PD needs within school administrations”. The remaining ideas for Ss have similar level of importance except for the final two ideas which have a low level of importance.

5.3.6 Teachers’ votes for each idea

Table 5.10 shows the relative level of importance of ideas for Ts’ meeting question. Sixteen clarified ideas from thirty-one generated ideas listed in the table were scored by the participants according to their relative level of importance. The remaining fifteen ideas had only limited levels of importance according to participants.

Table 5.10 Relative Level of Importance of Ideas for Ts' Meeting Question

Ideas No.	Ideas (after clarification phase)	Priorities Scores from each Participant								Sum of Scores for each Idea	Relative Importance (%)
		1	2	3	4	5	6	7	8		
1	Use experienced professionals to present PD programs	0	2	5	4	5	4	1	0	21	17.8
2	Determine the PD needs of teachers	0	3	0	5	0	4	0	5	17	14.4
3	Use of modern technology in PD implementation and delivery	0	3	0	3	0	5	0	1	12	10.2
4	Provide and use the right time for PD use	0	0	5	0	3	0	0	3	11	9.3
5	Use of active learning methods in PD programs	3	2	0	0	4	0	0	0	9	7.6
6	Involve the community in raising the motivation of education	0	0	1	2	0	1	0	2	6	5.1
7	Use notes of supervisory visits for teachers in planning PD practices	0	2	0	4	0	0	0	0	6	5.1
8	Link the curriculum to the surrounding environment	1	0	0	0	1	0	3	0	5	4.2
9	Give ideal/typical classes to teachers	4	0	0	0	1	0	0	0	5	4.2
10	Design the PD plan according to the development priorities	0	0	0	0	0	5	0	0	5	4.2
11	Correlate development programs with the curriculum being used	0	0	5	0	0	0	0	0	5	4.2
12	Train teachers on problem-solving using systematic methods	0	0	0	0	2	0	0	2	4	3.4
13	Use and keep up with modern teaching methods	0	4	0	0	0	0	0	0	4	3.4
14	Assess and follow-up the impact of development programs	0	0	0	0	4	0	0	0	4	3.4
15	Consider the psychological aspect of teachers and students	0	0	3	0	0	0	0	0	3	2.5
16	Implement academic programs to enrich the teachers' knowledge	0	0	0	0	1	0	0	0	1	0.8

It can be seen from the table that the highest scored idea for the Ts' responses to the meeting question is "Use experienced professionals to present PD Programs". The next most important ideas according to Ts' view are "Determine PD needs of teachers", "Use of modern technology in PD implementation and delivery", "Provide and use the right time for PD use" and "Use of active learning methods in PD programs". The remaining 11 ideas have a descending level of importance according to Ts' responses from 5 scores for each idea to 1 score.

5.4 Ranking of the Five Most Important Ideas

5.4.1 Introduction

This section presents the ranking of ideas according to the ranking of the five most important ideas in each of the five groups of participants. Ideas that have the same relative importance are ranked equally, and ideas that have more frequency are ranked according to the frequency and not according to the sum of ranked scores of importance.

5.4.2 Ranking of Ds-G ideas

Table 5.11 presents the results for scores and the final votes for the five most important ideas for the Ds-G group of participants. The ideas column was the generated main ideas from the participants after the clarification phase as described in Chapter 3. The priorities column represents scores allocated by each participant. The third column presents the sum of the score for each idea. The fourth column presents the collective ranking score, which are the total number of participant votes and the frequency of votes. The fifth column shows the ranked priorities via voted scores. The sixth column is about the frequency of voting of each idea. The next column is about ranked priority according to frequency of scores. The last column is ranked priority for ideas regarding scores and frequency occurring level. Tables 5.12 to Table 5.15 which follow are presented in the same format.

Table 5.11 Directors General's Ranking of the Five most Important Ideas

Ideas No.	Ideas	Priorities Scores from each Participant						Sum of Scores for each Idea	Collective Ranking Score	Ranked Sum of Score	Frequency of Voting for each Idea	Ranked Priority via Frequency	Ranked Priority via Scores and Frequency
		1	2	3	4	5	6						
1	Prepare and list competencies for the PD and training of teachers	5	5	0	5	5	5	25	25/5	1	5	2	1
2	Adopt a teaching profession license	4	3	1	4	2	1	15	15/6	2	6	1	2
3	Identify the PD needs of teachers	4	2	1	0	2	4	13	13/5	3	5	3	3
4	Link the career path with PD use	3	3	4	0	2	0	12	12/4	4	4	4	4
5	Use a Specialised Centre for PD and training of teachers	0	4	0	0	1	3	8	8/3	5	3	5	5

It can be seen from Table 5.11 that the highest ranking was “Prepare and list competencies for the PD and training of teachers”. The second idea is “Adopt a teaching profession license”, followed by “Identify the PD needs of teachers”. The fourth highest-ranking idea is “Link the career path with PD use”. The fifth ranked idea is “Use a Specialised Centre for PD and training of teachers”. It is noted that the number of the participants who ranked an idea for each of the ideas plays an important role in establishing group consensus as evidenced in the 3 highest ranked ideas.

5.4.3 Ranking of Human Resources Development Directors’ five most important ideas

Table 5.12 presents the results for scores and the final votes for the five most important ideas for the HRDDs group of participants.

Table 5.12 Human Resources Development Directors' Ranking of the Five Most Important Ideas

Ideas No.	Ideas	Priorities Scores from each Participant					Sum of Scores for each Idea	Collective Ranking Score	Ranked Sum of Score	Frequency of Voting for each Idea	Ranked Priority via Frequency	Ranked Priority via Scores and Frequency
		1	2	3	4	5						
1	Find a systematic approach to monitor the impact of PD use in the field of education	0	1	5	3	3	12	12/4	1	4	1	1
2	Identify the PD needs of teachers	4	2	0	0	5	11	11/3	2	3	2	2
3	Linking career path with PD use and qualification	0	4	4	2	0	10	10/3	3	3	3	3
4	Have specialised cadres for PD use	5	0	1	2	0	8	8/3	4	3	4	4
5	Use academic specialist teacher programs	3	0	0	0	4	7	7/2	5	2	5	5

According to the ranking priority that followed in ranking ideas, the results indicate that the idea “Find a systematic approach to monitor the impact of PD use in the field of education” has the highest rank in regards to general consensus obtained from the HRDDs. The second ranking idea is “Identify the PD needs of the teachers”. The third idea is “Link career path with PD use and qualification”, followed by “Have specialised cadres for PD use”. The fifth ranked idea is “Use academic specialist teacher programs”.

5.4.4 Ranking of School Principals’ five most important ideas

Table 5.13 presents the results for scores and collective ranking score and the final votes for the participants’ five most important ideas for the SPs group of participants.

Table 5.13 School Principals' Ranking of the Five Most Important Ideas

Ideas No.	Ideas	Priorities Scores from each Participant									Sum of Scores for each Idea	Collective Ranking Score	Ranked Sum of Score	Frequency of Voting for each Idea	Ranked Priority via Frequency	Ranked Priority via Scores and Frequency
		1	2	3	4	5	6	7	8	9						
1	Use more highly qualified coaches in the academic field for PD activities	5	0	4	4	0	5	0	5	1	24	24/6	1	6	1	1
2	Use the right time for teacher PD use	5	0	5	3	4	3	0	2	0	22	22/6	2	6	2	2
3	Adopt advanced and modern techniques	4	3	3	5	2	0	0	0	0	17	17/5	3	5	3	3
4	More support for the PD trainees and the trainers	0	0	5	0	3	0	0	4	2	14	14/4	4	4	4	4
5	Determine the PD needs for teachers	0	2	1	0	0	3	0	5	0	11	11/4	5	5	5	5

It can be shown from the table that the highest ranked idea was, “Use more highly qualified coaches in the academic field” followed closely by “Use the right time for teacher PD use”. The third highest ranked idea was, “Adopt advanced and modern techniques”. The fourth point of rank is “More support for the PD trainees and the trainers”. The fifth idea to be ranked is “Determine the PD needs for teachers”.

5.4.5 Ranking of Supervisors’ five most important ideas

Table 5.14 presents the Ss’ collective ranking score and the final votes for the participants’ five most important ideas.

Table 5.14 Supervisors' Ranking of the Five Most Important Ideas

Ideas No.	Ideas	Priorities Scores from each Participant					Sum of Scores for each Idea	Collective Ranking Score	Ranked Sum of Score	Frequency of Voting for each Idea	Ranked Priority via Frequency	Ranked Priority via Scores and Frequency
		1	2	3	4	5						
1	Linking career/professional path with PD implementation and delivery	3	5	2	2	3	15	15/5	1	5	1	1
2	Monitor the PD needs for teachers from the reality of the classroom situation	4	0	0	5	5	14	14/3	2	3	2	2
3	Use a systematic approach at school to assess the PD outcomes	0	4	2	4	4	14	14/3	3	3	3	3
4	Identify/determine PD needs within school administrations	5	0	5	0	0	10	10/2	4	2	4	4
5	Use of peers in PD programs	4	0	0	0	2	6	8/2	5	2	5	5

It can be seen from the table that the highest ranked idea is “Link career/professional path with PD implementation and delivery” followed by “Monitor the PD needs for teachers from the reality of the classroom situation”. The third ranked idea is “Use a systematic approach at school to assess the PD outcomes”. The fourth ranked idea is “Identify/determine PD needs within school administrations”. The final ranked idea is “Use of peers in PD programs”.

5.4.6 Ranking of the Teachers’ five highest ranked ideas

Table 5.15 presents the Ts’ collective ranking score of the participants for the five highest ranked ideas. According to the ranking priority that followed in ranking ideas, the results indicate that the idea “Use experienced professionals to present PD Programs” has the highest rank in regards to general consensus obtained from the Ts. The second ranking idea is “Determine PD needs of teachers”. The third idea is “Use of modern technology in PD implementation and delivery”, followed by “Provide and use the right time for PD use”. The fifth ranked idea is “Use of active learning methods in PD programs”.

Table 5.15 Teachers' Ranking of the Five Most Important Ideas

Ideas No.	Ideas	Priorities Scores from each Participant								Ranked Sum of Score	Collective Ranking Score	Ranked Sum of Score	Frequency of Voting for each Idea	Ranked Priority via Frequency	Ranked Priority via Scores and Frequency
		1	2	3	4	5	6	7	8						
1	Use experienced professionals to present PD Programs	0	2	5	4	5	4	1	0	21	21/6	1	6	1	1
2	Determine PD needs of teachers	0	3	0	5	0	4	0	5	17	17/4	2	4	2	2
3	Use modern technology in PD implementation and delivery	0	3	0	3	0	5	0	1	12	12/4	3	4	2	3
4	Provide and use the right time for PD use	0	0	5	0	3	0	0	3	11	11/3	4	3	3	4
5	Use of active learning methods in PD programs	3	2	0	0	4	0	0	0	9	9/3	5	3	3	5

5.5 Summary

In this chapter the researcher has presented the NGT results for each of the five groups of participants, namely, Ds-G, HRDDs, SPs, Ss and Ts, concerning the ideas and their priorities to address provision of PD for Post-Basic Education school teachers.

Table 5.16 presents summary results for the five groups of participants. Only the five highest ranked ideas from the total numbers of ideas for each of the groups are presented. Each of the columns presents the group ideas for the five most important ideas.

The table shows that for each of the participant groups that the ranking of ideas concerned different ideas. However, for a number of ideas the same idea was shared by two or more participant groups.

Table 5.16 Rank Order of Ideas for the Directors General, Human Resources Development Directors, School Principals, Supervisors and Teachers

Ideas					
Ranking Order	Directors General	Human Resources Development Directors	School Principals	Supervisors	Teachers
1	Prepare and list competencies for the PD and training of teachers	Have a systematic approach to monitor the impact of PD use in the field of education	Use more highly qualified coaches in the academic field for PD activities	Linking career/ professional path with PD implementation and delivery	Use experienced professionals to present PD programs
2	Adopt a teaching profession license	Identify the PD needs of the teachers	Use the right time for teacher PD use	Use a systematic approach at school to assess the PD outcomes	Determine PD needs
3	Identify the PD needs of teachers	Linking career path with PD use and qualification	Adopt advanced and modern techniques	Monitor the PD needs for teachers from the reality of the classroom situation	Use modern technology in PD implementation and delivery
4	Link the career path with PD use	Have specialised cadres for PD use	More support for the PD trainees and the trainers	Identify /determine PD needs within school administrations	Provide and use the right time for PD use
5	Use a Specialised Centre for PD and training of teachers	Use academic specialist teacher programs	Determine PD needs for teachers	Use of peers in PD programs	Use of active learning methods in PD programs

Table 5.17 shows that there were two types of ideas: singular ideas and shared ideas. Singular ideas are those only listed by one group whereas shared ideas are those indicated by two or more groups.

Table 5.17 The Priority Ideas for Groups

Items No.	Ideas	Groups				
		Ds-G	HRDDs	SPs	Ss	Ts
1	Prepare and list competencies for the PD and training of teachers	Singular	---	---		---
2	Adopt a teaching profession license	Singular	---	---	---	---
3	Identify and determine the PD needs of teachers	Shared	Shared	Shared	Shared	Shared
4	Link the career path with the PD use	Shared	Shared	---	Shared	---
5	Use a Specialised Centre for PD and training of teachers	Singular	---	---	---	---
6	Use academic specialist teacher programs	---	Singular	---	---	---
7	Have specialised cadres for PD use	---	Shared	Shared	---	Shared
10	Have a systematic approach to monitor the impact of PD use in the field of education		Shared	---	Shared	---
12	More support for the PD trainees and the trainers	---	---	Singular	---	---
13	Adopt advanced and modern techniques	---	---	Shared	---	Shared
14	Use the right time for teacher PD use	---	---	Shared	---	Shared
15	Use of peers in PD programs	---	---	---	Singular	---
16	Use of active learning methods in PD programs	---	---	---	---	Singular

It can be seen from the table that there were seven singular ideas and six shared ideas within data.

The singular important ideas provided by participants were as follows:

- Prepare and list competencies for the PD and training of teachers (Ds-G)
- Adopt a teaching profession license (Ds-G)
- Use a Specialised Centre for PD and training of teachers (Ds-G)
- Use academic specialist teacher programs (HRDDs)
- More support for the PD trainees and the trainers (SPs)
- Use of active learning methods in PD programs (Ts)
- Use of peers in PD programs (Ss).

The shared ideas provided by participants were as follows:

- Identify/determine teacher PD needs (shared by all groups)
- The impact/outcomes of PD (shared by HRDDs and Ss)
- Link career path with PD use (shared by Ds-G, HRDDs and Ss)
- Use the right time (shared by SPs and Ts)
- Have specialists/specialised cadres (shared by HRDDs, SPs and Ts)
- Adopt advanced and modern techniques/technology (shared by SPs and Ts).

The next chapter, Chapter 6 presents the results of participants' views on different aspects of teacher PD using focus group results.

Chapter 6

Participants' Views on Different Aspects of Teacher PD

6.1 Introduction

Chapter 3 described the process used in the data analysis of the focus group (FG) data. This chapter presents the results from the NVivo of the focus group data for the three groups of participants involved in FG sessions, namely, Teachers (Ts), Supervisors (Ss) and School Principals (SPs).

Results from the data analysis are presented in the following sections namely:

- Emergent themes from the data analysis
- The theme matrices for each participant group
- The categories that emerged from each theme for each of the participant groups.

The last section presents a summary of the results.

6.2 Emergent Themes from the Data Analysis

The analysis of the FG using NVivo as explained in Chapter 3 revealed that seven themes emerged from Ts, Ss and SPs data and these are shown in Table 6.1. The table lists the themes that emerged including the ranking order which highlighted the extent participants referenced each theme for each group of participants. For each theme, the table shows the number of responses, called references, for each group of participants. In addition, the table presents the number of references that participants gave for different themes.

Table 6.1 Participant Groups' PD Themes and Ranking of Themes

Themes	Teachers		Supervisors		School Principals	
	Rank order	Number of responses	Rank order	Number of responses	Rank order	Number of responses
Defining PD and Training	6	15	3	17	3	21
Teacher Purposes of PD	3	25	4	12	5	14
Teacher PD Needs	1	34	5	15	8	8
Practices for the Presentation of PD Programs	2	31	2	23	6	13
Improving Teacher PD practices	9	41	1	51	9	38
Characteristics of Effective Teacher PD programs	7	15	3	17	1	34
Impact of Teacher PD	8	13	4	12	4	15

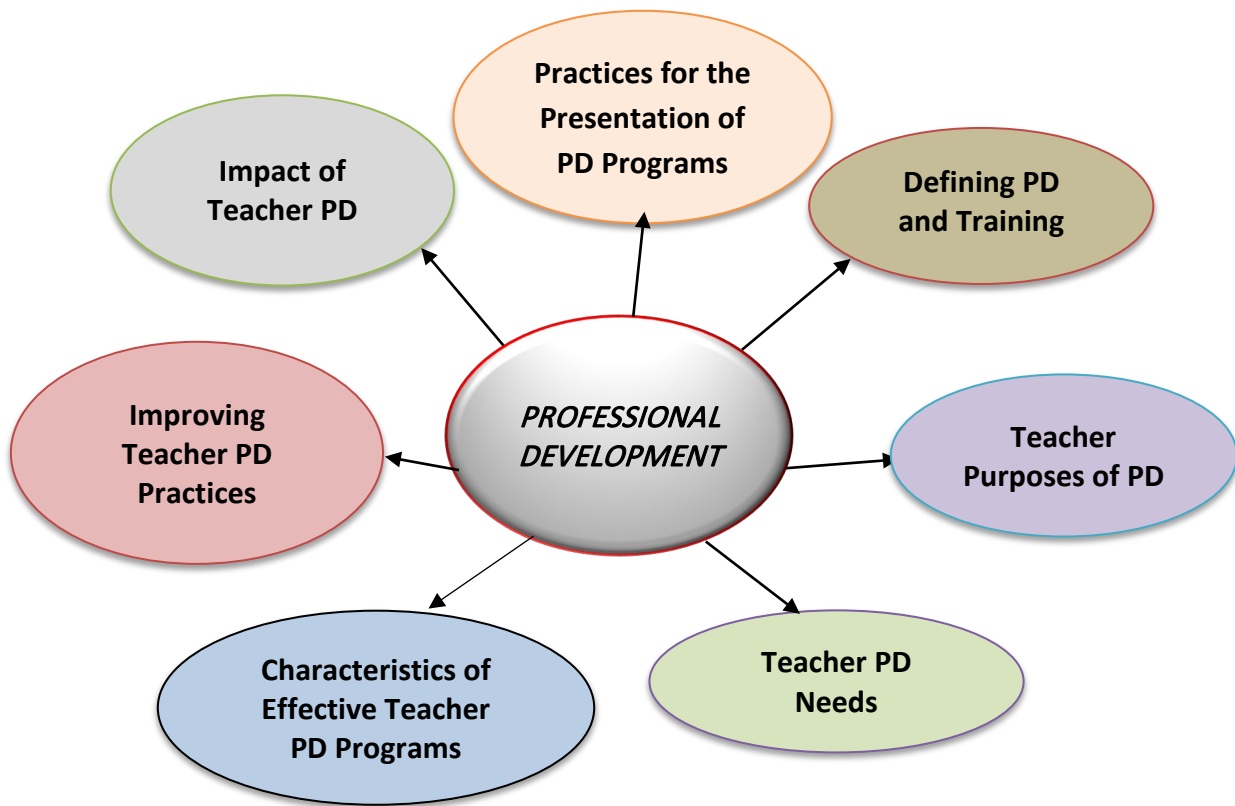
It is evidenced from the table that the participant rank order for themes varies considerably for the different participant groups. Furthermore, the table shows that in terms of ranking priority that the T's ranked **Teachers' Needs** as their first priority whereas SPs gave this theme the lowest level ranking in terms of importance. For SPs, the highest ranked theme was **Characteristics of Effective Teacher PD programs**. On the other hand, results for Ss were different to that for T's and SPs. The highest ranked theme for Ss was **Improving PD practices**.

6.3 Themes Matrices

6.3.1 Introduction

Following the examination of word frequency counts and word clusters, a theme matrix was generated for each theme. The purpose of generating theme matrices was to reveal specific references that can be associated with each of the different themes for each group. The specific groups of references are referred to as categories. Figure 6.1 presents seven theme matrices associated with teacher professional development. Each theme matrix comprised of two or more categories. Categories are subthemes that emerged from data analysis.

Figure 6.1 PD Themes



The remainder of this section presents detailed descriptions of each theme for Ts, Ss and SPs.

6.3.2 Theme 1: Defining PD and Training

The theme **Defining PD and Training** has two categories as shown in Figure 6.2, namely, *Characteristics of Professional Development* and *Characteristics of Training*. The categories were generated from the text/data for all of the themes presented in Figure 6.2. They were generated in the same way for the results of each of the other themes listed in the previous section.

Figure 6.2 Categories for Theme: Defining PD and Training

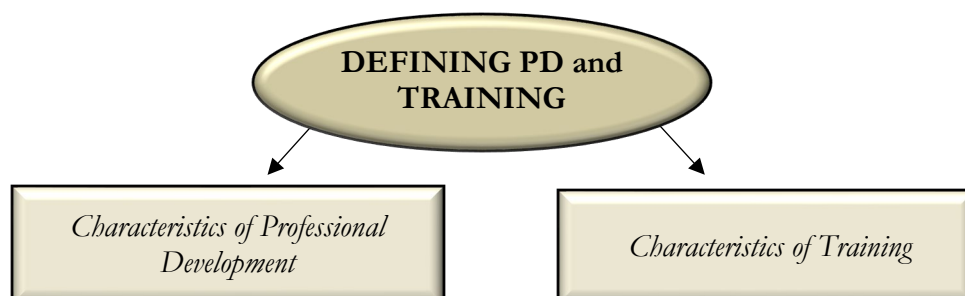


Table 6.2 shows the number of references to this theme for Ts, Ss and SPs for *Characteristics of Professional Development* and *Characteristics of Training* categories.

Results show that there are thirty-five references for the category *Characteristics of PD* and thirty-seven references for the *Characteristics of Training* category. Results identified that the majority of respondents stated directly or indirectly that “PD is a general, comprehensive and continuous development that goes beyond *Training*”. A smaller number of participants stated that “PD is more of a personal process than a collective process”. Results show that the SPs, Ss and Ts had different interpretations of the two categories, however, Ss and SPs seem to have better/developed understanding than Ts. However, the results suggest that there is a misunderstanding in interpreting the meaning of PD and training. Nevertheless, Ss and SPs appear to share similar ideas about understanding PD different from that of Ts.

Table 6.2 Theme: Defining Professional Development and Training

Categories	Teachers' Collective Comments	Refs.	Supervisors' Collective Comments	Refs.	Principals' Collective Comments	Refs.
Characteristics of Professional Development	<ul style="list-style-type: none"> • limited only to the career • promoting the career • dedicated to the career itself • only related specific career • all the experience acquired in learner's career • theoretical and practical • more general and comprehensive than training • working papers offered to teacher to promote their career 	9	<ul style="list-style-type: none"> • more comprehensive than training • always practical • contains information and knowledge that teachers can implement at school • related to life and not necessarily related to the teacher subject matter itself • more general • self-program or specified by supervisors of a teacher • an ongoing process over civil service with follow-up • PD comes after training • to develop teachers' skills 	12	<ul style="list-style-type: none"> • has different styles such as self-reading, lecture, reports and training texts or bulletins • a self-development process • to improve specific aspects and skills for employees • practices needed assigned by mentor teachers • an ongoing process • interrelated with training • specialises on specifications of materials and on curriculum according to its implementation program • PD is more comprehensive than training 	14
Characteristics of Training	<ul style="list-style-type: none"> • comprehensive and not limited to job-related matters • related only to develop specific skill for specific objective in teachers' work • more general, and related to a specific occupation • used to develop practical skills • a practical procedure • initially is to acquire specific skills • the same as PD • a continuous process 	9	<ul style="list-style-type: none"> • in a specific activity • more than theoretical side • a tool of implementing PD • done at real work activity • completed when the trainee acquired practical skills • specified to subject matters in teachers' work • only restricted to develop specific skills or competencies at the beginning of teachers' work • preceding PD • to train teachers on professional plans and topics that benefit them later 	13	<ul style="list-style-type: none"> • part of PD programs • comes in the form of presenting workshops • to do different tasks • an activity that employee needs for an individual purpose • a continuous process • both concepts are interrelated, but training is more general than PD • done for specific aims at specific time and it is shorter than the PD • happens for specific needs • related to adopting new unit within the curriculum or new strategy 	15

6.3.3 Theme 2: Teacher Purposes of PD

Figure 6.3 shows that five categories that were generated by this theme.

Figure 6.3 Categories for Theme: Teacher Purposes of PD

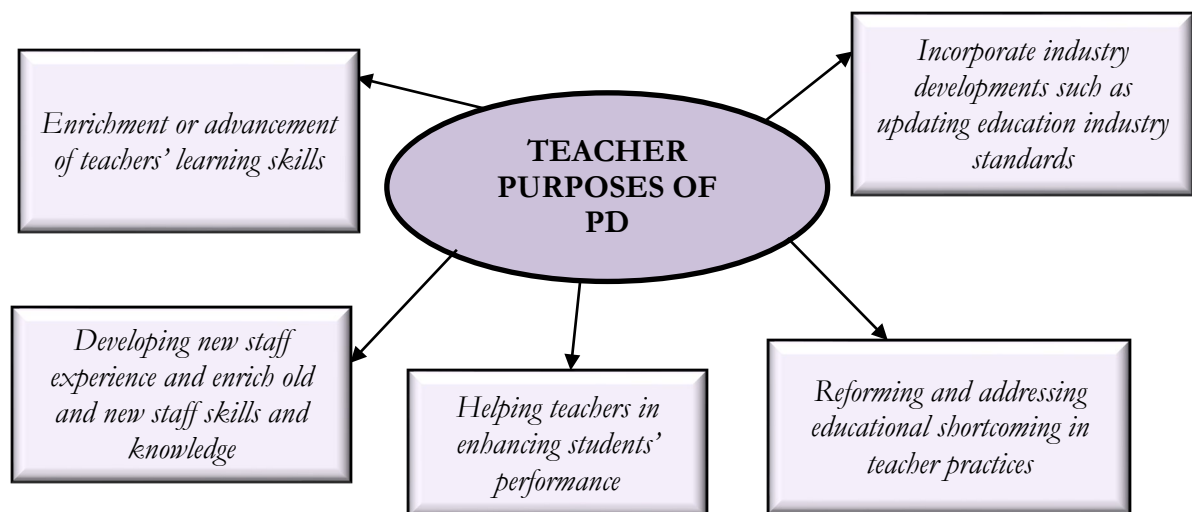


Table 6.3 shows that each category contains the collective comments from Ts, Ss and SPs and the number of references made for each category. For example, Ts' collective comments on Enrichment or advancement of teachers learning skills is to "To acquire more skills, and for advancement in career". For Teacher Purposes of PD theme, Ts related PD to be for enhancement and upgrading of skills and practices. Ss and SPs connected PD to be for the improvement in education standards, new teaching techniques deepen ethics, and bridge the gap between sufficiency and efficiency.

Table 6.3 Categories for the Theme: Teacher Purposes of PD

Categories	Teachers' Collective Comments	Refs.	Supervisors' Collective Comments	Refs.	Principals' Collective Comments	Refs.
Reforming and addressing educational <i>shortcoming in teacher practices</i>	<ul style="list-style-type: none"> To acquire more skills, and for advancement in career 	9	<ul style="list-style-type: none"> Acquire new skills 	7	<ul style="list-style-type: none"> Improve PD practices and problem solving 	9
Helping teachers in enhancing students' performance	<ul style="list-style-type: none"> PD is expected to improve student performance 	6	<ul style="list-style-type: none"> Increase teachers' achievement that will reflect upon students' performance 	3	<ul style="list-style-type: none"> Develop teachers' academic practices to improve students' educational level 	1
Incorporate industry developments such as updating education industry standards	<ul style="list-style-type: none"> Continuous development to keep up with current trend 	5	<ul style="list-style-type: none"> Develop PD according to modern education theories 	2	<ul style="list-style-type: none"> Teachers use modern technology 	3
Enrichment or advancement of teachers' learning skills	<ul style="list-style-type: none"> Improve technical skills and practical aspects Raise quality and improve proficiency 	5	<ul style="list-style-type: none"> Improve in education standards Develop the level of teaching methods and of evaluation Bridge the gap between sufficiency and efficiency 	1	<ul style="list-style-type: none"> Improve education standards Use new teaching techniques Deepen ethics of profession Teachers need to be creative and apply new concepts 	2
Developing new staff experience and enrich old and new staff skills and knowledge	<ul style="list-style-type: none"> Improve skills of the existing staff Teach new skills to new staff 	3	<ul style="list-style-type: none"> No data 	0	<ul style="list-style-type: none"> PD is compulsory for new teachers 	1

It can be seen from the table that the categories with the most references is *Reforming and addressing educational shortcoming in teacher practices*. For this category, views from each group of participants are very similar namely, “to acquire more skills and improve PD practices and problem solving”. Similarly, the category *Helping teachers in enhancing students’ performance* has a high number of references but Ss have a different view to that of Ts and SPs which is “Increase teachers’ achievement that will reflect upon students’ performance”. Each of the other categories in the table have relatively low references. This suggests a lesser importance of these categories.

6.3.4 Theme 3: Teacher PD Needs

This theme has four categories as shown in Figure 6.4.

Figure 6.4 Categories for Theme: Teacher PD Needs

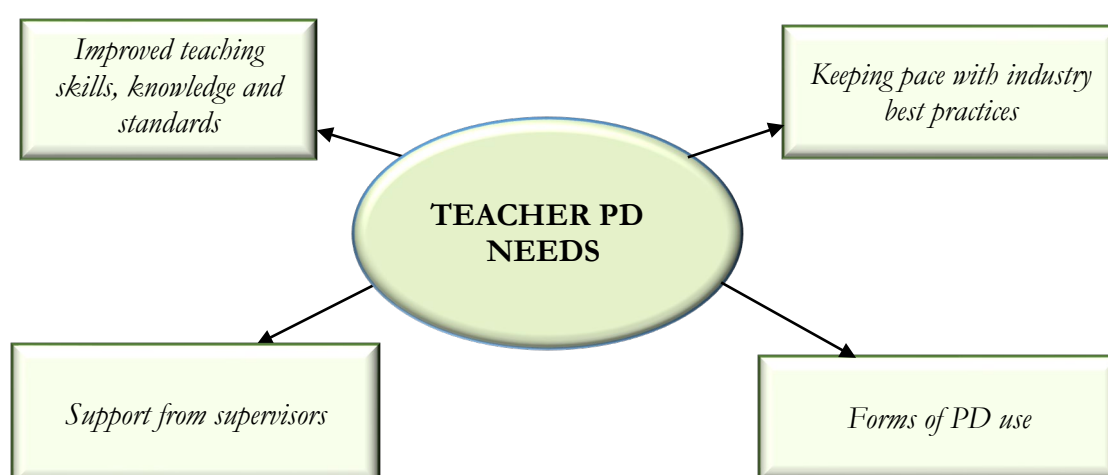


Table 6.4 presents the different categories of the theme above for Ts, Ss and SPs. It has the number of references made for each category. It also provides examples of collective comments of participant understanding. Example of Ts’ collective comments on *Improved teaching skills, knowledge and standards* is “Individual needs do not match up to administrative needs”. Other examples of Ss’ and SPs’ collective comments can be found in the following table.

Table 6.4 Categories for the Theme: Teacher PD Needs

Categories	Teachers' Collective Comments	Refs.	Supervisors' Collective Comments	Refs.	Principals' Collective Comments	Refs.
Improved teaching skills, knowledge and standards	<ul style="list-style-type: none"> • Need for materials in each specialty area • Individual needs do not match up to administrative needs • Acquisition of skill and knowledge 	13	<ul style="list-style-type: none"> • Change in methods of teaching • Enhance ICT and modern methods • Need for specialised teachers 	7	<ul style="list-style-type: none"> • Diversify teaching strategies 	2
Support from supervisors	<ul style="list-style-type: none"> • Categorisation of needs is necessary • Advance planning to identify PD requirement is necessary • Lack of finance for supporting programs 	14	<ul style="list-style-type: none"> • Limit of program to certain number of teachers • Enrich teachers' knowledge • Focus should be on PD and not on training 	3	<ul style="list-style-type: none"> • Teachers need financial incentives 	2
Keeping pace with industry best practice	<ul style="list-style-type: none"> • Improve skills and benefit from continuous PD 	5	<ul style="list-style-type: none"> • Familiarity with new information • Learning from other nations 	2	<ul style="list-style-type: none"> • Passing new knowledge and skills to other teachers who are isolated 	4
Forms of PD use	<ul style="list-style-type: none"> • Panel discussions • Presenting spread worksheets • Individual PD through electronic platform • Using "PowerPoint" presentations 	3	<ul style="list-style-type: none"> • Increase availability of PD programs • Give clear instructions directly to teachers about the implementation of PD practices • Use new technology practices 	3	<ul style="list-style-type: none"> • Need to use modern technology • PD programs need to be increased 	0

It can be seen from the table that the most referenced category is *Improved teaching skills, knowledge and standards of target*. Groups' views are similar on improvements in methods of teaching skills and strategies. In addition, the next most referenced category in this theme is *Support from supervisors* which, for teachers, had the highest number of references than other categories. The category *Keeping pace with industry best practice* is cited with almost similar number of references to other categories showing the importance of "The need to employ modern technology" in PD delivery as *Forms of PD use*.

It is noted that in this theme Ts indicated that providing PD should be according to teachers' individual and development importance, providing necessary requirements, facilities, finance, and in diversification of forms of PD. SPs expressed the necessity of diversification of teaching strategies and providing incentives and employing modern technology in practices.

6.3.5 Theme 4: Practices for the Presentation of PD Programs

Figure 6.5 shows that four categories were associated with this theme which were generated from the participants' references in the data.

Figure 6.5 Theme: Practices for the Presentation of PD Programs

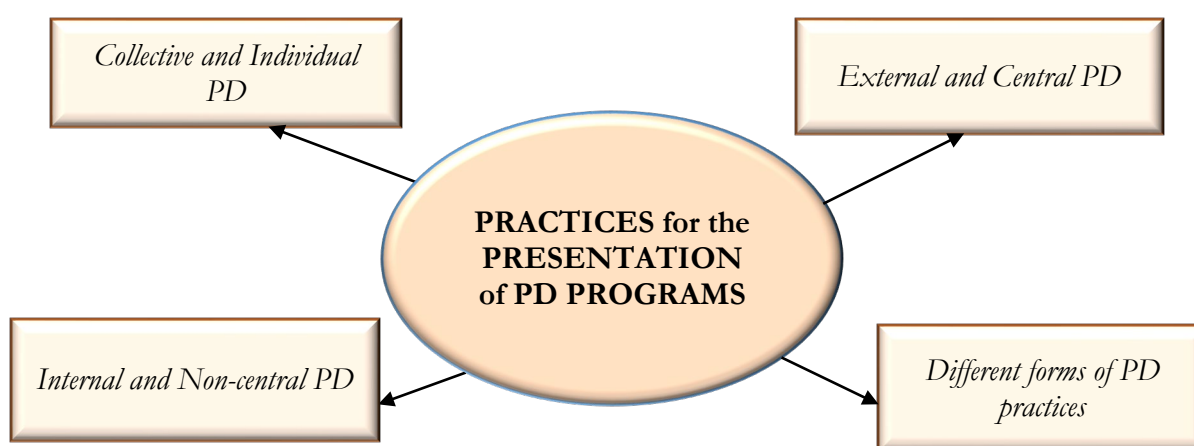


Table 6.5 presents the different categories of the theme **Practices for the Presentation of PD Programs** for Ts, Ss and SPs. It has the number of references made for each category. It also provides examples of collective comments of participant understanding. An example of collective comments for Ss' on the category of *Different forms of PD practices* is "Short/Long term

courses, limited to a few persons in the ministry”. It is noted that groups emphasise similar views about a need for a change in regards to the category *Different forms of PD practices*. Thus, schools should have an opinion about the presentation process. In addition, PD is more collective than individual or personal demands. *Collective PD* refers to PD practices that are done in a group gathering which includes more than one person.

Table 6.5 Categories for Theme: Practices for the Presentation of PD Programs

Categories	Teachers' Collective Comments	Refs.	Supervisors' Collective Comments	Refs.	Principals' Collective Comments	Refs.
Different forms of PD practices	<ul style="list-style-type: none"> School class, exchanging visits, workshops Courses at schools for 2 or 3 days or panel discussion Lectures in a specific aspect Workshops and activities at the level of Directorates Panel discussion of the teachers of subjects' practices trends and approaches Use an electronic educational platform and PowerPoint 	14	<ul style="list-style-type: none"> Short/Long term courses, limited to a few persons in the ministry Emphasis on quantity rather than quality where many teachers are exposed to short training periods, two or even few hours More focus on the subject matter instead of PD skills Use technical practices at the governorates Provide training programs at the Specialised Training Centre 	12	<ul style="list-style-type: none"> Participate in conferences, lectures Use of technology such smart board, worksheets Use professional learning societies for PD Have workshops and meeting sessions Have discussion sessions and practical classes 	10
Collective and individual PD	<ul style="list-style-type: none"> Group presentation of PD in school not individual Most programs are collective that use "PowerPoint" Establishing professional cooperative society Provide individual PD through electronic platform 	6	<ul style="list-style-type: none"> Most programs are collective 	1	<ul style="list-style-type: none"> It depends on the PD of the teachers 	1
Internal and non-central PD	<ul style="list-style-type: none"> Internal PD at school only No diversification on PD delivery Mentor or other teacher communicate his/her experience to other teachers 	3	<ul style="list-style-type: none"> Use an annual plan for governances by the Ministry Use both plans from Ministry Non-central PD is done at the level of the Directorates General PD plan depends upon the PD needs and requirements 	2	<ul style="list-style-type: none"> Use according to MOE plan for PD Needs are determined by mentor teachers Mentors reflect the PD impact 	1
External PD and central PD	<ul style="list-style-type: none"> Training is at the level of the ministry/governorates/directorates Partner Program Centre is an example at the Sultanate level External PD at the level of the Ministry/abroad 	2	<ul style="list-style-type: none"> Programs are done in the Sultanate or at the Ministry buildings not at schools or at the Directorates General of Education in governances 	1	<ul style="list-style-type: none"> MOE adopt a plan at the beginning of school year Practices are implemented according to needs; in technology, in education indicators or in assessment 	1

Table 6.5 shows that Ts, Ss and SPs have much to say about **Practices for the Presentation of PD Programs**. It can be seen from the table that the highest referenced category is *Different forms of PD practices*. Participants concentrate in this category upon the different types of PD.

Collective and Individual PD programs is the next important category. The majority of PD experiences are Collective PD, where Ts are grouped and trained mostly with using Power Point presentations whereas Individual PD is something personalised. In addition, the last two categories, Internal PD and Non-central and External PD and Central PD, have a similar number of references. Data shows that Central PD is done at the level of directorates or at the level of the Ministry while Non-Central PD is conducted at the level of school and teacher.

6.3.6 Theme 5: Improving Teacher PD practices

Figure 6.6 shows that there were eight categories associated with the theme **Improving PD practices**. They were generated from the participants' references in the data.

Figure 6.6 Theme: Improving Teacher PD Practices

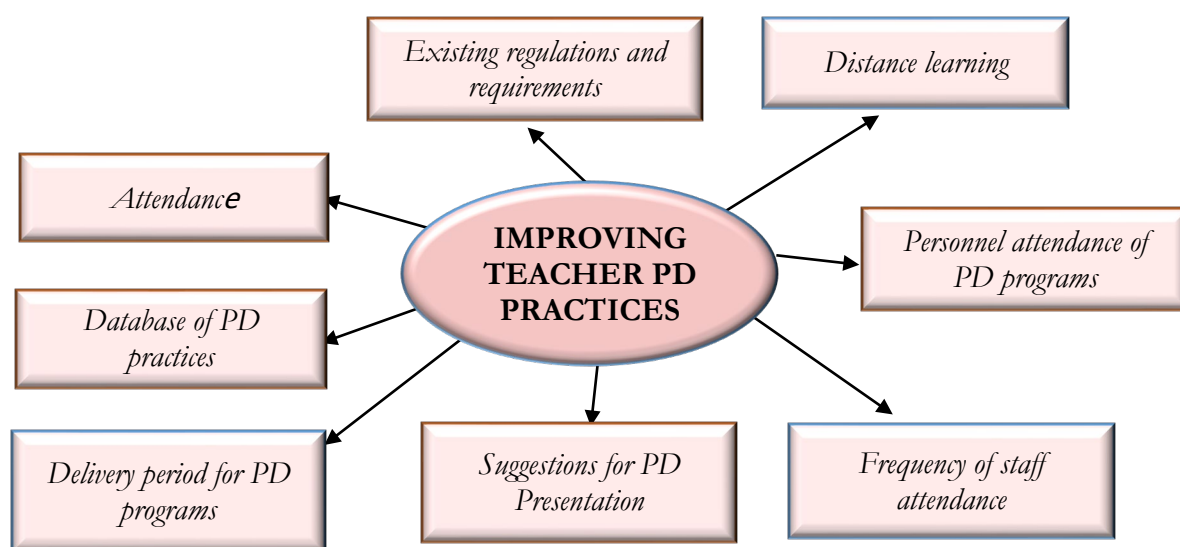


Table 6.6 presents eight different categories for the theme **Improving Teacher PD practices** for Ts, Ss and SPs. It shows the number of references made by participants for each category. It also provides examples of collective comments of participant understanding. Example of Ts' collective comments on *Attendance* is "Attendance is now compulsory, and nomination is done by supervisors". In this theme of **Improving Teacher PD practices**, Ts admitted that existing

regulations have very limited credibility with more repetitions of PD programs and advised that database should include programs and participants' details. Other examples of SPs' collective comments on *Frequency of staff attendance* is "Attendance should be limited to a certain period", "A well-planned and sequential PD is needed" and "At the beginning and end of each semester". In this theme, **Improving Teacher PD practices**, Ss expressed their worries about the decline in the attendance level while Ts advised on the provision of appropriate place of training, transportation, timing, and dissemination of information.

Table 6.6 Categories for Theme: Improving Teacher PD Practices

Categories	Teachers' Collective Comments	Refs.	Supervisors' Collective Comments	Refs.	Principals' collective comments	Refs.
Attendance	<ul style="list-style-type: none"> Attendance is now compulsory Obligation is based on whether it is central or not Nomination is by supervisors Proper dissemination of information 	9	<ul style="list-style-type: none"> Attendance is now compulsory especially for nominated teachers Obligation is based on whether it is central or not Nomination is by supervisors 	18	<ul style="list-style-type: none"> Attendance is now compulsory especially for nominated teachers Obligation is based on whether it is central or not Proper dissemination of information 	10
Personnel attendance of PD programs	<ul style="list-style-type: none"> It should be open to anyone in need 	11	<ul style="list-style-type: none"> Teachers who are in need All supervisors All staff and targeted teachers 	6	<ul style="list-style-type: none"> Anybody who is nominated to attend Anybody in need 	4
Suggestions for PD presentation	<ul style="list-style-type: none"> The Ministry should adopt a PD program inside schools Teachers should have their views recorded about their choices of PD programs At training centres, supervisors, teachers and mentors are not effective in delivering PD Specialised, competent and experienced trainer is needed Teachers should only be allowed to present in school alone 	9	<ul style="list-style-type: none"> Presenters of PD practices should be experts and should be given a priority in the delivery process Increase the PD programs to what it was before Diversification in PD delivery should be based on needs. Participants focus on the training while the main focus should be PD Have attendance to seminars, conferences and reciprocal visits to other countries 	8	<ul style="list-style-type: none"> Emphasise who should present and how to present Provide a form to all teachers to apply for presentation Teachers should not present PD programs if not knowledgeable enough 	3
Delivery period for PD programs	<ul style="list-style-type: none"> It should be in the beginning of school year/semester It should be available at the time specified in the timetable 	4	<ul style="list-style-type: none"> Available at the beginning and end of semester 	5	<ul style="list-style-type: none"> Beginning, middle and end of semester and in a necessity First week of the semester First month of the school year 	7
Frequency of staff attendance	<ul style="list-style-type: none"> Whenever there is a need 5 times in a semester 3 times in a semester 	5	<ul style="list-style-type: none"> There has been a noticeable decrease in attendance 	1	<ul style="list-style-type: none"> Attendance should be limited to a certain period such as at the beginning and end of each semester 	1
Existing regulations and requirements	<ul style="list-style-type: none"> Continuity is compulsory Depends on the supervisors' effort to create No credibility 	4	<ul style="list-style-type: none"> Continuity is compulsory Depends on the supervisors' effort to create one 	9	No data	0

Table 6.6 Categories for Theme: Improving Teacher PD Practices (cont'd)

Database of PD practices	No data	0	<ul style="list-style-type: none"> • A database of programs but it depends on the school visiting supervisors' effort to be created 	4	<ul style="list-style-type: none"> • A database of programs and it is compulsory to create a data base of programs and personnel 	1
Distance learning	No data	0	<ul style="list-style-type: none"> • Activated but not functioning properly and has no culture of awareness of it 	8	No data	0

It can be seen from the table that the category *Attendance* has the highest number of references for the theme of improving teacher PD practices. It seems that groups share similar views about attendance, nomination of teacher, dissemination of information and the base for attendance obligation. Then, the next highest number of references is *Personnel attendance of PD programs* category. Groups agreed that accessing PD practices should be open to anyone in need, to targeted teachers and to nominated groups to attend. Then, the next third high referenced category is *Suggestion for PD presentation* where each group has different views about the presentation process. Furthermore, the next most number of references is for *Delivery period for PD programs* category. Groups' views were to conduct PD practices at the beginning and at the end of each semester. Additionally, the fifth highest number of references category is *Frequency of staff attendance*. Ts suggested that the attendance of the PD programs should be in the beginning of the school year or semester and to be applied upon teachers' demand yearly; five times or 3 times yearly. Moreover, other categories have similar numbers of references. Moreover, categories of *Existing regulations and requirements* and *Data base* have nearly similar number of references for Ts and Ss. Participants recommended that continuity of PD is compulsory within existing regulations and requirements. On the other hands, SPs advised on school visiting supervisors to create an updated data base in order to avoid repetition of PD practices. *Distance learning* is referenced by Ss who stated that it is not functioning properly, and practices have no impact in application.

6.3.7 Theme 6: Characteristics of Effective Teacher PD programs

Figure 6.7 shows six categories associated with the theme **Characteristics of Effective Teacher PD programs** according to the groups of Ts, Ss and SPs. Those categories were generated from the participants' references in the data.

The figure presents the effective PD programs suggested by the participants aimed within the implementation of the PD process according to the participants' perspectives about the topic of teacher PD in Oman.

Figure 6.7 Theme: Characteristics of Effective Teacher PD Programs

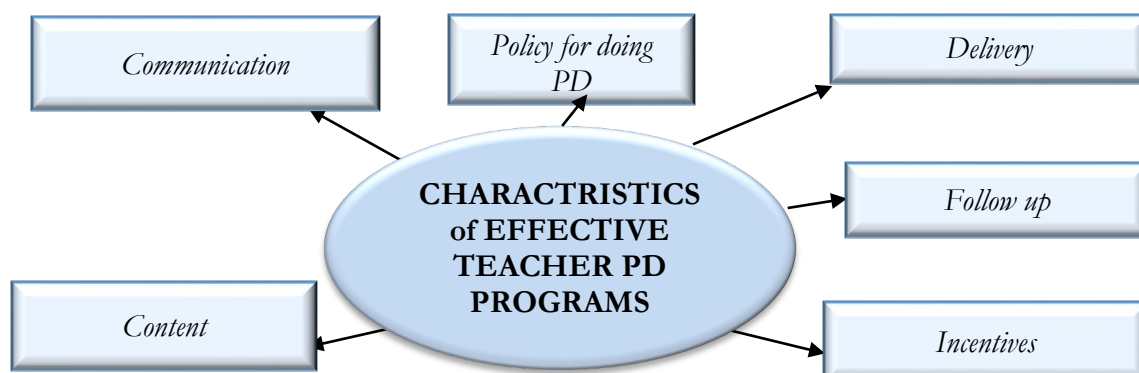


Table 6.7 presents six different categories for the theme **Characteristics of Effective Teacher PD programs** for the groups of participants of Ts, Ss and SPs. It shows the number of references made by participants for each category. It also provides examples of collective comments of participant understanding. An example of SPs' collective comments on *Content* is "Enrich the content and emphasise quality aspects and the practical issues". In this theme of **Characteristics of Effective Teacher PD programs**, Ss indicated that using specialists and carrying efficient implementation at school will have great effect. SPs indicated that teachers develop positive attitudes towards the implementation process and confirmed the importance of PD practices in passing knowledge and skills to teachers and in improving students learning outcomes.

Table 6.7 Categories for the Theme: Characteristics of Effective Teacher PD Programs

Categories	Teachers' Collective Comments	Refs.	Supervisors' Collective Comments	Refs.	Principals' Collective Comments	Refs.
Policy for doing PD	<ul style="list-style-type: none"> • Directorates General should be committed to putting up a plan for PD • Some mentors transfer knowledge in a wrong way • The policy on ground tends to give supervisors monopoly over the PD • Officials in the ministry also needs PD • Commence revision of new implemented policy • Provision of appropriate place of PD and training, transportation and dissemination of information • Using the educational indicators • Identify PD needs and requirements and provide efficient experts • Engage the community 	20	<ul style="list-style-type: none"> • Proper and sufficient incentives should be provided for trainee and trainers • Proper planning needs to be based upon views of targeted groups and targeted category 	3	<ul style="list-style-type: none"> • Directorates should not only make policies; they should also endeavour to seek ways to implement these policies • Provision of more time for PD • Supervisors' attitudes towards PD should be evaluated • Selection of mentors should follow a scrutinised process • Directorates should provide necessary infrastructure for schools • PD needs revision urgently • Follow-up is necessary after PD • Yearly necessity of attendance • Proper planning 	12
Delivery	<ul style="list-style-type: none"> • Diversification in presenting PD materials • Use of different materials for presentation is important as the era of using only PowerPoint presentation is gone 	2	<ul style="list-style-type: none"> • Central programs have no value at the school level • Sending specialists to schools will increase punctuality of trainees • Follow up procedures should be carried out by schools and governorates • Learn from other countries about PD • Poor infrastructure at training centres • Lack of trainers' technique and new technology 	10	<ul style="list-style-type: none"> • Shortage of time (lack of enough time to carry out PD appropriately) • PD must be carried out at the beginning or middle of the semester • Lack of proper infrastructure in training centres • Lack of funds 	8

Table 6.7 Categories for the Theme: Characteristics of Effective Teacher PD Programs (cont'd)

Categories	Teachers' Collective Comments	Refs.	Supervisors' Collective Comments	Refs.	Principals' Collective Comments	Refs.
Follow up	No data	0	<ul style="list-style-type: none"> A good/scientific approach for follow-up should be provided 	2	<ul style="list-style-type: none"> Lack of follow-up from supervisors causing program repetition Follow-up encourages the teacher to pass the knowledge Principal should be in charge to follow-up teachers and to pass appropriate penalties for teachers not passing knowledge Continuous assessment should be adopted for teachers Directorates are more concerned with quantity than quality 	9
Communication	<ul style="list-style-type: none"> Prioritise dissemination of information to teachers If all teachers should attend PD, there would be no teachers left in school Some supervisors don't allow teachers to register 	2	<ul style="list-style-type: none"> Dissemination of information about PD to teachers should be made a priority 	1	<ul style="list-style-type: none"> Lack of awareness on the importance of PD among teachers MOE training centres don't carry out independent programs, they depend only on the ministry for programs Directorate should develop a scheme whereby individual needs of a school will be accessed, and appropriate PD will be provided 	3
Content	<ul style="list-style-type: none"> Enrichment and to be theoretical and practical 	1	<ul style="list-style-type: none"> It must be varied and updated 	2	<ul style="list-style-type: none"> Enrich the content and emphasise quality aspects and the practical issues 	3
Incentives	No data	0	No data	0	<ul style="list-style-type: none"> Give incentives to the distinguished teachers and for attendance 	4

It can be seen from the table that *Policy for doing PD* category has the highest rank of references in this theme. Groups share different views about the organisation of the process. SPs and Ts provide more comments than Ss do. They advised that a follow up policy for the implementation process and choosing the mentors or the lead-teacher to pass knowledge need revision as well as other PD requirements at the field. Groups are concerned about proper planning of PD and identifying PD needs with using educational indicators and engaging community in the process. Furthermore, the *Delivery* category has the next highest number of references for this theme according to the perspectives of the FG groups. Participants identified several topics that need revisions in this category. For example, there were lack of infrastructure, shortage of time, choosing expert trainers, revising planning and designing PD programs and the use of modern technology. A noticeable point is that the *Follow up* category has nine references by SPs confirming the major role of that category at the implementation process. SPs expressed several points of disadvantages within the implementation process. They identified that the lack of follow up and presentation was concerned more about quantity rather than quality. SPs also recommended keeping them in charge of assessments and discipline procedures for teachers. All other categories have a similar number of references. For the category of *content*, groups inferred that programs should be based on school needs, the outright dismissal of “copy and paste method” and there should be no repetition of PD practices. Finally, for the *incentives* category, SPs advised upon motivated distinguished teachers in addition to the attendance and that the chronic lack of budget in schools should be tackled.

6.3.8 Theme 7: Impact of Teacher PD

Figure 6.8 shows three categories associated with the theme **Impact of Teacher PD** according to each group of participants, namely, Ts, Ss and SPs. Those categories were generated from the participants’ references in that data.

Figure 6.8 Theme: Impact of Teachers PD

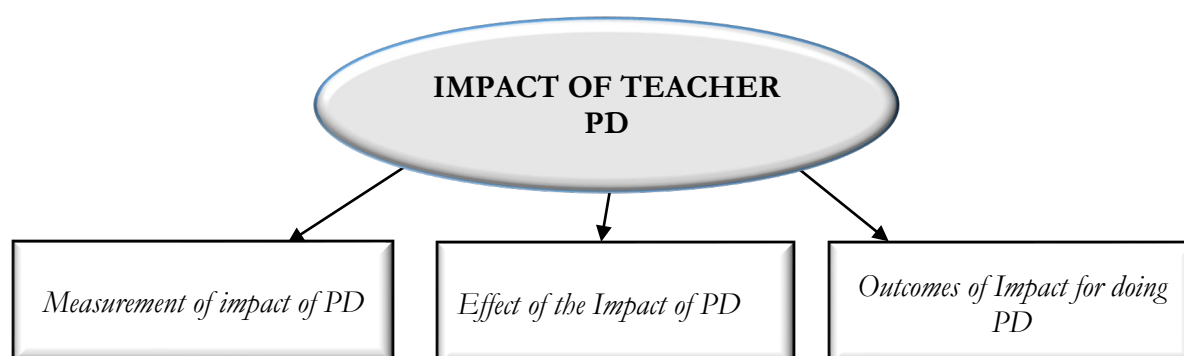


Table 6.8 shows the **Impact of teacher PD** results and the number of references made by participants for the categories associated with this theme. It also presents examples of collective comments of participants' understanding.

Table 6.8 Categories for the Theme: Impact of Teacher PD

Categories	Teachers' Collective Comments	Refs.	Supervisors' Collective Comments	Refs.	Principals' Collective Comments	Refs.
Measurements of impact of PD	<ul style="list-style-type: none"> Through visitation and supervision 	7	<ul style="list-style-type: none"> Visitation and supervision Using visits after the PD programs through supervisors Standard of achievements of students and through follow up A need to raise the performance of the student, then to raise the academic achievement 	6	<ul style="list-style-type: none"> Practical application Through visitation Student outcomes Teachers convince themselves of PD importance upon students' performances and school achievements 	7
Effect of the impact of PD	<ul style="list-style-type: none"> Shorten distance between PD and application Repetition of PD Implementation time Objectivity in determining PD requirements 	2	<ul style="list-style-type: none"> It is dependent on the teacher acceptance of transferring positive ideas from PD practices Making PD vision and role clear to participants in PD practices 	4	<ul style="list-style-type: none"> Teachers must be able to pass impact to the intended environment Positive attitude from teachers is needed Much knowledge of PD experience is necessary 	4
Outcomes of impact for PD	<ul style="list-style-type: none"> Increase students' performance Applying new models and multiple new ways Increase cooperation and mutual knowledge, exchange experience, rising level of PD accepting Positive towards community 	4	<ul style="list-style-type: none"> Impact of PD is not felt Transferring impact to peers inside school, for example, in subject matter or clarifying solutions or other implemented opportunities among group of participants in PD inside studying classes as a studying unit 	4	<ul style="list-style-type: none"> Teachers can enhance students' skills rapidly Teachers can apply for higher post accordingly Upon colleagues, students' outcomes and students' personality Deepen commitment to educational morals/ethics 	2

Table 6.8 shows that the theme **Impact of teacher PD** has three categories and it can be seen that the highest number of references is for the category of *Measurements of impact of PD*. All participants agreed that the impact can be measured by supervision visitation and through students' level of achievement. *Effect of the impact of PD* and *Outcomes of impact for PD* have similar numbers of references. Furthermore, it seems that each group has a different view about the effect of doing PD. For example, "Repetition of practices and shortening between PD practices and their application" was appraised by Ts, while SPs talked about passing PD impact to intended groups. On the other hand, Ss considered accepting doing PD programs by the teachers is a positive effect. Participants indicated that *Outcomes of impact of teachers' PD* happens in several ways. For instance, it helps "To enhance student learning outcomes and personality". It also supports "Teachers' upgrading to new careers".

For this theme of Impact of teacher PD, Ts and SPs indicated that impact could be measured through supervision, practical application and through students learning outcomes. Ss expressed that the impact is not felt.

6.4 Summary of the Results

An overview of results is presented in Table 6.9 shows that each of the themes had specific categories and the groups references for each group of participants.

Table 6.9 Emerging Themes and Categories Identified from Participants' Data

Themes	Categories	Group References		
		Ts	Ss	SPs
Defining PD and Training	• Characteristics of PD	9	12	14
	• Characteristics of training	9	13	15
Teacher Purposes of PD	• Reforming and addressing educational shortcoming in teacher practices	9	7	9
	• Helping teachers in enhancing student performance	6	3	1
	• Incorporating industry developments, updating education industry standard	5	2	3
	• Enrichment or advancement of teachers learning skills and knowledge	5	1	2
	• Developing new staff experience and enrich old and new staff skills and knowledge	3	0	1
Teacher PD Needs	• Improved teaching skills, knowledge and standards	13	7	2
	• Support from supervisors	14	3	2
	• Keeping pace with industry best practices	5	2	4
	• Forms of PD use	3	3	0
Practices for the Presentation of PD Programs	• Different forms of PD practices	14	12	10
	• Collective and Individual PD	6	1	1
	• Internal PD and Non-central PD	3	2	1
	• External PD and Central PD	2	1	1
Improving Teacher PD Practices	• Attendance	9	18	10
	• Personnel attendance of PD programs	11	6	4
	• Delivery period for PD programs	4	5	7
	• Suggestion for PD presentation	9	8	3
	• Frequency of staff attendance	5	1	1
	• Existing regulations and requirements	4	9	0
	• Data base	0	4	1
	• Distance learning	0	8	0
Characteristics of Effective Teacher PD programs	• Policy for doing PD	20	3	12
	• Delivery	2	10	8
	• Follow up	0	2	9
	• Communication	2	1	3
	• Content	1	2	3
	• Incentives	0	0	4
Impact of Teacher PD	• Measurements of PD impact	7	6	7
	• Effect of impact of PD	2	4	4
	• Outcome of impact for PD	4	4	2

It can be seen from the table that:

- Seven themes emerged from the data of the group of participants, namely, Ts, Ss and SPs. Each theme has associated with it a number of categories. The extent participants referenced categories is different for different themes. An example is that in the theme of Effective PD programs, the category “Policy for doing PD” had 20 references by Ts, 3 references by Ss and 12 references by SPs.
- For each theme there was typically a prominent category, for example, for the theme Practices in the provision of PD programs, the prominent category was “Different forms of PD practices”.
- There were distinct differences between groups of participants in respect to the extent and nature of commentary that was associated with each theme:
 - Ts had more commentary about the theme Teacher PD needs, the theme Effective PD programs, and the theme Practices for presentation of PD programs than did Ss and SPs.
 - Ts and Ss had more different ideas about the theme Improving PD practices than SPs.
 - SPs were concerned about the categories of “Different forms of PD practices”, “Attendance” and “Policy of doing PD”.

Chapter 7 presents a discussion of results presented on Chapter 5 and Chapter 6.

Chapter 7

Discussion of Results

7.1 Introduction

Chapter 5 and Chapter 6 presented the results from the data gathering undertaken in this research in order to address the RQs. In this chapter a discussion of results is presented in two sections. Initially the chapter discusses results from Chapter 5 of ideas and the priorities of these ideas provided by the different groups of participants for teacher professional development (PD). Next, the chapter considers the discussion of results from Chapter 6 from the different groups of participants using the framework of aspects of PD presented in Chapter 2. Finally, a summary of the discussion is provided.

7.2 Participants' Ideas and Priorities for the use of teacher PD

In the literature, there is limited consideration about teacher PD priorities and hence the discussion of results is not related to existing literature. In this respect, the findings can be considered as new knowledge considering that such findings would be an enrichment of information in the field of teacher PD in regards to the implementation and delivery process.

The results in Chapter 5 revealed for the different participant groups, namely Ds-G, HRDDs, SPs, Ss and Ts, identified a range of different ideas and priorities for Post-Basic Education school teachers' practices as summarised in Table 7.1.

Table 7.1 Identifying the Priority Ideas for Groups in the NGT Groups

Ideas Item No.	Priority of Ideas	Priority Areas				
		Ds-G	HRDDs	SPs	Ss	Ts
1	Prepare and list competencies for the PD and training for teachers	Singular	---	---		---
2	Adopt a teaching profession license	Singular	---	---	---	---
3	Identify and determine the PD needs of teachers	Shared	Shared	Shared	Shared	Shared
4	Link career path with PD use	Shared	Shared	---	Shared	---
5	Have Specialised centres for professional training of teachers	Singular	---	---	---	---
6	Use academic specialist teacher programs	---	Singular	---	---	---
7	Have specialists or cadres for PD use	---	Shared	Shared	---	Shared
10	Monitor the impact of PD		Shared	---	Shared	---
12	More support for the PD trainees and trainers	---	---	Singular	---	---
13	Use and adopt advanced and modern techniques	---	---	Shared	---	Shared
14	Use the right time for teacher PD	---	---	Shared	---	Shared
20	Use of peers in PD programs	---	---	---	Singular	---
21	Use of active learning methods in PD programs	---	---	---	---	Singular

Two types of important priority ideas emerged that could be identified for different groups: single ideas and shared ideas. Singular ideas (in colour) are those identified for different groups whilst shared ideas are ideas shared by different groups and these are shown in Table 7.1.

It can be seen that several groups share the same important priorities of ideas for aspects such as PD needs, PD purposes (e.g. linking career path to PD), improving PD practices (e.g. use the

right time for teacher PD), effective PD programs (e.g. use of experienced professionals and use advanced and modern technology/techniques), and the impact of PD.

Sharing similar relatively important priorities suggests agreement as to the types of appropriate PD use to enhance the student learning outcomes which should be the main priority of MOE in developing the quality of education in Oman. For example, agreement is noted between SPs and Ts for identifying the PD needs, use of PD specialists or cadres, the use of modern technology and choosing the right time. It could be expected as these areas are very much practical aspects related to teachers. The priority for singular ideas was also an unexpected result as they are to an extent a reflection of the groups' role in education. In this regard, the Ds-G are essentially a group concerned with policy. Hence, ideas for preparing some lists of competencies for undertaking PD, adoption of the teaching profession license, and having specialised centres for PD and training of teachers, represent their view. The SPs, Ss and Ts are basically groups interested in the implementation of PD practice, for example, Ss priority idea is the use of peers for the transfer of expertise approach. This identified situation suggests that participants have a different outlook regarding PD priorities. Specifically, a finding from the research is that different participant groups have interpreted their involvement in doing the PD process according to their identified status in the education system.

Similar participant groups shared similar PD aspects of Needs and of Effective PD programs. On the other side, SPs groups did not share ideas of Purposes and of Impact whilst Ss did not share aspect of Improving practices, and Ts had not shared aspect of Impact with other participant groups.

The findings the researcher proposed that those participant groups' priorities could be used to develop a framework of re-organising PD use documents. It also could be used to re-write and enhance the existing PD program of teacher PD in Oman.

Table 7.2 has summarised the participant groups' priorities of ideas associated with teacher aspects in terms of a framework of PD aspects that have been presented in Chapter 6.

Table 7.2 Participant Groups' Priority of Ideas Associated with Teacher PD Aspects

GROUP	PD ASPECTS				
	Teacher PD Needs	Teachers' Purposes of PD	Improving Teacher PD practices	Practices for the Presentation of PD Programs	Impact of Teacher PD
Ds-G	Identify the PD needs of teachers	Link the career path with the PD use	Use a Specialised Centre for PD and training of teachers	Prepare and list competencies for the PD and training of teachers	Adopt a teaching profession license
HRDDs	Identify the PD needs of teachers	Link career path with PD use and qualification	Use academic specialist teacher programs	Have specialised cadres for PD use	Have a systematic approach to monitor the impact of PD use
SPs	- Determine PD needs for teachers - More support for the PD trainees and trainers	--	- Adopt advances and modern techniques - Use the right time for teacher PD use	Use more highly qualified academic coaches for PD activities	--
Ss	- Monitor the PD needs for teachers from the reality of the classroom situation - Identify/determine PD needs within school administrations	Link career/ professional path with PD use	--	Use of peers in PD programs	Use a systematic approach at school to assess the PD impact
Ts	Use of active learning methods in PD programs	Determine the teacher PD needs	- Use modern technology - Use the right time for PD use	Use of experienced professionals to present PD programs	--

It can be seen from Table 7.2 that different participant groups share the same priority idea for different PD aspects, for example, for the theme **Teacher Purposes of PD** groups share the same priority idea of “Link career path with PD use”; for the theme **Teacher PD Needs** groups share the same priority idea of “Identify the PD needs of teachers”, and for the theme of **Impact of Teacher PD** impact of PD groups share the same idea of “Have a systematic approach to monitor the impact of PD”. On the other hand, different groups share different ideas for other PD aspects. For instance, for the theme **Practices for the Presentation of PD Programs** participant groups share the ideas of “Use of experienced professionals and use advanced and modern technology/techniques”. For the theme of **Improving Teacher PD practices** groups share the ideas of “Use a Specialised Centre for PD and training of teachers” and the idea of “Use peers in PD programs”. The findings indicate that different or same groups have different or similar views about the priority ideas that could be associated with different PD aspects. This suggests a need for greater dialogue between participant groups concerning ways of enhancing the provision of teacher PD.

7.3 Participant Views of Different Aspects of Teacher PD

7.3.1 Introduction

The literature review in Chapter 2 identified and critiqued seven main aspects that concern the provision of teacher PD. These aspects have been used as a framework for FG data collection in the result presented in Chapter 6. The remainder of this section details and discusses each of the seven PD aspects.

7.3.2 Summary of PD themes and Categories

Table 7.3 has further summarised the results presented in Chapter 6.

Table 7.3 A Summary of PD Themes and Prominent Categories

Themes	Prominent Categories	Group References		
		Ts	Ss	SPs
Defining PD and Training	<ul style="list-style-type: none"> • Characteristics of PD • Characteristics of training 	9 9	12 13	14 15
Teacher Purposes of PD	<ul style="list-style-type: none"> • Reforming and addressing educational shortcoming in teacher practices • Helping teachers in enhancing student performance 	9 6	7 3	9 1
Teacher PD Needs	<ul style="list-style-type: none"> • Improved teaching skills, knowledge and standards • Support from supervisors 	13 14	7 3	2 2
Practices for Presentation of PD Programs	<ul style="list-style-type: none"> • Different forms of PD practices 	14	12	10
Improving teacher PD Practices	<ul style="list-style-type: none"> • Attendance • Personnel attendance of PD • Suggestion for PD presentation • Delivery period for PD programs 	9 11 9 4	18 6 8 5	10 4 3 7
Characteristics of Effective Teacher PD Programs	<ul style="list-style-type: none"> • Policy for doing PD • Delivery 	20 2	3 10	12 8
Impact of Teachers' PD	<ul style="list-style-type: none"> • Measurements of PD impact 	7	6	7

These results reveal that there were both similarities and differences for each aspect in the categories obtained from the Ts, Ss and SPs. Similarities were as follows:

- Ts and Ss are more closely aligned in their views and different to those of the SPs. For instance, Ts had much to reveal about their needs rather than offering commentary for improving PD practice. They had more concerns about professional development practices,

and professional development purposes. For example, Ts are concerned about their needs, practices and the attendance policy while supervisors are concerned about attendance and practices.

- Ss had more of similar views as SPs concerning improving practices for doing PD, PD and training concepts, and practices for the presentation of PD rather than teachers' needs and purposes for doing PD for teachers.

Differences were as follows:

- Variations between participant groups for a number of categories, for example, for the theme Teacher PD needs, the category "Improved teaching skills, knowledge and standards" had thirteen references by Ts, seven references by Ss and two references by the SPs.
- SPs and Ss have different ideas for improving the delivery process of PD which might be considered to improve teacher professional development process.
- SPs on the other hand, had more commentary about the themes of improving professional development practices, PD and training concepts, and PD impact rather than about purposes and practices. SPs considered more attention to the teachers' practices and attendance policy. In addition, they advised that implementing suitable PD policy can influence teachers' and student performance at the end of the school year.

The implications of these results indicate that:

- Different participant groups have different PD needs which could be considered in the implementation and PD delivery process.
- Specific PD aspects are considered by different participant groups.
- Consideration of PD aspects is derived from the level of performance of each participant groups.
- Participant groups perceived their PD use according to their thoughts about barriers in the PD implementation process.
- Priorities of ideas could be involved in enhancing PD practices based on level of importance sought about PD aspects.

In respect to the foregoing, it seems that different participant groups tend to have different options/opinions about teacher PD use. SPs, for example, tend to interpret their view according to their responsibility in the implementation of PD and in facilitating important procedures to gain the intended outcomes. Ts, for example, had much to expose about their needs rather than offering commentary for improving PD practice.

A finding from this research is that Ss had an important concern about improving practices for doing PD, PD and training concepts, and practices for the presentation of PD. This point of view confirms their vital role and responsibility in the planning of teacher PD use and in determining the teacher PD needs and the practices needed to enhance delivery of the process.

In addition, the agreement in thoughts of SPs and Ss advance the implementation of the process and co-incide in their interpretation of the enhancement required to advise the proposed innovation and recreation needed.

An important finding of this research is that teachers expected a more understanding from the top-down level authority that would assist to develop new ideas and obligations of assistance needed. Essential requirements to enhance the PD practices such as implementing an innovated policy and PD standards that would have an immediate impact on PD outcomes were also anticipated. In addition, Ts would like a clear understanding of the PD needs, purposes and practices in order to be involved in doing PD practices.

7.3.3 Defining PD and Training

The results in Chapter 6 indicated a lack of consistent use and interpretation of the terms “PD” and “training”. Similar findings are not reported elsewhere in the literature. Overall, results indicated levels of uncertainty with regards to the difference between PD and training. The majority of participants expressed the difference between the two terms as follows:

- PD concerns teachers’ development as they progress in their profession.
- PD also refers to learning which is directly related to the primary occupation of teaching.
- PD programs may be more theoretical than training programs.

Participants considered training to be as follows:

- Training covered useful but non-teaching related topics such as first aid or how to deal with people.
- It may be more specific such as particular teaching techniques.
- Training tends to have a more practical approach.

The findings from this research indicates that SPs and Ss had a clearer and stronger voice specifying the difference between PD and training when compared with the other groups of participants.

Generally, this finding can be considered as new knowledge which can be used in Oman to establish a specific and a clear differentiation of PD and training amongst participants or stakeholders for enhanced usage of PD for future planning.

The research literature concerning the definition of PD and training in Chapter 2 provided a general definition about PD and training for use in this dissertation as follows:

Professional development is a change, collaborative, comprehensive, an ongoing process or activity happening in a particular context to develop an individual's skills, knowledge, competence, beliefs and attitudes to meet school and individual needs as practices.

Training is a systematic approach or a means to add new knowledge to teachers' experiences through attending workshops and training courses provided by an expert and to attain individual and organisational needs in order to improve the work culture and to enhance workplace practices.

As detailed in Chapter 1, in Oman, the Ministry of Education has adopted a policy to enhance its human resources using more extensive use of PD. However, the concept of PD was not clearly specified as a main term, but PD was inclusively utilised within the use of the training context as stated by the Ministry of Education (2006).

The intention of the MOE policy was to embed the idea of PD as a more holistic concept than training (Ministry of Education, 2006). As mentioned in Chapter 3, the Directorate General of Human Resources Development (DGHDRD) developed and designed an ambitious strategy for PD

which was represented in using the latest educational theories of PD aspects and the planning of a PD culture.

Despite the MOE's serious intentions to embed the PD concept in the education system, this research indicates that most of the participants in this research had a relatively limited perspective of PD. As such, it can be concluded that the research results confirm that group participants do not have in mind a clear understanding of PD and training, despite the MOE's efforts to diversify the PD practices. In this respect, recent documents and annual educational reports issued by the MOE refer to the MOE's adoption of a strategy for PD based on changing the concept of PD which embraces of the diversification of forms of approaches to its presentation and use. In this respect, training is essentially a subset of PD provision. Furthermore, there is a limited reference to the use of teacher PD in the Job Descriptions of D-Gs, HRDDs, SPs, Ss and Ts as listed in Appendix A.

The researcher presumes that the association or interchange between the concepts of PD and training is an expectable pattern in the results. A major reason is that in Oman, training is broadly used as a way for involving teachers in PD programs. This content is evident from the annual report of the Ministry of Education (2017), as shown in Appendix J, where the PD programs were referred to as training, which is divided into two sections: Central and Non-central PD programs. In addition, within the same MOE government document, Chapter 2 of this document was about the Non-central training which were considered as PD programs. Mainly, most of the PD programs implemented were referred to as training programs, and specifically PD programs implemented at school called "School as a PD Unit" are all training workshops.

Based on the foregoing, the researcher argues that because of the top-down approach used in the education reform, a training pattern still prevails in the provision of teacher PD opportunities. However, MOE has diversified the PD activities and the program is done centrally and non-centrally. It seems that MOE PD activities are still being planned and monitored by the MOE centrally (Ministry of Education, 2018b). It can be concluded that because the top-level participants are the planners and organisers of the PD and training programs, there should be a bottom-up approach for the provision of PD and training. Thus, those participating in the PD should be consulted during the planning about their needs and the way that PD is delivered. This research suggests that in Oman, there is an urgent "need to draw up/develop a human resources

development and training framework for all government organisations among their employees (Al Jabri, Silvennoinen & Griffiths, 2018, p. 98).

It can be concluded from this research that teachers do wish to play a vital role in the planning for the PD delivery process so that their needs are more appropriately addressed.

Four main reasons for this current situation can be identified:

- There appears to be a limited reference to teacher PD use in the Job Descriptions cards of D-Gs, HRDDs, SPs, Ss and Ts. This causes the participants involved in proposing PD policies and monitoring the implementation stages to adopt a holistic approach.
- Policy by MOE itself does not clearly distinguish between the PD and training to ensure an overall understanding of these aspects of human resources development.
- The existing misunderstanding amongst participants of PD and training definitions. It is possible that participants did not recognise PD as a changing process and training is a tool used for PD use. This research deems that this misunderstanding is caused by combining PD and training programs, and the administrative works and programs together at the Human Resources Development Administration (HRDA) at the MOE.
- There appears to be a lack of co-ordination between different bodies or stakeholders in the provision of PD use. This appears to have caused stakeholders to interpret PD and training concepts according to their understanding and according to their reasons for doing PD. This also causes miscommunication in the PD delivery process.

The implications for the above situation are as follows:

- It is difficult to identify the participants' needs, goals and the intended outcomes for teacher PD because the vision of PD is not clearly evident.
- Adopting strategies for the implementation of PD and training programs could be similarly interpreted. MOE needs to establish an advocacy approach which sponsors PD development. In this way, different participants within the MOE, especially teachers, recognise that PD opportunities are distinct from training. The existing situation is that PD is combined with the administration of training centres which are distributed amongst the Directorates-General of MOE in the eleven Governorates in Oman.

- The MOE publications need to reflect a clear understanding of the terms PD and training to avoid confusion between these two terms. This situation may hamper awareness among teachers to visualise the importance of the outcomes of their involvement in PD programs and may consider PD practices as a waste of time. This aspect can be rectified in the government documentations and publications; articles, periodicals, annual reports that refer to training in relation to the PD use.

The above commentary suggests that having clear and distinct definitions for PD and training can eliminate any misinterpretation of these two terms. In turn, this can assist in the visualisation of the policy and the implementation of appropriate PD practices.

7.3.4 Teacher Purposes of PD

In Chapter 2, the literature review revealed that there are a range of specific purposes for teacher PD use. A synthesis of these purposes indicates that the general main purposes for PD are as follows:

- Ongoing professional development
- To gain higher qualifications or upgrade teachers' qualifications
- To enhance the quality of students' learning
- To enhance teachers' performance through career growth.

In Oman, purposes for teacher PD as stated by the Ministry of Education (2005b) have not changed much since 2005 and are consistent with those purposes stated in general literature. However, it is evident that MOE has its own specific purposes for doing PD as a way to accomplish its vision. These purposes are focussed on the implementation of educational programs and ways of enhancing teachers' performance in order to improve student learning outcomes.

It is pertinent to discuss participants' views of the purposes of PD by the participant groups in this research and how these relate to general literature and the Omani literature.

Chapter 6 results revealed that there were five categories of purposes. By far the most prominent category for purposes of PD by each of the participants was "Reforming and addressing educational shortcoming in teacher practices". As could be expected the specific PD purposes as shown in

Chapter 6 were not all commented upon by each group. It can be presumed that each group has its own or recognised purposes according to their understanding or perspective of the purpose.

The possible reason for findings is that current PD policy does not explicitly state the purposes for PD use in a way which makes an overall understanding clearer. In this respect, a document that clearly states and explains the PD purposes in MOE publications is not available.

The implications from the findings are:

- MOE staff/officials, namely, Ds-G, HRDDs, SPs, Ss and Ts, need more clarification for their involvement regarding the purposes of PD. Such information would better enable the different participant groups to integrate their roles.
- Existing purposes for PD may not match the real-world situation for teachers. This suggests a need for diversification in PD purposes. Teachers would like to expect much more advantages of them doing PD. For example, teachers may expect to be updated with modern technology and advanced knowledge in education as well as in other administrative fields. Teachers may also wish to enhance their profession personally in order to compete with each other to qualify for higher posts whether in education or in other fields. Therefore, MOE could benefit from teachers' desire for enhancing their experience in the educational work.

7.3.5 Teacher PD Needs

In Chapter 2, the literature revealed a number of specific teacher PD needs. A synthesis of these PD needs shows that the general teacher PD needs are as follows:

- Providing more continuing professional development opportunities.
- Having teacher PD practices revised, for example, time for doing PD, travel funds for teachers to attend, and support of authorities that are involved in PD.
- Provide PD that addresses specific teacher needs such as more practical experiences and new teacher skills development.
- Provide PD opportunities for teacher experiences in order to gain new posts in their future career.

In Oman there appears to be an absence of research into teacher needs as well as MOE documentation that addresses the aspect of PD. The Ministry of Education (2014) noted that teacher needs for PD can enhance the status, morale, and professionalism of teachers.

The results in Chapter 5 indicated that one of the priority ideas which was a shared view of all the participant groups was “Identifying and determining the PD needs of teachers”. The priority was ranked as one of the most prominent of ideas of the participant groups. The perspective of the participants suggests an urgent need for specifically addressing the provision of PD needs as MOE’s highest priority for teachers doing PD.

Four categories of needs were identified by participants in Chapter 6, namely:

- Improved teaching skills, knowledge and standards.
- Support from supervisors, for example, support from supervisors in accessing PD.
- Keeping pace with industry best practices.
- Forms of PD use, for example, use diverse locations for teacher to use for PD.

By far the most prominent categories for needs of PD were “To improve teaching skills, knowledge and standards” and “Support from supervisors”. This result aligns itself with the general literature as presented in Chapter 2.

As was the case for the purposes of PD, the results in Chapter 6 revealed that there were shared ideas and singular ideas in the categories obtained by different groups. It would appear from the results that each participant group has its own specific perspective on needs of PD which suggests a need to provide specific PD for teachers.

The finding for teacher needs, “Support from supervisors” was not identified in the literature. The researcher suggests that the reason for this result is that there is a deep relationship and connection between the teachers and their supervisors in Oman. This has its unique advantages in Oman as supervisors have a main responsibility of PD programs. Supervisors’ responsibility includes endorsing teacher involvement in PD and undertaking the relevant planning for the delivery of PD programs for teachers.

The foregoing suggests that teacher PD practices could be furthermore improved if they were more based on teacher needs. Taking advantage of supervisors' involvement as the main officials representing teachers in the implementation of PD could enrich their roles in changing the system requirements and regulations to a modern and a more developed process.

Reasoning for such findings in this research could be:

- The MOE has its own identified needs of PD according to its own planning and innovations. However, it would appear that PD needs are not explicitly stated and generalised in a specific policy. Specifically, a document that fully acknowledges the PD needs in MOE publications is not available.
- The existing PD considers novice teachers and inexperienced teachers as a priority in raising the quality of education. This approach may not address adequately other areas of PD needs for teachers, particularly those experienced teachers.

The implications for this situation are:

- MOE staff namely, Ds-G, HRDDs, SPs, Ss and Ts, need more clarification of their involvement in the provision of PD for teachers.
- PD opportunities for teachers may not match all teachers' expectations in order to gain the intended development.
- Teachers do not consider doing PD as a major aspect in developing their practices. Thus, teachers might view the involvement in PD programs as an official demand regardless of the outcome of PD impact that would be accomplished.
- Teachers develop experiences in new posts for their future career not related to PD use. Some teachers seek to enrol in higher qualification degrees to develop their thinking skills and to gain advanced knowledge. Such involvement develops their personality and may prepare them to be in different administrative jobs.

7.3.6 Practices for the Presentation of PD Program

In Chapter 2, the literature revealed a number of specific teacher PD practices for the presentation of PD. The main PD practices identified in literature were as follows:

- The onsite use of seminars, workshops and action research

- The use of local, national and international conferences
- Collaboration as a PD practice
- Mentoring, peer visitations and team teaching
- The use of college courses, and special institutes
- The use of practices embedded in teachers' daily lives
- The use of teacher resources such as journals and online sources.

In Oman, it was noted in Chapter 2 that MOE has made considerable effort in implementing different PD practices for the presentation of PD. These practices were all very similar to those reported in the general literature. It was evident that MOE implemented a diverse range of practices which meet the needs of different participants.

A finding from this research is that it would seem that participants may agree upon using different forms of doing PD, but the different groups of participants have different views on the delivery and presentation of PD practices whether collective, central, internal and external PD in regards to their planning and activities.

Reasons for the findings include:

- PD practices are not clearly stated and generalised in a specific MOE policy stated.
- The misinterpretation of PD and training terms among participants may make it difficult to specify the appropriate practices to follow within the MOE plan.
- Supervisors as the main participants responsible for making, advising and following the PD plan of teachers may be providing inappropriate PD practices for teachers.
- In implementing PD practices, there is a tendency to use traditional forms of delivery rather than using more innovation approaches. This suggests a need for more specifications for PD practices appropriate for teachers.

The implications for this situation are as follows:

- Practices for the presentation of PD necessitate an explicit clarification for their use. Participants may like to participate in practices that meet their expectation of gaining advanced outcomes of enhancing their instruction and performance level. Clarification of

practice forms would give them the choice in choosing appropriate practices to develop their personality and their institutions.

- Practices may not be presented at appropriate times and demand. Planning the right time of involvement in PD practices would be an advanced advantage to gain knowledge according to teachers' readiness. Some teachers may take their involvement as wasting time or just as a requirement of continuing in their jobs.
- Teachers attend PD sessions that may not be particularly relevant to their needs, thus following the MOE innovations plan rather than being able to attend or to choose PD according to their needs or demands. Participants may recognise their participation as boring and not of vital importance. Thus, MOE would not achieve its goals of PD practices.

7.3.7 Improving Teacher PD Practices

In Chapter 2, the literature review revealed that there are a range of specific practices that can be adopted for improving teacher PD use. A synthesis of these practices indicates that the main ways of improving PD practices are as follows:

- Adopting multiple strategies such as individually guided staff development as well as group work.
- Longer duration of PD activities to provide in-depth consideration of issues of a PD topic.
- PD as a long-term process. This includes the use of follow-up activities which are sustained and structured.
- Intimately link PD practices to school reform as it is a process of culture building.
- The PD experience needs focus on core competencies regarding curriculum and pedagogy.

A synthesis of specific practices for improving PD in Oman as detailed in Chapter 2 were only in part consistent with the general literature. This can be explained by the fact that the MOE has developed its own practices for providing PD believed that adopting and enhancing the existing PD practices would be appropriate according to its vision (Ministry of Education, 2005a). Examples of these practices were use of regional and international conferences, coordinating PD use with pre-service training institutes and organising annual forums for teachers.

The results of Chapter 5 suggest that the priority ideas for improving PD practices are at the level of policy makers which support an appropriate provision of PD involving a top-level approach. In this respect, the policy makers should establish regulations and requirements needed at the implementation level based on priority ideas of PD use. These priority ideas could be revised to achieve PD impact outcomes through a dialogue with participants in PD programs at the teacher level.

Chapter 6 results revealed shared ideas and singular ideas in eight categories for improving PD practices most of which are consistent with those reported in the literature. However, the most prominent category for improving PD practices was “teacher attendance at PD programs”. This finding is not documented in the general literature, but it perhaps it is an assumed aspect of teacher PD.

The reasons for the findings could be as follows:

- MOE strategies for developing PD may not consider teacher’s long-term needs.
- Evaluation results from previous teacher PD programs may not be considered for improving PD for teachers.
- Supervisors, as the main facilitators of PD planning, have limited choices in regards to regulations, requirements and implementation aspects to meet teacher needs.

The implications for this situation are as follows:

- Teacher’s needs should be considered by MOE officials in the improvement process of PD practices.
- Involving teachers in the process of planning and developing teacher PD programs to ensure that appropriate practices are being used.
- The top-down approach currently focusses on the process of considering regulations, requirements and implementation aspects of teacher PD practices.
- The evaluation approach of PD should be revised for the enhancement of PD practices.

7.3.8 Characteristics of Effective Teacher PD programs

In Chapter 2, the literature review revealed that there are a range of specific practices that results in effective PD programs for teachers. A synthesis of these practices indicates the use of a combination of effective practices are:

- Incorporate characteristics of a PD program such as the content theory underpinning the knowledge and skills being learned.
- Use of active learning and collective participation opportunities.
- Consideration of key features of professional learning, for example, to be continuous and ongoing.
- Recognising teachers as knowledge generators.
- Address effective teacher collaborative processes.

A synthesis of specific effective PD programs in Oman is consistent with those reported in the literature. However, in Oman, MOE has its own perspectives and policy to make possible effective PD programs to accomplish its vision. However, there is a gap in identifying specific characteristics of high quality, and successful PD programs for use in Oman. This finding suggests a need to establish characteristics of effective PD in the Omani context. This approach is a means of enhancing the quality of teachers through adopting appropriate high-quality PD (Le Cornu, 2015).

The results in Chapter 6 indicated that there were six categories for achieving effective programs. However, by far the most prominent category for effective PD programs according to participant groups was “Policy for doing PD”. This is an aspect for improving PD that was not identified in the literature. Therefore, this finding could assist or strengthen the need for focussing on the planning, implementation and assessment of teacher PD use according to a systematic approach or framework to gain the desired outcomes.

The reasons for the findings could be as follows:

- Current PD policy does not explicitly state or generalise the effective characteristics of quality, effective PD programs. In this respect, there is no detailed documentation of the effective practices within PD programs.

- MOE does not explicitly document the strategies for teacher PD. A consequence is that could be the gap between MOE expectations and participants' views of doing PD.
- MOE does not emphasise the characteristics of effective PD programs that need be adopted.

The implications from the findings are as follows:

- MOE participants, especially SPs, Ss and Ts, need to be involved in the process of developing and presenting enhanced effective PD programs.
- Ts, Ss and SPs all contribute to the design of effective PD programs.
- A need to identify the barriers for designing effective PD programs. These could be:
 - Proper planning needs to be based on views of targeted groups and targeted category.
 - Include a systematic approach of a follow-up scheme.
 - Identify PD needs and requirements such as to provide necessary infrastructure for schools.
 - Enrich the content and emphasise on quality aspects and the practical issues.
 - Supervisors should have a dialogue with teachers to determine their needs and attendance.

7.3.9 Impact of teacher PD

A synthesis of this literature on the impact of teacher PD indicates that the main impact for PD is as follows:

- A positive outcome on individual and team performances.
- Evidence on changing professional practices and improved participant's outcomes.
- Results in positive effects on student learning outcomes/achievements.
- Gaining positive impact of the process of collaboration and collaboration itself.

The impact of PD in Oman as detailed in Chapter 2 and further contextualised based on the researcher's personal experiences indicates that three specific impacts can be identified from the results presented in Chapter 6. These are:

- There was limited impact of PD use on teachers' practices.
- There existed a degree of disparity between the PD use and teachers' beliefs and practices.

- There was a need for the evaluation of PD impact.

The reasons for these findings could be:

- PD impact on teacher practices has not been considered within the implementation process.
- MOE has not extensively raised the awareness of PD impact and its importance for enhancing teacher practices and student achievement.
- MOE does not specify its strategies for determining the impact of teacher PD.

The implications from the findings are as follows:

- MOE should consider the vital role of PD that impacts on its policy for participants especially SPs, Ss and Ts. Impact should be recognised as a critical tool in enhancing student learning outcomes.
- The need to include a proper evaluation program for determining the impact.
- Ss could implement strategies that assist teachers to visualise the importance of PD impact on teacher and student learning outcomes.
- SPs should be directly involved in the evaluation of PD impact on teachers and students at schools or outdoors.
- Ss should emphasise the role of PD impact in their planning of PD programs.

7.4 Summary

This Chapter revealed that the participants' ideas and priorities for teacher PD appeared to be viewed from different perspectives as may have been expected. Nevertheless, common priorities were identified because such priorities are shared and generalised by all the participants encountering their concern in the implementation and delivery of PD use. Furthermore, differences in groups' perspectives could be attributed to the level of participants' positions in MOE. For instance, Ds-G and HRDDs tended to be more concerned with policy related to matters in the provision of teacher PD whilst SPs, Ss and Ts were more attuned with practices used by teachers. The implications of the differences were discussed, and it was deemed that to address this situation it will require the development of a communication scheme between different groups of participants/stakeholders to finalise a clear understanding/point of view about teacher PD use.

It was also established that the framework for PD aspects has served to highlight aspects of PD use in Oman that has similar interpretation and application with that reported in the literature.

However, it appeared that the interpretations were different and/or not reported in the literature.

This was, in part, to be explained by the fact that MOE sought to have different components of PD aspects, for example, purposes of PD, as means to achieve its vision. Nevertheless, it was argued that there was a need for MOE to more extensively document intentions and to make these better known. It was evident that MOE needs to make clearer its intention and objectives by making documents available to all participants. This could assist in the clarification of such aspects and improve an appropriate understanding of the approach in teacher PD use amongst different stakeholders.

Problems and issues identified regarding use of PD in Oman are as follows:

- The definition of PD and training needs to be more clearly and fully articulated as to the differences between the two terms. The problem this has caused appears to be the confusion in the use of PD. Furthermore, a reference to teacher PD is required to be more clarified in Job Description cards of PD participants because it seems to be limited. Such clarification could modify any misunderstanding between PD and training terms.
- It was argued that there is a need for MOE to document a clear definition of PD and training terms as an innovation in teacher PD use.
- It became apparent in the results that there is somewhat of a chasm between the different levels of positions of participants in MOE in terms of PD perspectives. Policy for teacher PD appears not to be well articulated in PD practices. Mechanisms are needed to address this situation. This in part is currently being addressed by the Sharing/Participatory Committee (named Sharing Follow-up Committee), the Specialised Centre of Professional training of teachers and the Supervisors role. PD impact could be achieved and enhanced by the revision of PD priority ideas and through a dialogue between the top-level of policy makers and the teacher level.
- It was not able to be discerned in the research findings the process that is actually used to enact PD policy into practices. This is evident in the participants' views; for example, it is suggested to have a systematic approach to monitor PD impact which might indicate that there is a need to reform and address any educational shortcoming in teacher practices.

- There is a need to make possible more input for Ts in the provision of PD. In this respect, it is argued that reviewing the supervisors' responsibility in the delivery of PD practices is an important finding from this research. The finding endorses that supervisors are responsible for planning, the implementation, and the delivery process for Ts. However, they have limited choices of involvement for determining regulations, requirements and implementation aspects of PD use that can draw upon Ts inputs. They should play a vital aspect in the evaluation and in the continuous assessment of PD practices. Supervisors as facilitators of PD impacted the outcomes of the implementation and delivery process and that was considered a unique advantage in Oman.
- A finding from the results was that the MOE has diversified appropriate practices for the presentation of PD programs. In this respect, and as part of enhancing PD, there appears a need to establish a review that addresses barriers in undertaking PD. For example, having updated documents that specify the different PD aspects associated with PD programs.
- It appears that there was common agreement amongst participant groups about their ideas in doing teacher PD. However, differences occurred between participant groups. For example, SPs and Ss were more concerned about the regulation and requirement of teacher PD such as using the right time in doing PD programs. On the other side, Ts were not aware of the purposes of teachers doing PD rather than about teacher needs and to be more involved in the planning of PD use.

Chapter 8 provides conclusions and recommendations of the research and identifies areas for future research.

Chapter 8

Conclusions and Recommendations

8.1 Introduction

This research has examined teacher professional development (PD) perspectives regarding the provision of PD for Post-Basic Education school teachers in Oman. It has investigated the priority of ideas and the PD aspects in the provision of teacher PD.

This chapter begins with a consideration of the scope and limitations of the research. It is followed by a reflection on the appropriateness of the methodology used in this research in terms of the Omani context. Next, the Research Questions posed in Chapter 1 are answered followed by the conclusions from the research. The remainder of this chapter provides recommendations in regards to the present and future use of PD practices at the MOE institutions in Oman. Lastly, areas for further research investigation and concluding remarks are provided.

8.2 Scope and Limitation of the Research

The scope of this research was an exploration of views and perspectives of selected Ministry of Education (MOE) Omani participants about PD use for Post-Basic school teachers. The limitations of this research will be described in the following section.

Sample

The research was undertaken in Oman only and all participants were from the MOE. The sample contained participants who were Ds-G, HRDDs, SPs, Ss and Ts. Other education providers were excluded, namely, the private school system. Therefore, the results cannot be generalised within Oman and in other Middle Eastern or Gulf countries because the sample may not be a representative sample.

Sample Size

Chapter 3 described the participant sample used in this research. They were Ds-G, HRDDs, SPs, Ss and Ts who were chosen in order to represent a cross section of positions at MOE.

Representativeness of each group of participants was assumed but this may not have been the case. Therefore, the research results from each group needs to be interpreted with caution.

Unit of Analysis

In this research, Ds-G, HRDDs, Principals, Supervisors and teachers were the units of analysis. The focus of the study of PD was perspectives for Post-Basic Education school teachers. Therefore, results only apply to school teachers in this setting. The influences of issues of particular educational considerations in Basic Education school teachers and other programs were not considered and are an area for future research. Therefore, the responses from participants may not be representative of all teachers.

Research Outcomes

The results from the research concern the identification of priorities and aspects of PD use that may influence the application of PD in future use in Oman. Adopting such results may play an important role in enhancing current teacher practices and towards enhancing student learning outcomes. In other words, the research was concerned with the priorities and aspects of PD practices which can enhance the PD use rather than about the outcomes of the use of PD practices. This constitutes an area for further research.

8.3 Reflection on Methodologies Used and Implications

The use of the Nominal Group Technique (NGT) is new to Oman and the focus group (FG) was used in a specific way. This section presents a reflection on the use of NGT and FG methods in this research. The benefits and the issues in conducting these methods in the Oman context are considered.

8.3.1 NGT use

As shown in Chapter 3, the details of use of the NGT method for data collection in educational contexts are extensively documented in the research literature. However, NGT as a research

method is new in the Omani context. In the absence of such literature in the Omani context, this researcher developed the processes and protocols used in this research based on the use of NGT in the literature.

It was found that there are strengths/benefits in the use of the NGT method especially in combination with FG sessions for data collection. Table 8.1 lists the opportunities that were afforded through the use of the NGT method in this current research context.

Table 8.1 Strength/benefits in the use of NGT in Oman

Aspects	Comments
Expanding research literature	The use of the NGT method was an adaptation of the method described within the literature to allow this researcher to accommodate the specific requirements of the research. The use of NGT will enrich the Omani literature as an additional research method.
Accessing methods	The NGT method, using different settings, addressed administrative procedures that will make the NGT appropriate for use in Oman and identifiable for researchers.
Validity of participants' responses	Gaining similar or different views on similar topics among same groups of participants seldom happens in a consensus style. The use of NGT supported the cultural context for gaining consensus.
Giving participants a "chance" to describe the process	Participants' acknowledged the benefits of being able to view their peers' ideas. Also, the NGT provided an opportunity to describe their actual and intended practices in detail in this case of PD policy and practices. The use of NGT developed positive attitudes towards the discussion topic in relation to other related educational issues.

Whilst the foregoing has acknowledged the benefits of using of NGT, the problematic nature of using the NGT method in the Omani research context is also considered. In this respect, several aspects regarding the use of the NGT method proved to be problematic in this research, and it is appropriate to consider those aspects, as presented in Table 8.2.

Table 8.2 Problematic Aspects of Use of NGT Method for Data Collection in the Omani Research Context

Aspects	Problems	Solutions
Access	Being new to research in Oman and to groups of participants necessitates more explanation and persuasion by the researcher to gain approval to conduct meeting sessions.	Using NGT as a new experience helped to convince participants of its importance in research. Using relationships to contact the participants and using prepared package for the explanation method solved this issue.
Time	The use of the NGT method is very time consuming. Much time was used in the initial meeting with each group of participants in setting up, the recording and clarification of ideas and the steps involved.	Using a planned time schedule for each point of the implementation process enabled the researcher to control the use of NGT responses in an efficient manner.
Limited funds	Funds were needed when using the NGT method at all points of implementation. This included funds for the reservation of accommodation for the participant groups, in addition to meeting rooms, transportation, allowances for participants.	The researcher used personal funds to cover different costs associated with the use of NGT.
Familiarity with the method	The researcher needed to review different research to be familiar with the use of NGT in order to clarify the process to the groups of participants involved in the Omani context.	The researcher used the literature to develop a PowerPoint presentation to familiarise participants with the NGT process.
Use of protocols and prepared documentation	Protocols and documentation needed to be specifically developed and trialled before the use of NGT.	This researcher developed documents and protocols used with the NGT method and has developed the documentation used throughout the process.

As shown in Table 8.2, the use of the NGT method in this research setting was found to be problematic in terms of:

- the amount of time required to organise for the implementation of NGT, to involve participants and to access MOE authorities in order to organise different groups sessions.

- the limited processes and protocols suitable for the Omani context that existed. The researcher developed the appropriate processes and protocols for the Omani context.

The knowledge of the benefits of using NGT and the problematic nature of using the NGT method in the Omani research context were considered. However, as shown in Chapter 5, the NGT was successful in gathering data that was respectful and representative of all participants. Thus, the researcher has developed NGT use and NGT processes and the protocols that can facilitate an appropriate usage for researchers in the Omani context.

8.3.2 FG use

The use of FGs in this research approach is a relatively familiar data collection method for educational purposes. The participants involved in the FGs sessions were conversant with the approach and were able to express their perspectives clearly. The participants knew how the FG session would operate. Thus, the meeting sessions provided the opportunity for the participants to share ideas and comments. Importantly, participants were able to safely share their own perspectives according to their own needs and their educational institution's needs. It was observed that the use of FGs was acceptable and participants were very glad to share their views and opinions in the meeting. The use of FGs in Oman provided the researcher with in-depth information about the use of PD at Post-Basic Education schools.

In the use of FG method, separate meeting sessions were held for each of the groups of participants, namely Ts, Ss and SPs. This approach made participants feel comfortable and it encouraged them to discuss their own views with their peers in an informal setting, which enriched the elicitation of different patterns and themes concerning aspects of PD. The use of FG in this research has demonstrated the efficacy of this data collection method in the Omani context.

8.4 Consideration of RQs

The RQs articulated in Chapter 1 are addressed in this section in the context of PD for Post-Basic education teachers.

8.4.1 Consideration of RQ 1

How is PD defined and distinguished from training as perceived by different groups of participants?

This research found that participants in general did not have a clear distinction between PD and training. This research recommends the definition of PD and training, as articulated in Chapter 2, to be used. It was argued in Chapter 7 that a clarification of these terms would remove misinterpretation of these two terms which would assist in interpreting the policy and the implementation of appropriate PD practices in Oman.

8.4.2 Consideration of RQ 2

What are the ideas and priorities for enhancing a PD program delivery as perceived by the different groups of participants?

Different ideas and priorities were generated by the participant groups. There were seven singular ideas and six shared ideas that were identified. The different participant groups had their own interpretation of their ways of enhancing PD program delivery.

Shared or common ideas between participants are as follows:

- Consideration of PD needs (shared by all groups). All groups emphasised the importance of identifying, determining and monitoring PD needs for teachers.
- Link career path to PD (shared by Ds-G, HRDDs & Ss). These groups indicated the necessity of linking career path to PD in order to gain the desired outcomes of PD practices.
- Use the right time (shared by SPs & Ts). Groups treasured providing and choosing the right time for teachers' participation in PD. This is important as teachers may value their involvements in PD programs positively.
- Use specialists' cadres (shared by HRDDs, SPs & Ts). In respect to the presentation of PD practices, participants indicated the need to use experienced professionals or experts in PD use.
- Adopt advanced and modern techniques/technology (shared by SPs & Ts). The diversification of technology use was considered a priority in the implementation and the PD delivery process.

- Monitor the impact of PD (shared by HRDDs & Ss). Participants stressed the need to use a systematic approach in monitoring or assessing PD impact on teachers and student learning outcomes.

The singular important ideas provided by participants were as follows:

- Prepare and list competencies for the PD and the qualification of teachers (Ds-G).
- Adoption of a teaching profession license (Ds-G).
- Have specialised centres for professional PD of teachers (Ds-G).
- Use of academic specialist teacher programs (HRDDs).
- More support for the PD training and the trainer (SPs).
- PD use of active learning methods (Ss).
- Use peers in PD programs (Ts).

8.4.3 Consideration of RQ 3

What PD aspects can enhance the provision of PD for Post-Basic Education school teachers?

Seven aspects/themes associated with the provision of PD were identified that can enhance the provision of PD in Oman, based on the results from Ts, Ss and SPs. These aspects were as follows:

- Defining PD and Training
- Teacher Purposes of PD
- Teacher PD Needs
- Practices for the presentation of PD programs
- Improving PD practices
- Characteristics of effective PD programs
- Impact of teachers' PD.

In terms of the above aspects, the research findings revealed that the following matters need to be addressed:

- A clear statement for PD needs to be formulated by MOE. A dialogue between different stakeholders regarding teachers' needs would be valuable to ensure PD experiences are provided for teachers.

- A clear statement for the purposes of PD needs to be formulated by MOE. Participants indicated that PD purposes were not always understood clearly by participants. Carefully documented purposes could clarify PD policy and the implementation and delivery process.
- High quality PD programs should be provided to enhance the desired outcomes upon teachers' practices and student learning outcomes.
- Identification of barriers for teacher PD is needed. Establishing the impact of teacher PD is important in determining if the appropriate teacher PD practices are being provided.

8.4.4 Consideration of RQ 4

How do different authority levels influence the provision of teacher PD as perceived by the different groups of participants?

MOE documents a policy for the implementation of PD for teachers. However, this research indicated that the policy is not clearly understood by teachers at the bottom level regarding PD practices. The results from this research suggest that different participant groups do not have sufficient dialogue between each other and with other authority levels of groups to enhance the provision of teacher PD based on teacher needs.

8.4.5 Consideration of RQ 5

What specific PD recommendations arising from the research could enhance present and future practices for Post-Basic Education school teachers?

Four recommendations emerged from this research and are presented in Section 8.6.

8.5 Conclusions

Within the Omani context, six conclusions can be drawn from this research and these are presented in this section.

1. There were variations in the level and nature of understanding between different participant groups and interpretation of teacher purposes, needs, practices used for the delivery of teacher PD.

The findings indicate that the main reason for this situation is that MOE policy and documents do not explicitly state the purposes, needs or practices used for the delivery of PD for teachers. As a consequence, the different groups of participants, namely, Ds-G, HRDDs, SPs, Ss and Ts, have

made their own interpretations and determinations for teacher PD use. This situation has been further exacerbated by the fact that there is a lack of distinction between the terms PD and training. This issue has arisen because, as described in Chapter 1, the implementation of PD within the MOE started with teachers doing training. The adoption of PD practices was implicit within PD practices that emphasised training workshops and training courses rather than PD activities. However, following the establishment of the Directorate General of Human Resources Development at the MOE, as noted in Chapter 1, the MOE participants embedded the concept of PD as being more than just doing training within its educational strategies. In the process, no clear distinction emerged in MOE policy and practices for PD and training. Furthermore, a more clarification is needed within the PD participants' responsibility in reference to the revision of Job Description cards. Therefore, it was difficult to accustom PD practices within the system as distinctive from training.

2. There was a varying level of agreement as to the priority of ideas for enhancing teacher PD use.

Twenty-five priority ideas were listed for the five groups of participants. "Identify and determine the PD needs of teachers" was the most prominent priority idea. It was noted that this idea was shared as a priority idea by all the groups of participants in the NGT results but contextualised differently by the different groups.

This outcome could be expected because each different group had different roles and responsibilities as they work in different environments. For the Ds-G and HRDDs matters tended to be viewed from a policy perspective because of the top-bottom level authority. Whereas, SPs, Ss and Ts were more concerned with viewing matters from a practice point of view because of the bottom-up level authority which is concerned about the implementation of such practices.

3. There was a general level of agreement with the literature regarding identification of teacher purposes, needs and practices for the presentation of teacher PD use.

Five categories of "PD purposes" were identified by participants. The most prominent purpose was "Reforming and addressing educational shortcoming in teacher practices" which is consistent with literature findings.

Four categories of "PD needs" were identified by participants. The most prominent need was "Enhanced teaching skills, knowledge and standards" which is consistent with the literature findings.

Furthermore, in addressing matters of doing PD, the idea of “Needs of teacher doing PD” was the most prominent important idea in the NGT results and it was shared as a priority idea by all the groups of participants. The aspect “teacher PD needs” was not considered much in the literature and especially in Omani literature.

Four categories of “practices for the presentation of PD” were identified by participants. The most prominent category of PD practice was “Different forms of PD practices”. This category was strongly endorsed and was given high priority by different participant groups and is also cited much in the literature.

Eight categories were identified by participants for enhancing PD practices. The most prominent category was “Compulsory attendance” category. Different participants appear to agree upon finding a proper strategy to enhance the attendance procedures which is not considered in the literature, especially in Omani literature.

Six categories of practices were identified to enhance effective use of PD programs. The most prominent category was “Policy for doing PD” which was consistent with the most prominent category for obtaining effective use of PD programs. Limited reported literature existed for this aspect. Participants recognised doing PD as a requirement of a MOE policy while others sought it as a school policy. Furthermore, different participants share similar perspectives of revising “policy for doing PD”. For instance, participants proposed the revision of PD in terms of enhancing the ways of providing teacher PD practices. Examples of enhancement could include use of the right or appropriate time and conducting more evaluation and more follow up as an assessment approach concerning quality.

It can be concluded that the findings from this research for each PD aspect are consistent with those reported in the general literature, but each group of participants views the importance of each PD aspect differently according to their level of involvement in teacher PD program.

4. There is a lack of a systematic approach for critical evaluation of PD programs.

Currently, evaluation of PD practices appears not to have been used to determine if PD programs were meeting teacher and school needs. Within the evaluation procedures, results indicated that a

feedback form was used after teacher participation in a PD program. However, this information appears not to be used to address teacher concerns. In addition, PD evaluation results could be used to update participants' needs to help decide upon determining changes in the PD program.

5. The use of PD had limited impact on teacher practices.

Focus group results indicated that participants did not consider that the use of PD had an impact on teachers and other groups. For example, teachers appeared not to recognise that PD had much impact on their skills and knowledge level, their career or their students' learning outcomes. Another example is that an impact outcome of doing PD should cause a positive attitude on teachers so that their peers use the experience. However, some teachers did not acknowledge a positive outcome of doing PD. Furthermore, SPs, in their roles, appeared not to draw on PD evaluations to address potential problems with existing programs or to enhance programs.

6. A coordinated MOE approach for the use of PD, specifically policy and practices for PD, tends to be lacking at the PD provision in Oman.

Participants' perspectives and the MOE views regarding PD aspects appear not to be aligned. This suggests a need for a more coordinated approach in PD use. Using a coordinated approach that involves Ds-G, HRDDs, SPs, Ss and Ts could help to achieve the intended MOE goals. This can enhance better teacher practices for doing PD. Co-ordination can take place through a Specialised Professional Development Administration (SPDA) as considered in Section 8.6.

8.6 Recommendations

Four recommendations have been formulated arising out of the conclusions from this research for present and future teacher PD use. They are intended to enhance the provision of future delivery of PD for teachers in Oman. Whilst this research has concentrated on Post-Basic Education school teachers, it is deemed by this researcher the recommendations presented apply to all teachers within the Omani context. The reason for this contention is that teacher PD is recognised in the literature as a key factor in enhancing teacher practices and student learning outcomes at all levels of education.

Recommendation 1

Establish national guidelines for the provision of PD

Results from this research indicate a need to have national guidelines for the PD delivery process for providing teacher PD. As MOE is the authority responsible for the delivery of PD for teachers, teacher PD practices are informed by “MOE PD policy” and subsequently by “MOE PD guidelines”. It follows that in order to provide clarity, a description of both the “PD policy” and ‘PD guidelines” are needed.

In this regard, “PD policy” should refer to documents that articulate the MOE educational authority’s stance and perspective on PD and PD practices. As such, PD policy should encapsulate general information about PD, the purpose of PD and the PD responsibilities of involved personnel.

“PD guidelines” outline the intent of PD and provide more specific details and recommendations about PD approaches and practices for teachers. The guidelines can be based on a PD framework that addresses key aspects, namely:

- PD and Training – Definition of PD and training
- Teacher purposes of PD – Reasons for teachers undertaking PD
- Teacher PD needs – The importance and desirability for doing PD
- Practices in the presentation of PD programs – The way PD is made available for teacher
- Improving PD practices – Making availability improvements for PD access by teachers
- Characteristics of effective PD programs – adopting effective PD
- Impact of teacher PD – The influence of PD on student outcome.

For the provision of PD practices in Oman, there needs to be consistency in key elements of PD policy and practice at MOE. This researcher suggests a need to have PD national guidelines as underpinning the PD use in Oman. In this respect, the report “Key components of effective professional experience in initial teacher education in Australia” by Le Cornu (2015) is of particular relevance for PD implementation and delivery process in Oman.

In her report, Le Cornu (2015) deems that in order to obtain high quality PD experiences, teachers need to have an integrated approach including well-structured, well managed, well supported PD programs. Aspects such as appropriate timing, length and frequency, for example, are very necessary to ensure high quality experiences. The component of particular relevance in this research concerns the establishment of a high quality integrated systematic approach of PD experiences in order to prepare high quality teachers and education programs. In addition, research suggests that extended professional experiences and programs are necessary to prepare high quality teachers (Darling-Hammond, 2012).

Recommendation 2

State explicit meaning of PD and training within the policy documents

It is particularly important to have documentation defining and explaining PD and training. Terminology is considered vital when the aim is to achieve consistency in interpretation to use specific terms or concepts. It was established in this research that in order to minimise the various interpretations of PD and training concepts, consistent usage of these terms is needed.

This research demonstrated that there are various interpretations of the terms PD and training at various levels within the educational system in Oman. Furthermore, it is evident from the research findings that there should be a clear statement of definitions of PD and training within the MOE policy as stated in Chapter 2.

Therefore, the proposed definition for teacher PD is:

Professional development is a change, a collaborative, a comprehensive, an ongoing process or activity happening in a particular context to develop an individual's skills, knowledge, competence, beliefs and attitudes to meet school and individual teacher needs as practices.

The proposed definition for Training is:

Training is a systematic approach or a means to add new knowledge to teachers' experiences through attending workshops and training courses provided by an expert and to attain individual and

organisational needs in order to improve the work culture and to enhance workplace practices.

The above definitions were generated based on the literature review and this researcher's knowledge about the identification of these two terms. Clearly, there is a need for MOE to provide a description and meaning for PD and training that also includes specific examples of their use. It may seem from the results of this research that the implementation of PD by MOE still needs time to be recognised and accepted by teachers and others such as supervisors and school principals. It follows that acceptance of the concept of PD in education may take time to be recognised as a significant reality. Based on the findings of this research, it is suggested that the implementation and acceptance of the above definitions would require the re-organisation of Specialised PD Administration (SPDA). This action would verify the interpretation of PD and training as separate concepts where each has its unique characteristics, implementation and practices.

Recommendation 3

Re-organising the Specialised PD Administration (SPDA) for the provision of PD in Oman

The findings from participants' perspectives indicated that there is a need for re-organising the Specialised PD Administration (SPDA) unit within the MOE in order to meet teacher PD needs and purposes. This unit could be revised to review, re-organise and enhance the policy, delivery and implementation of teacher PD. The SPDA unit would have its own vision and message in developing high quality Omani teachers focussing on PD practices rather than training programs.

It is recommended that the SPDA has the following main roles:

- *Change the Training MOE Centres' (TMOECs) name in the Governances to be PD Centres (PDCs) in the Educational Directorates General.* The primary reason for this is to make the process of PD delivery and practices clear for participants involved in PD regarding policy, and implementation. Thus, PDCs at MOE would provide both PD and training. In this respect it would be appropriate to split the current (TMOECs) into 2 divisions; a PD department and a training department, each of which would have specified responsibilities.
- *Determine PD needs from schools in each of Oman's eleven Directorates General.* This can be done through the use of surveys, regular meetings, and various educator networks in the process.

- *Develop educational partnerships with colleges, universities, and other agencies.* Forming such connections/networks can enhance the PD delivery process, especially the presentation of PD programs for teachers. Establishing partnerships with internal and external educational and learning communities can help address PD needs such as collaborative networked working relationships. Networks allow educators and the SPDA to share ideas and information in order to share same perspectives about enhancing PD practices. Establishing a community network can also assist in identifying suggestions for improvement of deficiencies in the delivery of the PD process.
- *Make available specific provision of PD for inexperienced/ novice teachers in schools, which is needed at both school and regional level.*

The results in this research indicate a particularly greater need to provide PD for new inexperienced teachers than for experienced teachers. Through the researcher's experience, the practice should be aimed at teachers with less than five years of teaching experience. Therefore, PD is required specifically for those inexperienced teachers. In this respect, Chapman and Miric (2009) proclaim that teachers are "the gatekeepers of the educational reform" (p. 319), who can make changes happen by reflecting best educational practices positively on students. In this research, results indicate that participants recognised that one of the purposes of PD was for developing new staff experience and enriching old and new staff's skills and knowledge.

- *Enhance current evaluation of PD practices.*
- Evaluation of PD practices provides the opportunity to further enhance PD practices. The results from this research suggest a need to regularly evaluate PD programs and their outcomes and to use the results evaluation by different stakeholders for the revision of the implementation and delivery process. Participants' perspectives, especially teachers, indicated that evaluation of PD practices by teachers doing PD was not systematically undertaken or done properly so as to have the intended effect at schools.
- *Facilitate more open dialogues between those involved in PD.*

A critical aspect in the enhancement of PD use is to have more dialogues between the different participant groups. The establishment of a committee or team that may include stakeholders from MOE including Ds-G, HRDDs, SPs, Ss, and Ts from the eleven educational directorates general in the Sultanate is a suggestion. Open dialogues must exist

between participants responsible for PD policy and its' uses. Moreover, dialogue can assist in making each participant responsible for contributing to group decisions. Results from such dialogues could enhance the understanding of PD practices for different groups at MOE including Ds-G, Supervisors, Technology Personnel, School Principals, administrators, teachers, and other professionals.

Recommendation 4

Undertake a comprehensive review of the practices and presentations of PD and training in Oman

As shown in the findings a review of PD in general and the type of PD offered is needed. The review could assist in addressing the adequacy of current PD practices and presentations. For example, it could determine the appropriate needs and purposes for teachers doing PD. A committee or team would be responsible for conducting the review and could include officials such as Ds-G and HRDDs from all the eleven educational directorates general in Oman. It should also include Supervisors and Senior Teachers because of their main supervisory roles for teachers.

Recommendation 5

Develop a framework to use in the design, development and use of teacher PD practices for enhancing existing teacher PD programs.

This research intimates the need for a framework for PD use in Oman. The reason for this framework is that PD use needs to be reorganised to consider, express and connect all stakeholders' points of view in order to meet PD needs, purposes, practices of presentation, characteristics of an effective PD program, improvement aspects and consider the impact of doing PD on teachers. MOE could use the educational indicators system which is a system adopted at MOE to indicate the level of weakness and strength of the educational plans and process at MOE and at schools. Feedback from officials involved in the implementation and delivery of PD programs can then be used to re-organise and further shape an innovation for doing teacher PD.

The researcher suggests that the framework could be based on the ideas and priorities of PD use, for example, identify and determine the PD needs of teachers, and have specialised cadres for PD use.

Furthermore, the researcher also suggests that the framework could be based on the main PD aspects in the provision of teacher PD which were mentioned in Chapter 6.

In this respect and based upon foregoing, the researcher suggests that the framework should have three interactive components as follows:

- Delivery elements
- PD aspects
- Participants

Figure 8.1 Framework for Teacher PD use

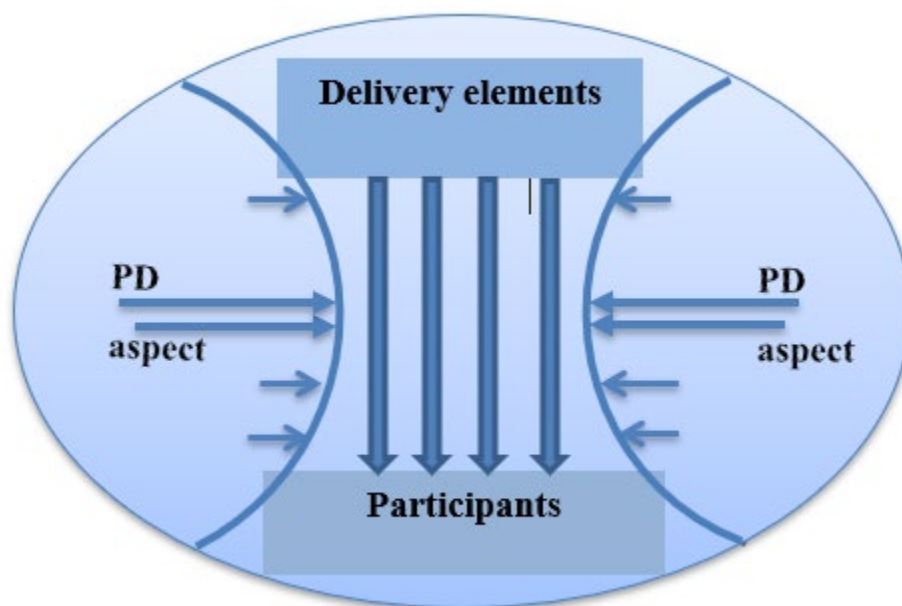


Figure 8.1 shows the core features of how PD works to influence teacher performances and impact student learning outcomes. This figure proposes a basic model of how successful PD implementation and delivery process could satisfy and enhance participants' performances. This model represents interactive relationships among the main key features of delivery elements, PD aspects and participants who are the beneficiaries of the outcomes of the PD use/process.

Successful implementation of PD follows the order that appropriate delivery elements are identified and developed, appropriate PD aspects are considered and finally the participants experience the PD.

This framework offers a strong foundation for revising whether the PD use is effective. Practically, this framework evokes that the outcomes of the PD use depends upon the implementation of successful PD delivery elements through adopting advanced PD aspects which consider appropriate participant needs.

8.7 Areas for Further Research

This section considers areas for further research that have arisen out of the finding from this research and its limitations. The following areas for further research have been identified:

- Examine the MOE PD standards for the implementation of teacher PD practices. The research would examine the existing standards in the light of literature. The outcome of this research would be proposing enhanced PD standards to keep in pace with the modern innovation and evolution.
- Investigate PD use other than at the Post Basic Education level such as in Basic education in the government sector and in the private education sector. The outcome of this research would be to develop updated PD practices which could enhance teacher practices and student learning outcomes. This could be done by replicating this research for further MOE schools.
- Undertake research to establish best practices in the provision of PD. The research will investigate and review best practices of PD. The research could investigate the participants' perspectives about different aspects of teacher PD practices. Results can be used to develop a framework for best practices that may be used in enhancing existing teacher practices.
- Further investigate the priorities and aspects of PD practices which can enhance teacher PD outcomes for different groups of teachers, such as inexperienced teachers, teachers needing PD for the qualification; the updating of teachers of new approaches to teacher practices. This research could be done by reviewing PD articles and documentation. Research outcomes would help determine the types of PD that these groups need.

- Examine the use of partnership participation in the implementation of PD programs as their involvement could apply advanced and modern techniques and approaches for enhancing PD use. Such research could determine the importance of a broader perspective in the design and development of new programs. Building connections with other educational communities can also underpin the need for new PD practices.
- Research the effect of specific PD practices on student outcomes. This research is needed to help determine what particular PD uses and purposes can help enhance students learning outcomes. This research could be done by investigating perspectives of novice and experienced teachers about their views in doing teacher PD. The outcome of this research could be developing guidelines for successful implementation of PD practices.

8.8 Concluding Remarks

It is evident that the MOE in Oman considers the use of PD as a key priority for obtaining high quality teachers. This research has shown that there is a need to further enhance current use of PD drawing upon the seven aspects identified in the provision of teacher PD. In this respect, recommendations for future development of PD have been provided. Importantly the research findings intimate a need for a systematic approach benefiting from the priorities of ideas and enhanced aspects of PD use. The researcher suggests there is a need to establish an overall review of practices and presentations be adopted in PD use. An important recommendation of this research is to consider developing a framework to use in the design, development and use of teacher PD practices in the implementation and delivery of teacher PD practices to enhance the existing teacher PD program. The research also considers the re-organisation of the established Specialised Professional Development Administration (SPDA) in Oman as a unit to have the responsibilities of providing appropriate PD programs and evaluate their use. As has been demonstrated, to date there has been limited research about teacher PD practices in Oman. It is hoped that this research will stimulate further research in teacher PD use in Oman.

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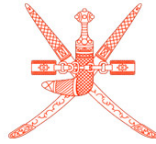
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Appendices

Appendix A: Job Description Cards for the Groups of Participants in the Research

This appendix shows the different roles of different stakeholders within the Ministry of Education in the Sultanate of Oman who participate in this research. These job cards were issued by Ministerial Decision in the year 2014 by the Minister of Education.

In the Name of God, the Most Compassionate, the Most Merciful



Ministry of Education
Ministerial Decision No. (652/ 2014)
On the Establishment of some Supervision Posts in Educational Directorates in Governorates

Based on Civil Service Law issued under Royal Decree no. 120/2004,
Royal Decree no. 37/2008 on the assignment of the Ministry's portfolio and the accreditation of its organizational structure,
The Regulations of Civil Service Law issued under Decree no. 9/2010,
Ministerial Decision no. 69/2008 on the accreditation of the Ministry's administrative divisions, and the determination and amendments of their portfolio,
Ministerial Decision no. 649/2012 on the accreditation of job tables and descriptions according to Ministry's Job Categorization and Organization System,
The Civil Service Ministry's approval under Letter no. (6360/ 5212) on 25/8/2014 A.D,
And as required by the interest of the work.

It was decided that:

Article (1): the following **Supervision Posts** shall be added to job tables and descriptions, according to Ministry's Job Categorization and Organization System for Omani attached to said Ministerial Decision no. (649/ 2012), in the educational directorates in the governments: "Assistant Director General of the Education Directorate General for the **Administrative, Financial and Projects Affairs** in the Governorate, Assistant Director General of the Education Directorate General for the **Planning Affairs, Human Resources Development and Information**

Technology in the Governorate, and Assistant Director General of the Education Directorate General for **Educational Assessment Affairs and Educational Programs**” with their degrees and conditions as specified in the Appendixes from (1-3).

Articles (2): the two posts of **Assistant General Director of the Education Directorate General for the Educational Affairs**, and **Assistant Director General of the Education Directorate General for the Administrative and Financial Affairs** Shall be cancelled.

Article (3): this Decision shall be effective as of date of issuance.

Dr. Madeeha bint Ahmed Al-Shebania

Minister of Education

[*Signed]

Issued on: 4/12/1435 A.H

Corresponding to: 28/9/2014 A.D

Job Description Card	
Sultanate of Oman	
Ministry of Education	
Job Code:	354
Job Title:	Director General of the Directorate General of Education in the Governorates
Job Grade:	Second, Third, Fourth, and Fifth Grades
Qualitative Group of Jobs:	Senior Management
Jobs Category:	Senior Management
General Description:	
Job Location:	This job is at the top of jobs in the Directorate General of Education in the Governorates related to the Minister of Education.
Job Function:	This job is concerned with supervising, planning, coordinating and monitoring all activities related the development and implementation of plans and programs in order to achieve the objectives of the Directorate General of Education in the Governorates.
Roles & Responsibilities:	
<ul style="list-style-type: none"> - The incumbent shall be subject to the administrative direction of the Minister and shall supervise generally on all departments, offices and sections under his/her responsibility. - To oversee the development of annual plans for the Directorate within the framework of public policies and submit them to the concerned authorities for approval. - To follow up the implementation of the organizational and functional plans and programs of the Directorate and monitor the validity and quality of implementation process in accordance with quality standards. - To approve the studies and research of the Directorate, the standard performance rates and the employment quota, and present what is necessary before the competent authorities for approval. - To apply the modern administrative methods of the Directorate in accordance with the requirements of the work development. - To supervise the implementation of projects related to the Directorate. - To supervise the study of the challenges and problems faced in the implementation of the activities of the Directorate. - This job's role requires a great deal of freedom of action, innovation and dealing with problems and situations that require solutions while not conflicting with the objectives of the Directorate. 	

- To review the periodic reports of the achievements and activities of the Directorate as well as the challenges and problems and ways of solution to be submitted to the competent authorities concerned.
- To supervise the implementation of policies and decisions issued by the Ministry concerning the provision of educational services in the region.
- To supervise the provision of care and professional development for teaching and administrative staff and workers in the Directorate.
- To encourage conducting research, innovation and innovative initiatives emanating from the educational field.
- To provide general supervision on organizing the annual teachers' forum, its activities and implementation.
- To suggest new methods for developing work based on the real practices.
- To follow up the process of developing work systems in the Directorate and update them according to the latest developments.
- To follow up the implementation of curricula and the process of educational evaluation and ensure that the teaching and administrative staff apply documents and the related publications.
- To provide the general administrative supervision for all divisions of the Directorate, schools and offices affiliated to it.
- To coordinates with the governmental and private institutions at the region level in various aspects that serve the educational process.
- To perform other similar duties as may be assigned.

Job Description Card	
Sultanate of Oman	
Ministry of Education	
Job Code:	366
Job Title:	Director of Human Resource Development Department
Job Grade:	Sixth, Seventh and Eighth Grades
Qualitative Group of Jobs:	Educational Services
Jobs Category:	Teaching
General Description:	
Job Location:	This job is at the top of jobs in Human Resource Development Department the Directorate General of Education in the Governorates.
Job Function:	This job is concerned with supervising all works and activities related to the implementation of plans and programs of Human Resource Development Department and following up the achieved objectives and the developed work plans.
Roles & Responsibilities:	
<ul style="list-style-type: none"> - The incumbent shall be subject to the general supervision of Director General of the Directorate General of Education in the Governorate and shall supervise directly on the centre and sections under his/her responsibility. - To develop and coordinate the plans, programs, systems and rules to define work methods in the field of human resource development and submit them to the Director General. - To review the technical assistance programs prepared by the sections of the Department and related to the requirements of non-typical study to solve work problems in the field of human resource development and the application of modern management systems. - To supervise the implementation of human resource development plans, the development of the staff in the Department and increase the efficiency of performance. - To review the implementation of projects related to human resource development. - To supervise the study of the challenges and problems faced in the implementation of Department activities, and prepare the results to be submitted to the Director General of the Directorate. - To supervise the establishment of databases for the work systems in the Department using modern IT systems. - To issue instructions to facilitate and coordinate work procedures among the employees of the Department. 	

- To make medium-level contacts if authorized to represent the office or unit and participate in meetings and committees related to human resource development.
- To prepare the results of periodic reports concerning the achievements and activities of the Department as well as the obstacles and ways of solution to be submitted to the Director General.
- To supervise the preparation of the annual training plan for the region according to needs and follow-up its implementation and evaluation.
- To supervise the follow-up of training courses to identify and overcome any difficulties that may arise during work.
- To supervise the evaluation of the training programs' impact on the performance of training programs' beneficiaries in cooperation with the competent authorities.
- To supervise the provision of all necessary facilities for the implementation of training programs.
- To lay down the foundations and criteria for nomination for qualifying and higher studies, ensure their application for nomination and follow-up of candidates.
- To supervise the performance of teaching and administrative staff in accordance with the educational supervision policies approved by the Directorate General for Human Resource Development.
- To supervise all student evaluation processes and follow-up the related mechanisms at the school and Directorate level in the light of the approved policies.
- To suggest developing the operational regulations and systems in light of feedback to be applied.
- To supervise the process of applying the controls to provide financial and abstract incentives for the teaching, administrative and technical staff and inform the concerned bodies of them.
- To perform other similar duties as may be assigned.

Job Description Card	
Sultanate of Oman	
Ministry of Education	
Job Code:	134
Job Title:	Director of Main Training Centre
Job Grade:	Sixth, Seventh and Eighth Grades
Qualitative Group of Jobs:	Administrative
Jobs Category:	Administrative
General Description:	
Job Location:	This job is at the top of jobs in the main training centre of the directorate general for human resource development.
Job Function:	This job is concerned with supervising on all works and activities related to the implementation of plans and programs of Main Training centre and following up the achieved objectives and the developed work plans.
Roles & Responsibilities:	
<ul style="list-style-type: none"> - The incumbent shall be subject to the general supervision of director general of human resources development and shall supervise directly on the centre's employees. - To develop and coordinate the plans, programs, systems and rules to define work methods in the centre and submit them to the Director General. - To supervise the implementation of human resource development plans, the development of the staff in the centre and increase the efficiency of performance. - To supervise the conduction of studies and research, performance rates and the employment quota and provide proposals to be presented before the Director General. - To review the technical assistance programs for the centre and related to the requirements of non-typical study to solve work problems in the field of training and modern management systems. - To review the implementation of projects related to training field. - To supervise the study of the challenges and problems faced in the implementation of centre activities and prepare the results to be submitted to the Director General. - To propose he annual budget for the training centre in coordination with Qualification and Training Department. - To supervise the training centres in the Governorates and educational regions and provide them with the necessary devices and materials to perform their work. 	

- To activate the role of training centres in the Ministry and educational regions and follow up the implementation of training programs in them.
- To Participate in measuring the impact of qualifying and training programs.
- To Participate in research that contributes to developing the training and qualification.
- To supervise on following up centres in the Governorates and educational regions and prepare periodic reports on work process in them.
- To develop the training library, update it and provide it with books and references.
- To propose for holding conferences, workshops and internal and external educational seminars and schedule them within an annual plan.
- To follow up the educational meetings held at the level of the Ministry and educational regions.
- To prepare a database of training institutions and expertise at the local and regional levels for use in the design and implementation of training programs.
- To participate with both departments of educational supervision and the development of school performance in the establishment of databases necessary for human resource development.
- To issue instructions to facilitate and coordinate work procedures among the employees of the centre.
- To make medium-level contacts with authorities inside and outside the Directorate if authorized to represent the Department or Unit and participate in meetings and committees of the Directorate in order to discuss the latest developments and modern systems.
- To prepare the results of periodic reports concerning the achievements and activities of the centre as well as the obstacles and ways of solution and submit them to the Director General of the Directorate.
- To supervise the establishment of databases for the work systems in the Training Centre using modern IT systems.
- To perform other similar duties as may be assigned.

Job Description Card	
Sultanate of Oman	
Unit Name:	Ministry of Education
Job Title:	School Manager
Qualitative Group of Jobs:	Educational Services
Jobs Category:	Teaching
General Description:	
Job Location:	Public Schools
Job Function:	This job is concerned with managing the educational process in the school and facilitating all its organizational, executive, evaluation and development requirements and following up them; studying all the challenges facing the school in the administrative, financial and technical aspects and working on solving them; and supervising all the employees, students and school facilities.
The incumbent is subject to the direct supervision of the Director General of Education in the Governorate / Director of the Department of Education. In addition, his/her performance shall be evaluated by the Senior Administrative Supervisor and the Administrative Supervisor.	
Roles & Responsibilities:	
<ul style="list-style-type: none"> - To adhere to the ethics of the profession, the laws, regulations and decisions organizing the work whether in behaviour or action and follow up the commitment of the staff implementation of them. - To establish a time schedule for the implementation of his/her duties and responsibilities in the school plan under the supervision of the administrative supervisor. - To develop the school plan with the participation of employees and beneficiaries of the school services, follow up the implementation process of that plan, assess and develop it. - To supervise and organize all works required by the school management. - To supervise the preparation of the school timetable. - To determine the school needs concerning the teaching, technical and administrative cadres; provide the necessary materials and devices and follow-up them; and work in coordination with the concerned bodies to provide them. - To supervise the development of the annual plan of school curriculum and the daily preparation of lessons by teachers and verify the compatibility of the daily preparation with the annual plan. - To supervise the fulfilment of students' educational, social, health and psychological needs in coordination with the persons concerned. 	

- To supervise the regular attendance of employees and students at school.
- To supervise the preparation, organization, and usage of school records and files and safekeeping them electronically or in paper-based form.
- To prepare records and files related to the work field in order to ensure better performance.
- To supervise the activation of educational activities inside and outside the school so as to serve the educational process.
- To supervise the activation of the work of committees and competitions determined by the Ministry.
- To hold regular meetings with the teaching, administrative and technical staff for the development of school work.
- To supervise the work of exams, evaluation process, analysis of results, and the implementation of informative and remedial programs with senior teachers to help students of different categories.
- To participate with the assistant and senior teachers to pay supervisory visits to the teaching staffs and the related functions and provide the concerned supervisor in detail with the most important strengths and the most important aspects of the proposed development.
- To participate in the planning and implementation of professional development programs for the teaching staff and the related functions and follow up the impact of these programs on staff performance in coordination with the concerned supervisors and senior teachers.
- To make the necessary contacts with community institutions, link between the school and the surrounding community and invest its resources to achieve the school's goals.
- To supervise the safety, maintenance, cleanliness and good use of school building.
- To supervise school transportations, identify the related needs of school and follow up them.
- To supervise the management of school financial resources in cooperation with the concerned cadres.
- To supervise the preparation of the annual budget of the school, its implementation and redeployment between its items in accordance with the actual need of work in a manner that is compatible with the regulations issued in this regard.
- To plan and implement the developmental projects that contribute to the development of administrative and technical performance as well as the advancement of academic achievement in accordance with the controls issued in this regard.
- To supervise the work process in the school cooperative association/ school canteen.
- To supervise the auditing and approval of financial invoices.
- To supervise the annual inventory of school property.
- To prepare job performance evaluation reports for the school staff in coordination with the concerned.

- To nominate members of teaching staff and the related posts for the specialised studies according to the available qualifying opportunities.
- To strengthen the cooperation among school, home and the local community, activate the roles of parents' council and the school as an educational institution to serve the community and make use of the available resources to serve the educational process.
- To prepare a quarterly report on work progress in the school in which he/she explains what has been accomplished and what has not clarifying the means to overcome the difficulties, if any, and submit this report to the Director General of the Department of Education in the Governorate.
- To participate in the preparation of research and field studies and employ their findings and recommendations in the field of work.
- To develop his/her professional knowledge, enhance his/her practical experience, and commit to participate in events, meetings and training programs related to the field of work.
- To renew, develop and make proposals within the field of his/her roles and responsibilities in the light of work regulations.
- To supervise the self-assessment process of school performance.
- To promote the national and functional belonging and loyalty.
- To work on self-evaluation.
- To visit the committees and rooms of the General Examinations of the General Education Diploma or equivalent level in Exam Centre headed by him/her to follow up the compliance with the controls of the examinations administration; collect evidence and prepare the record of evidence in the event of any violation of those controls.
- To pay field visits to the school campus facilities to monitor the compliance of school staff and students with the rules of behavioural and ethical discipline, collect evidence and prepare a record of evidence in the event of any violation of these rules.
- To perform other similar duties as may be assigned.

Job Description Card	
Sultanate of Oman	
Unit Name:	Ministry of Education
Job Title:	Subject/ Field Supervisor
Job Code:	
Qualitative Group of Jobs:	Educational Services
Jobs Category:	Teaching
Job Grade:	Eighth and Ninth Grades
General Description:	
Job Location:	Directorates/ the Educational Administration in Governorates.
Job Function:	This job is concerned with supervising the senior teachers and subject/field teachers in schools.
The incumbent is subject to the direct supervision of the competent Head.	
Roles & Responsibilities:	
<ul style="list-style-type: none"> - To adhere to the ethics of the profession, the laws, regulations and decisions organizing the work whether in behaviour or action, and follow up the commitment of persons, under his/her supervision, concerning the implementation of these regulations and decisions. - To establish a time schedule for the implementation of his/her duties and responsibilities under the supervision of the competent responsible. - To contribute to the dissemination of professional culture among senior teachers and subject/ field teachers. - To develop an annual plan for his/ her work, implement and follow up it. - To review the plans, programs and mechanisms of the work of senior teachers and subject/field teachers and follow up their implementation, evaluation and development. - To participate in specifying, preparing and implementing the training programs for senior teachers and subject/field teachers and follow up their impact. - To pay supervisory visits to follow up the performance of senior teachers and subject/field teachers and specify their needs; prepare reports on their performance levels and provide them with necessary support. - To follow up the implementation of the educational plans and programs applied on field/ subject at the level of schools. - To Coordinate with school manager and the senior teacher to help the teacher in different aspects related to field/ subject. 	

- To employ various supervisory methods based on the needs of senior teachers/teachers in schools under his/ her supervision.
- To implement the program of classroom visits exchange between senior teachers/ teachers.
- To implement practical lessons based on teachers' needs at the level of schools under his/ her supervision.
- To study the difficulties faced in teaching subject/ field and suggest the appropriate solutions to be presented to the senior supervisor.
- To follow up the employment of senior teachers and subject/ field teachers for learning resources centres, laboratories and other centres in a manner that serves the curriculum.
- To follow up the provision of schools' needs concerning teaching and technical cadres, books and the educational means related to his/ her field/ subject, and coordinate with the competent authorities to provide this.
- To participate in following up the performance of Literacy and Adult Education Centres.
- To participate in specifying, preparing and implementing the training programs for the categories under his/ her supervision and follow up their impact.
- To participate in the process of nominating senior teachers/ teachers for courses and training programs in their work field.
- To follow up the plans of implementing the curricula and verify the achievement of their objectives.
- To analyse, assess and prepare reports and developmental proposals to be submitted to the senior supervisor.
- To participate in the development of curricula with specialists.
- To participate in the preparation of exams, review them and follow up their implementation.
- To analyse a sample of students' results, examine the results indicators and provide feedback for senior teachers and subject/ field teachers in schools under his/ her supervision.
- To follow up the outcomes of learning, education and evaluation processes and contribute to developing them for better performance.
- To follow up the usage of academic achievement outcomes in school plan to improve the level of students' learning.
- To follow up the usage of educational programs and developments among senior teachers/ teachers.
- To participate in following up and evaluating the performance of schools according to the system of school performance development.
- To study and analyse the reports of senior teachers and subject/ field teachers, provide feedbacks, suggest appropriate solutions for the encountered challenges and follow up the implementation of these solutions.

- To hold periodical meetings with senior teachers and subject/ field teachers to exchange opinions and review the latest educational developments.
- To prepare evidence and guiding publications related to the supervision of subject/ field.
- To activate the computerized programs, employ data, information, statistics and indicators and develop them.
- To prepare a comprehensive annual report on the performance of senior teachers and subject/ field teachers.
- To participate with the school manager in the preparation of reports concerning the evaluation of job performance of senior teachers and subject/ field teachers.
- To participate in all works related selecting senior teachers and subject/ field teachers, evaluate their performance and provide them with the necessary support.
- To prepare records, files and databases related to his/ her work field and update them in a manner that guarantees better performance.
- To participate in the preparation of research and studies and employ their findings and recommendations in the field of work.
- To develop his/her professional knowledge and enhance his/her practical experience.
- To participate in events, meetings and training programs related to the field of work.
- To renew, develop and make proposals within the field of his/her roles and responsibilities in the light of work regulations.
- To promote the national and functional belonging and loyalty.
- To work on self-evaluation.
- To perform other similar duties as may be assigned in the work field.

Job Description Card	
Sultanate of Oman	
Unit Name:	Ministry of Education
Job Title:	Subject/ Field Teacher
Qualitative Group of Jobs:	Educational Services
Jobs Category:	Teaching
General Description:	
Job Location:	Public Schools
Job Function:	This job is concerned with teaching and implementing the educational approaches according to the developed techniques and means in a manner that lead to increasing the academic achievement level of the students.
The incumbent is subject to the direct supervision and evaluation of the school manager, the assistant director, the senior teacher and the competent supervisor in case of no senior teacher.	
Roles & Responsibilities:	
<ul style="list-style-type: none"> - To adhere to the ethics of the profession, the laws, regulations and decisions organizing the work whether in behaviour or action. - To establish a time schedule for the implementation of his/her duties and responsibilities under the supervision of the school manager, the assistant director, the senior teacher and the competent supervisor in case of no senior teacher. - To prepare the annual plan of the curriculum and the daily preparation for lessons. - To cooperate with the senior teacher in the preparation of study plan of field/ subject. - To give the teaching hours assigned to him/ her in his/ her field/ subject, develop continuously the learning level of students and upgrade the level of academic achievement. - To create the suitable environment to implement the educational approaches. - To apply the curriculum, participate in them and provide the senior teacher and field/ subject supervisor with analytical models for them. - To use and develop various teaching techniques in the educational approaches. - To provide the educational means, prepare and use them during classes. - To commit to attending the school queue and participate in its organization. - To give the reserve hours (classes) assigned to him/ her. - To participate in the meetings of subject/ field teachers to discuss the professional and administrative topics. - To provide practical lessons in his/ her field/ subject at the level of the school and the Directorate. 	

- To take care of students educationally and didactically and guide them to the best ways of learning and education in different educational approaches.
- To use various programs and learning resources to give lessons and implement activities during classes.
- To implement and follow up classroom and non-classroom activities assigned to the students and provide them with feedback.
- To prepare, review, implement, and analyse the exams; extract student performance indicators and implement the approved assessment tools.
- To perform all the work of exams, observation and correction, including literacy and adult education.
- To enter the grades of students' learning evaluation and descriptive reports into the educational portal.
- To develop and implement the remedial and informative plans for students, including the students with learning difficulties in order to raise the level of academic achievement.
- To develop the culture of innovation among the students and follow up the impact of this in their academic achievement.
- To participate with his/ her colleagues of subject/ field teachers in the establishment of professional development programs for the subject/ field and carry out them.
- To participate in daily shift works and follow up student attendance.
- To supervise the school activities groups and students' councils assigned to him/ her, perform the duties of class educator and provide the technical consultations for school activities specialist.
- To cooperate with school management and his/ her colleagues of subject/ field teachers in the assigned works that contribute to the development of the educational process.
- To strengthen the cooperation among school, home and the local community in relation with his/ her work field under the supervision of school management.
- To meet the parents of students to discuss the educational situations of their children.
- To participate in school councils and committees and attend the school meetings.
- To use records and files related to his/ her work field and update them in a manner that guarantees better performance.
- To use the computerized programs in performing assigned the duties.
- To participate in the preparation of research and field studies and employ their findings and recommendations in the field of work.
- To develop his/her professional knowledge, enhance his/her practical experience and participate in events, meetings and training programs related to the field of work.
- To renew, develop and make proposals within the field of his/her roles and responsibilities in the light of work regulations.
- To participate in all evaluation processes of school performance.
- To promote the national and functional belonging and loyalty.

- To instil values and good morals in school.
- To enhance the positive behaviours among students and forbid them from unacceptable behaviours
- To work on self-evaluation.
- To perform other similar duties as may be assigned in the work field.

Appendix B1: A Sample Transcript of Recording of a Focus Group Session

Researcher: What are the differences between the Professional Development (PD) and training in the context of this subject?

SP1

From my point of view, I expect the differences between the PD and training is that PD might be going on process. For, example, teacher needs to develop himself. Training is limited to a specific period and is exceptional for specific training needs, which targets the trainee.

SP2

The both concepts are interrelated, but training is more general than PD because the PD specialises in the specificities of the materials. However, in training covers all the subjects in one training pack.

SP1

Training is done on specific training PD specialises on curriculum according to the timing of executing its programs. PD is a continuous case related development or new addition of new strategies or others within the educational field.

SP3

Training is specific for specific category in specific subject while PD is particularised for targeted group in specific subject in a specific time. Training happens in limited percentages for small numbers of teachers. PD happens at school continuously about teaching strategies and specific categories.

SP4

Training sessions for specific aims at specific time and it is shorter than the PD. PD is at the individual level as a long-term process to develop his perception and knowledge.

SP5

I think that PD expresses the need for specific thing, but training is general.

SP6

Training is part of PD as PD can be done by the institution or by the person himself or school. Training might be happening according to specific needs for example, related to adopting new unit within the curriculum or new strategy. However, PD is learning along life run at school and outdoors. For example, there is PD learning societies where teacher tends to be a learner as in-service training as teachers learn from each other.

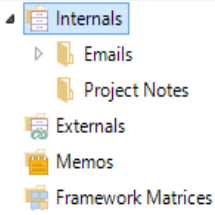
Appendix B2: The Main Steps in the NVivo Data Analysis for Focus Group Sessions

The main steps involved in the NVivo data analysis of Focus Group sessions were:

- View the available information and save it on Word files documents in order to use it digitally easily.
- Clean the data, including renaming transcripts to de-identify participants' responses.
- Write notes and maybe summaries and seek out new information.
- Read and examine data in depth so as to obtain relationships, connections and main headings in a way that enriches the study.
- Use and encode data with pseudonyms and nicknames to participants on PC for security purposes.
- Use the NVivo 11 data analysis program as shown in Appendices C1 to C6.
- Organise the FG(s) in three sets of Teachers, Supervisors and School Principals in order to obtain the references of repeated words in those sets clearly.
- Create memos (summaries) corresponding to interview questions for each category, which were named as their subjects, for example the Defining PD and Training topic and PD purposes.
- Create Tree-Node and open FG files in check box of sources and then worked on opening each FG session separately. When each node is clicked on, it opens as a Word document which has the shaded sentences in each group.
- Group data in information as sub-level nodes.
- Develop Queries folder and present results as eight nodes called themes. They were named: Defining PD and Training, Purposes of doing PD, Teacher Needs, Practices for the presentation of PD, Improving PD practices, Impact of teachers doing PD and Effective PD programs.
- Develop Queries Results folders and present results as sub-level nodes which are the sub-themes called categories.

Appendix C1: Sample File for NVivo Analysis

Appendix C1 is a sample file containing all the available data to facilitate the NVivo usage. The file has two columns. Column 1 shows the sources that were established to start the project in NVivo 11. In this research, “project file” could be opened to obtain Internals, Externals, Memos and Framework Matrices files which are called sources in the NVivo 11 program. Column 2 shows the “Internals”. In the Internals, researcher generated six files for the six FG groups of participants. Six files represent the division of the three FGs groups. Each group has two groups. For example, Teachers’ group has FG1 Teachers and FG2 Teachers.

Sources		Look for	Search In	Internals	Find Now	Clear
		Internals				
		Name	Nodes	References	Created On	
		FG3 Supervisors	56	523	11/03/2017 8:52 PM	
		FG6 Principals	63	606	30/04/2017 6:12 PM	
		FG2 Teachers	64	601	11/03/2017 8:52 PM	
		FG5 Principals	65	534	30/04/2017 6:11 PM	
		FG4 Supervisors	68	740	11/03/2017 8:52 PM	
		FG1 Teachers	72	838	11/03/2017 8:52 PM	

Appendix C2: Sample File Presenting FG Memos based upon FG Meeting Questions

Memos were created and used based upon FG questions that were asked in the meeting. Appendix C2 is a sample file as is shown in the Appendix and has two columns. Column 1 shows the Memos file in the Sources file of the main project file. Column 2 shows the list of Memos that were created in the project.

Sources

Internals

Emails

Project Notes

Externals

Memos

Framework Matrices

Sources

Nodes

Look for

Search In

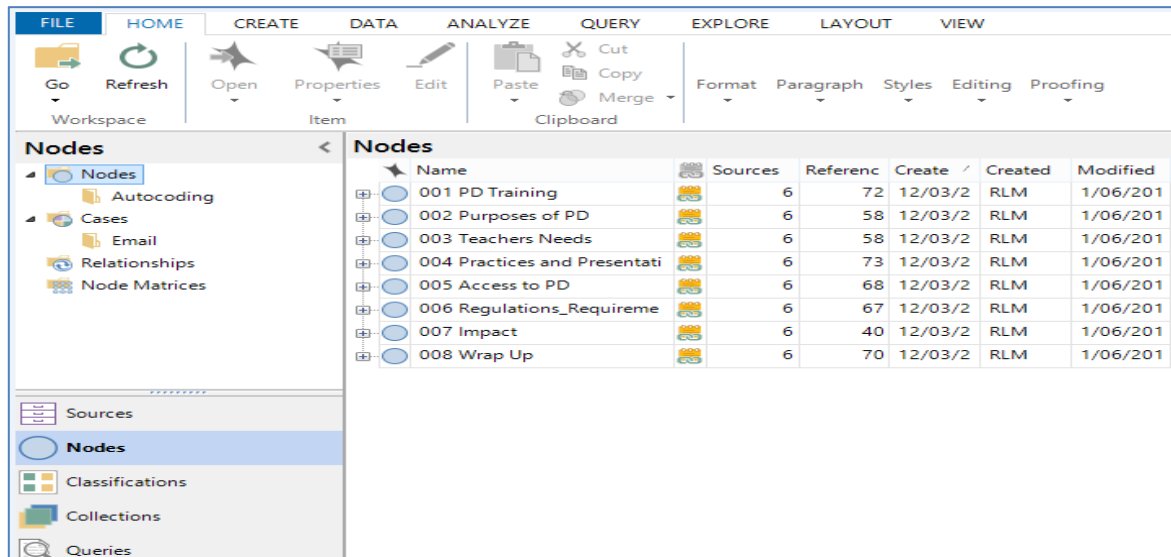
Memos

Memos

Name	Nodes	Referenc	Created
Access to PD	0	0	17/03/2
Impact	0	0	17/03/2
Mapping additional research qu	0	0	22/03/2
PD Training	0	0	17/03/2
Practises and Presentation	0	0	17/03/2
Purposes of PD	0	0	17/03/2
Regulations and Requirements	0	0	17/03/2
Summaries & Comparisons- Tea	0	0	30/03/2
Teachers' needs	0	0	17/03/2
word teacher noly	0	0	2/08/20
Wrap up	0	0	17/03/2

Appendix C3: Tree-Nodes for the FG Questions

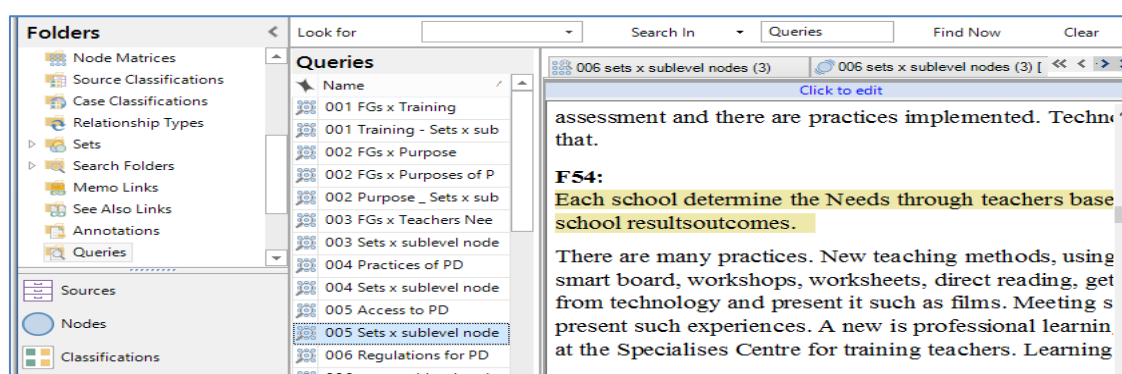
The appendix shows the classification of data according to FG questions in the Tree-Nodes and has two columns. Column 1 is about Nodes File included in the main project file. Column 2 presents the list of Nodes established from the data.



Name	Sources	Referenc	Create	Created	Modified
001 PD Training	6	72	12/03/2	RLM	1/06/201
002 Purposes of PD	6	58	12/03/2	RLM	1/06/201
003 Teachers Needs	6	58	12/03/2	RLM	1/06/201
004 Practices and Presentati	6	73	12/03/2	RLM	1/06/201
005 Access to PD	6	68	12/03/2	RLM	1/06/201
006 Regulations_Requireme	6	67	12/03/2	RLM	1/06/201
007 Impact	6	40	12/03/2	RLM	1/06/201
008 Wrap Up	6	70	12/03/2	RLM	1/06/201

Appendix C4: FG Referenced Words in the Text

The appendix presents FG-referenced words in the data and has three columns. Column 1 shows the Queries File in the main Folders documents file. Column 2 presents the list of names in the Queries. Column 3 shows the word document text opened for the (F54); showing FG number 5, and participant No. 4 and displaying the highlighted phrase as a reference in the data.



Appendix C5: Queries Results for the FG Questions

The appendix shows the Queries Results of FGs identified in the data and has two columns. Column 1 is Queries' file in the main Folders documents. Column 2 shows the list of "Queries Names" established from the data.

Folders		Look for	Search In
<ul style="list-style-type: none"> Node Matrices Source Classifications Case Classifications Relationship Types Sets Search Folders Memo Links See Also Links Annotations Queries 			
<ul style="list-style-type: none"> Sources Nodes Classifications Collections Queries Reports Maps Folders 			
Queries		Name	Created On
		001 FGs x Training	1/06/2017 11:38
		001 Training - Sets x sub level nod	1/06/2017 1:27 P
		002 FGs x Purpose	1/06/2017 2:11 P
		002 FGs x Purposes of PD	1/06/2017 11:35
		002 Purpose _ Sets x sublevel nod	1/06/2017 1:28 P
		003 FGs x Teachers Needs	1/06/2017 11:39
		003 Sets x sublevel nodes	1/06/2017 1:29 P
		004 Practices of PD	1/06/2017 11:40
		004 Sets x sublevel nodes	1/06/2017 1:30 P
		005 Access to PD	1/06/2017 11:40
		005 Sets x sublevel nodes	1/06/2017 1:31 P
		006 Regulations for PD	1/06/2017 11:41
		006 sets x sublevel nodes	1/06/2017 1:32 P
		007 Impact	1/06/2017 11:42
		007 sets x sublevel nodes	1/06/2017 1:33 P
		008 sets x sublevel nodes	1/06/2017 1:34 P
		008 Wrap Up	1/06/2017 11:43
		All sources W Frequency	2/08/2017 12:12 P
		Combined groups x aggregated no	1/06/2017 1:04 P
		Nodes Aggregated	1/06/2017 11:45

Appendix C6: Queries Results Showing the Sublevels Nodes

The appendix shows the sublevel nodes called categories which were developed from the FG data.

Queries

Look for Search In Results Find Now Clear Advanced Find

Queries
Results

Results

Name	Sources	Referenc
001 FGs x Tr	6	72
001 FGs x Tr	6	72
001 Trainin	6	72
001 Trainin	6	72
001 Trainin	6	72
002 FGs x P	6	33
002 Purpos	6	58
002 Purpos	6	58
003 FGs x T	6	58
003 Sets x s	6	58
003 Sets x s	6	58
004 Practice	6	73
004 sets x s	6	73
004 sets x s	6	73
004 sets x s	6	73
005 Access	6	68

Sources
Nodes
Classifications
Collections
Queries

004 Practices of PD 004 sets x sublevel nodes

	A : Principals 2 FGs	B : Supervisors 2 FGs	C : Teachers 2 FGs
1 : Collective and individual PD	1	1	6
2 : External PD or central training	1	1	2
3 : forms of PD experienced	10	12	14
4 : Internal PD or non central training	1	2	3
5 : Post career training	0	0	1
6 : Pre-career training	0	0	1
7 : Suggestions for, and criticisms of, presentations	0	8	9

It can be seen that the appendix has three columns. Column 1 shows that the Queries folder has queries and results documents. Column 2 indicates the results folders, which contains three sub-columns that include Names of themes, Sources of data which are the six FG groups and References that themes' data for each theme were referenced. Column 3 shows the seven Sub level nodes, which are the Categories for the Theme Practices of PD; collective and individual PD, external PD or central PD, forms of PD experienced, Internal PD or non-central PD, post career, pre-career, and suggestion for and criticisms of, presentations. In addition, column 3 shows the three FG groups of participants (Principals 2FGs, Supervisors 2FG and Teachers 2FGs) and numbers of references (in colour) for each category in the theme.

Appendix D1: Ethical Clearance (approval no. H15/11-255)



Secretary, Human Research Ethics Committee
Ph: 07 4923 2603
Fax: 07 4923 2600
Email: ethics@cqu.edu.au

Professor John Dekkers and
Mr Said Al Tubi
School of Education and the Arts
26 February 2016

Dear Prof Dekkers and Mr Al Tubi,

HUMAN RESEARCH ETHICS COMMITTEE ETHICAL APPROVAL PROJECT: H15/11-255 TEACHER PROFESSIONAL DEVELOPMENT PRACTICES APPROPRIATE FOR POST-BASIC EDUCATION SCHOOL TEACHERS IN OMAN

The Human Research Ethics Committee is an approved institutional ethics committee constituted in accord with guidelines formulated by the National Health and Medical Research Council (NHMRC) and governed by policies and procedures consistent with principles as contained in publications such as the joint Universities Australia and NHMRC *Australian Code for the Responsible Conduct of Research*. This is available at http://www.nhmrc.gov.au/publications/synopses/_files/r39.pdf.

On 26 February 2016, the Chair of the Human Research Ethics Committee considered your application under the Low Risk Review Process. This letter confirms that your project has been granted approval under this process, pending ratification by the full committee at its March 2016 meeting. **Please note that there are specific conditions attached to this approval, in addition to standard conditions listed below. These are outlined in the attached table (in red font).**

The period of ethics approval will be from 26 February 2016 to 30 March 2017. The approval number is H15/11-255; please quote this number in all dealings with the Committee. HREC wishes you well with the undertaking of the project and looks forward to receiving the final report.

The standard conditions of approval for this research project are that:

- (a) you conduct the research project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments required to be made to the proposal by the Human Research Ethics Committee;
- (b) you advise the Human Research Ethics Committee (email ethics@cqu.edu.au) immediately if any complaints are made, or expressions of concern are raised, or any other issue in relation to the project which may warrant review of ethics approval of the project. *(A written report detailing the adverse occurrence or unforeseen event must be submitted to the Committee Chair within one working day after the event.)*
- (c) you make submission to the Human Research Ethics Committee for approval of any proposed variations or modifications to the approved project before making any such changes;

(d) you provide the Human Research Ethics Committee with a written “Annual Report” on each anniversary date of approval (for projects of greater than 12 months) and “Final Report” by no later than one (1) month after the approval expiry date; (*Forms may be downloaded from the Office of Research Moodle site -*

<http://moodle.cqu.edu.au/mod/book/view.php?id=334905&chapterid=17791>.)

(e) you accept that the Human Research Ethics Committee reserves the right to conduct scheduled or random inspections to confirm that the project is being conducted in accordance to its approval. Inspections may include asking questions of the research team, inspecting all consent documents and records and being guided through any physical experiments associated with the project

(f) if the research project is discontinued, you advise the Committee in writing within five (5) working days of the discontinuation;

(g) A copy of the Statement of Findings is provided to the Human Research Ethics Committee when it is forwarded to participants.

Please note that failure to comply with the conditions of approval and the *National Statement on Ethical Conduct in Human Research* may result in withdrawal of approval for the project.

You are required to advise the Secretary in writing within five (5) working days if this project does not proceed for any reason. In the event that you require an extension of ethics approval for this project, please make written application in advance of the end-date of this approval. The research cannot continue beyond the end date of approval unless the Committee has granted an extension of ethics approval. Extensions of approval cannot be granted retrospectively. Should you need an extension but not apply for this before the end-date of the approval then a full new application for approval must be submitted to the Secretary for the Committee to consider.

The Human Research Ethics Committee wishes to support researchers in achieving positive research outcomes. If you have issues where the Human Research Ethics Committee may be of assistance or have any queries in relation to this approval please do not hesitate to contact the Secretary, Sue Evans or myself.

Yours sincerely,

A/Prof Tania Signal
Chair, Human Research Ethics Committee


Cc: Dr Ali Abusalem (co-supervisor) Project file

Approved

Appendix D2: Ministry of Education (MOE) Approval Letter to Conduct Research

بسم الله الرحمن الرحيم

الرقم التاريخ
٢٠١٤/٣/٢٢ هـ الموافق



سَلْطَنَةُ عُومَان
وَزَارَةُ التَّرْبِيَةِ وَالتَّعْلِيمِ
المكتب الفني للدراسات والتطوير

إلى من يهمه الأمر

نود إفادتكم بأن الفاضل/ سعيد بن صالح بن أحمد التوي، طالب دراسات عليا دكتوراه بجامعة سنترال كوينزلاند الاسترالية، يقوم بإجراء دراسة بعنوان "ممارسات الانتماء المهني الملائمة للمعلمين العمانيين لمرحلة التعليم ما بعد الأساسي في سلطنة عمان"، وأنه ليس لدى الوزارة مانع من تطبيق أدوات الدراسة على العينة المستهدفة في الدراسة المذكورة، في المديريات التعليمية التابعة لوزارة التربية والتعليم في سلطنة عمان.

وقد أعطيت هذه الرسالة بناء على طلبه دون تحمل الوزارة أي مسؤولية اتجاه ذلك.

وتفضلوا بقبول وافر الشكر والتقدير،،،

سعاد بنت مبارك بن سعيد الفورية
مديرة المكتب الفني للدراسات والتطوير

Appendix E1: Project Summary

Research Project Description

Teacher Professional Development Appropriate for Post-Basic Education School Teachers in Oman

Project Overview:

The Education system in Oman is in the process of reform through the “Vision 2020” statement. The implementation of the basic education system at schools in the year 1997/1998 was one of its fruits. Teacher professional development (PD) is presently one of the key elements for the reform of education in Oman. Within the Omani context, there is evidence that much of the implementation has been successful, however acceptable student learning outcomes are not being achieved as expected.

Purpose:

The purpose of this study is to identify the TPD practices appropriate for the Post-Basic education school system for Omani teachers to enhance the implementation of teacher PD programs.

Participants:

Participants in the research will comprise approximately 83 persons within the Ministry of Education (MOE) including supervisors and teachers. There are also meetings with Her Excellency, the Minister of Education and Undersecretary for Educational Planning and Human Resource Development. Permission would be sought from the MOE via a letter of introduction and this project description. Stakeholders will be met at the site. Participation will be entirely voluntary.

Research Design:

The research will comprise of 2 phases.

Phase 1 will use the Nominal Group Technique (NGT) to establish ideas about teacher professional development, which include strategies, purposes, models and characteristics for teacher PD. The meetings will be conducted in Arabic and should take no longer than one hour and a half to complete.

Phase 2 will then use the Focus Group (FG) sessions to seek in-depth views of supervisors and teachers regarding the teachers’ needs and requirements for teacher PD. The FG sessions will be conducted in Arabic and will be recorded on tape. Each session should take about one hour and a half.

Participants in Phase 1 will be asked to:

- Provide their ideas regarding teacher PD practices at post-basic education schools in and outside a classroom.
- Provide suggestions for more effective teacher PD practices to enhance the quality of the implementation process.

Participants in Phase 2 will be asked to:

- Elaborate on results of the NGT. Participants may respond to other participants' comments, ask questions and make their own comments.
- Respond to the results from the NGT process and provide in-depth ideas about teacher PD.

Outcomes:

The data will be used to develop recommendations for teacher PD including a recommendation of developing a framework for PD use. Utilisation of the framework in teacher PD would assist the alignment of Omani teacher practices with the goals of the Omani government's reform and future goals. Copies of this framework will be made available to the Ministry of Education. Recommendations will be generated that facilitate alignment of the perspectives of Omani stakeholders about their roles with the current teacher professional program.

Benefits:

Teachers

- Provision of opportunity for teachers to reflect their perspectives and underpinnings of their practice at schools.
- Provision of relevant teacher professional development opportunities to enhance classroom practices.

Professional Development providers

- Recommendations based on the research outcomes are to inform the design and delivery of how teacher professional development programs can better facilitate the alignment of teacher needs and requirements of the Ministry reform agenda.

School Administration, Senior Teachers and Supervisors

- The alignment of teaching practices and pedagogical choices of teacher professional development practices may result in observable improvements in meeting the goals of the Ministry of Education reform in developing teachers' skills and knowledge.

Researchers

- Utilisation of the framework and the recommendations can form the basis of further research for teacher professional development programs.

Confidentiality and further information

The information collected in the NGT and FG sessions for this project would be subject to the Central Queensland University's Code of Conduct

(<http://www.cqu.edu.au/research/governance-and-policies>). All responses provided through the NGT and FG sessions would be treated confidentially and not be shared with any other person or organisation. All participating stakeholders including teachers and schools identities would remain confidential and would not be identifiable in the research results, final thesis and research articles or papers.

Research Contact Information:

Principal Researcher

Said Saleh Ahmed Al Tubi

CQUniversity Australia

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Noosaville BC 4566

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Dr Ali Abusalem

Omani government address:

Sultanate of Oman

Diwan of Royal court

Directorate General of Administrative Development

The Palace- Muscat.

Email: hahfarsi@diwan.gov.om

Signed: *Said Saleh Ahmed Al Tubi*

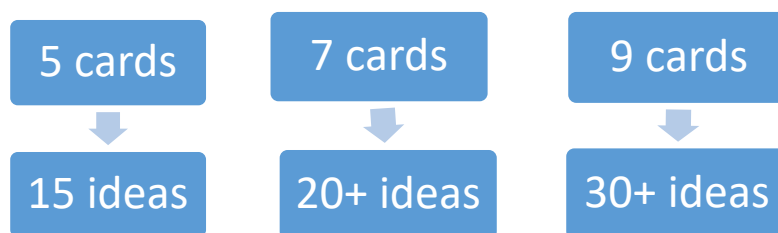
Appendix E2: Process used in the Listing and Ranking Cards

Step 4: Listing & Ranking of Ideas (Time – 25 minutes)

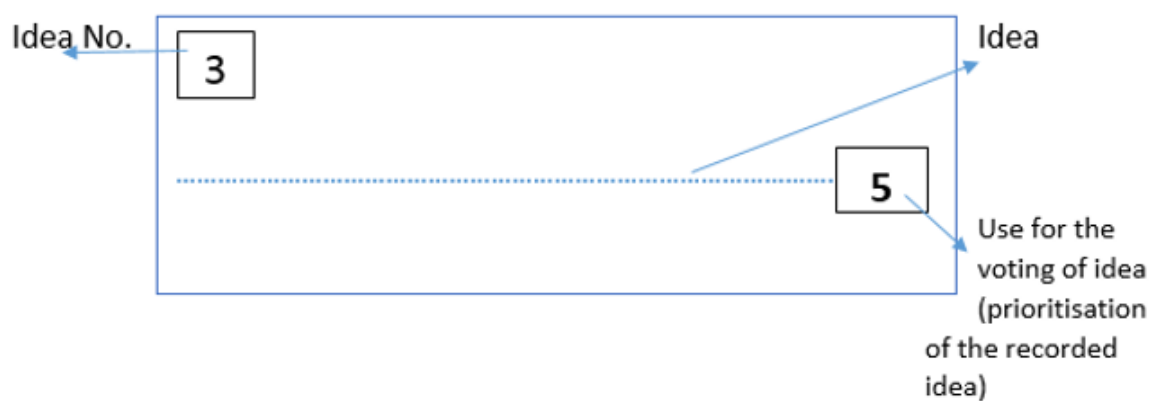
This step is done by each participant individually for each group.

1. Issue five small cards (index cards) 12*12 or 3*5 size to each participant.

Number of cards to be used as follow:



2. Each participant then writes ideas of their own choosing on each card from the Master List.
3. Each participant selects 5 important ideas from the Master List of ideas.
4. Each participant to write each idea on a separate card.
5. Demonstrate/Show how this is done by example of having a large card in front of the participants.



6. Each participant records/places the number of the idea in the upper left-hand corner of the card. Write its idea (the identified words) on the centre of the card.
7. Participants select the five most important ideas from the list of ideas. (Res. Work hard!?)
8. Participants do for each of the five ideas chosen from our Master List. (5.ms)
9. Don't rank-order yet?
10. Next, each participant spread out their cards in front of him/her so he/she can see all five at once.
11. Each idea on each card is ranked as follows:
 - 5 – The first most important
 - 1 – The least important
 - 4 – The second most important
 - 2 – Less important
 - 3 – Important
12. Participant ranks according to its importance. Write the number (e.g. (5)) in the lower right-hand corner of the card.
13. Look at all cards and decide which idea is the most important idea compared to the other four cards.
14. All cards are then collected by the researcher, Said.

Step 5: Recording of Votes & Voting Results (Time – 20 minutes)

This step is done by group/by all of the participants.

1. All of the cards from the participants placed into one large pile which the Res./Said then shuffles. After that, each participant is given 5 cards from the pile.
2. Said/Researcher records the results on the Master List of ideas.
3. Each participant reads the idea number and ranking number from each index card.
4. Res. /Said records the scores for each of the ideas to identify those ideas.
5. Scores are recorded.
6. The scores for all ideas are tallied and recorded as follows:
 - The number of voters
 - The total score for all responses

A sample voting table score

No	Items/ Ideas	Score	Collective Total	Scores	The Vote
1	Increasing learning outcomes	5+5+5+5	20	4/20	1
2	Developing T's learning skills	4+3+1	8	3/8	2

7. The outcomes/those ideas, which are the most highly rated by the group as a whole is the focus of our NGT process.

Appendix E3: Participant Consent Form

Teacher Professional Development Appropriate for Post-Basic Education School Teachers in Oman

Researcher: Said Saleh Ahmed AL Tubi, CQUniversity, Noosaville, Queensland

By signing below, you are indicating that you are providing informed consent to participate in this research.

- You have read and understood the information sheet about this project;
- You have had any questions about the project answered to your satisfaction by the information sheet as well as any further verbal explanation required;
- You understand that you have the right to withdraw from the research at any time without penalty;
- You understand that the research findings will be included in the researcher's publication(s) on the project;
- You understand that your anonymity and confidentiality will be ensured;
- You understand that your name and your work will be protected by the use of pseudonyms;
- You are aware that a Plain English statement of results will be available from the researcher whose address is provided in the Information Sheet;
- You understand that any observation and other information collected will be stored so that they are not accessible by any other persons than the researcher/s;
- You understand that if you have any concerns or complaints about the ethical conduct of this project. In Oman, you may use the following contact:

Kalaf Marhoun Al'Abr, Sultan Qaboos University, Lecturer, kabri@squ.edu.om
In Australia:

The Ethics Officer on: (07) 429232603, email ethics@cqu.edu.au or by mail: Building 32,
CQUniversity, Rockhampton, QLD. 4702.

The Ethics Officer is not connected with this research project and can facilitate a resolution to your concern in an impartial manner.

Participant consent: I agree to participate in this project

NAME

SIGNATURE

DATE

E-mail address (Optional)

If you wish to be sent a copy of the final report, please include your email address above.

Appendix F: Researcher Dialogue used in each of the NGT Process Steps

Step No.	Steps in the Process and Dialogue used	Duration time for step
1	<p><i>The Silent Generation of Ideas in Writing</i></p> <p>I will give you a sheet of paper, which has an open question about the topic, which is focussed on teacher professional development (PD). Individually, brainstorm all ideas that occurred to you for the question. It will be written on the whiteboard/a flipchart at the front of the room. I will read the question to you now to avoid misunderstanding. I ask you now to think of your responses and then I want you silently to write down your key thoughts/ideas. Other members of the group, including the researcher, will not share responses. You will be allocated 10 minutes <i>only</i> to write down your thoughts due to time restrictions on the whole session. I want you to write down as many ideas as possible. Please, write ideas concisely not long ideas.</p>	10 min.
2	<p><i>Round Robin Recording of Ideas</i></p> <p>Now I want you to give me your ideas in turns. We will go in an anticlockwise direction. Please, read your written ideas as I am going to write these ideas to record them on the whiteboard/flipchart paper. If you repeat any themes, they will not have written down again, only notes of it on the whiteboard/flipchart will be addressed. You will all have an equal chance to participate. I want other people to follow with me while I am writing and please no side talk. First, person (1) one please list your ideas. Then, person (2) two please list your ideas. Then person 3 elicit his ideas, no repetition (and so on until person 6). Then we start again in a clockwise way to elicit more ideas. I tell the participants that "If you have no further ideas, please you may say 'pass' to show that you have no further ideas to add." Please no discussion at this stage. Now we have finished recording ideas, we can see that a list of ideas and suggestions are generated.</p>	25 min.

3	<p><i>Serial Discussion for Clarification of Ideas</i></p> <p>This is the most important stage of NGT because it establishes the validity of the findings. Now each of the recorded items identified in step 2 will be discussed with you to arrive at a satisfactory level of clarification and understanding of these ideas. I invite you now to comment on the given responses verbally or by given further explanation on your ideas. At this stage, I interrupt to safeguard any display of judgments or critical comments. We will amalgamate similar points to form one single statement. This checking process forms an integral part of the internal validity of the research. At the end of this stage, we have a clear list of ideas.</p>	30 min.
4	<p><i>Ranking of Important Ideas</i></p> <p>In this stage, I want you to prioritise the recorded ideas that were selected or listed in the ‘robin round’ stage in order to reduce the group list to a manageable proportion.</p> <p>The 12x12 cm voting card is designed for recording the number that corresponds to the number of a flipchart statement.</p> <div> <p>Idea No. <input type="text"/></p> <p>..... Statement</p> <p>.....</p> <p>..... <input type="text" value="8-1"/></p> <p>The ranking score (prioritised the recorded ideas)</p> </div>	20 min.

	<p>The left-hand box is for recording a number, which corresponds to the number of a flipchart statement. The space adjacent to the left-hand box is for writing the actual statement. The right-hand box is for recording a score of between one and five. The score could be between one and eight, depending on the total number of ideas. Each of you will be given a package of 5 of the prepared ranking cards (the above one). You will silently write down five ideas on five separate cards from the whiteboard/flipchart. I want you to prioritise these ideas from 5 to 1, with 1 being the least important and 5 being the most important. Each of you now will give me the most important card-recorded items (3 ideas) in their opinion according to the record score on the card.</p> <p>Then each participant will then be asked to place the card face down. Finally, I want you to give me the 3 top ranked responses for each one of you to be as a key base for the final voting. In doing that, we will generate a new list of ideas which I will record on a new flipchart. These ideas will be listed in a new whiteboard/flipchart for voting.</p>	
5	<p><i>Final Voting</i></p> <p>After we have a new list of ideas, I want each participant to rank the items from the most important to the least important ideas on the new flipchart. This process provides transparency and facilitates interaction among members of the group in a structured meeting.</p> <p>To conclude, do you have anything to say about the results (a brief discussion of the results, what it yields and how and when this would be utilised)? In other words, give me any further points for discussion.</p> <p>Finally, please share any issues as feedback from the meeting.</p> <p>Thank you very much for your kind participation and forgive me for any misunderstanding. Have a good day. Thanks.</p>	20 min.

Appendix G: Draft 2 of Focus Group Schedule

Thank you for participating in today's focus group session. I appreciate your presence with me today. I am honoured to share your experience in education.

My name is Said Saleh Ahmed Al Tubi. I am a research student at CQUniversity, Central Queensland University, in Australia, doing the Doctorate of Philosophy in Education.

My topic is "Teacher professional development appropriate for use at the Post-Basic Education schools level in the Sultanate of Oman."

We are here to share views about the teacher professional development appropriate within the Omani context. After your permission, the session will be recorded. Today's focus group discussion will form part of my research project that is exploring teacher professional development practices appropriate for use at the Post-Basic Education level which give the educational system the opportunity to enhance student learning outcomes. Six key themes will be addressed in today's focus group session:

- 1. Purposes**
- 2. Teachers' needs**
- 3. Practices/ presentation of PD**
- 4. Access to PD**
- 5. Regulation for doing PD**
- 6. Impact**

I have already done research with a group of participants who are Directors General, Human Resources Development Directors, Supervisors, School Principals and Teachers. The research was to determine the kind of policy needed for teacher professional development. Some examples of the finding from the previous technique that I already used, which is called the NGT, are:

- Determine list of competencies for PD and teacher's qualification
- Find a scientific approach to monitor the impact of PD in the field of education
- PD specialists/Provide highly qualified coaches in the academic field
- Linking career path with PD path and qualification
- Experts to determine PD provision/to give development programs

- Identifying/determine PD needs and requirements
- ... etc.

This session today is about more applied practical things about PD. We will finish our session within 1 hour and 30 minutes time. With my complements, please help yourself to the open buffet, fresh juice, tea, coffee & fruits that I have provided for you. When participating in today's session, please feel free to talk about your experience related to the topic and related questions. I want all the participants to be involved and to share ideas in our conversation. Do not feel shy.

Thank you again and I hope that I would be a gentle guest upon you.

Do you have any questions to ask before we start taping?

Before we get to the themes, let us have a warm up discussion by this question?

Aspects	Questions	Prompts/ Comments	Other Questions	Time
1. Warm up PD Training	Is there a difference between professional development (PD) and training? Which is more relevant to you?	<ul style="list-style-type: none"> • <i>What is training?</i> • <i>What is PD?</i> • <i>How much do you learn from training?</i> 		5 min
2. Purposes	What do you think are the main purposes of doing PD?	<ul style="list-style-type: none"> • <i>To develop new knowledge, skills and values</i> • <i>To enhance student-learning performance in order to get high marks</i> 	<ul style="list-style-type: none"> • <i>For developing research skills or self-awareness about teaching and learning</i> <p><i>What are PD practices done for?</i></p> <p><i>Can you give more examples?</i></p> <ul style="list-style-type: none"> • <i>At the ministry level</i> • <i>At Directorate General level</i> • <i>At the school level</i> • <i>At the Specialised Centre for Ts T</i> • <i>Have you attended a PD practices?</i> • <i>What have you taken from them?</i> 	10 min
3. Teachers' Needs	What are your needs to do PD?	<p><i>If you were to be asked, what PD you want, what would you ask for?</i></p> <p><i>What PD needs are there in regards to</i></p> <ul style="list-style-type: none"> • <i>School administration needs</i> • <i>Improving students learning outcomes</i> 	<p><i>Things to get from PD. For example, needs suitable for your subjects or administrative development</i></p> <p><i>Can you identify the area of PD needs?</i></p> <p><i>What activities you want? For example, continuous assessment methods in evaluation process</i></p>	10 min

4. Practices/ Presentation of PD	<p>What types of PD actual application/practices have you experienced?</p> <p>How should PD programs be presented?</p> <p>Who should present PD sessions?</p>	<p><i>Presentation of information about use of IT</i></p> <p><i>Seminar/ one-day workshop/ conferences, Demonstrations</i></p> <p><i>Online programme or face to face</i></p> <p><i>In private or in-group?</i></p> <ul style="list-style-type: none"> • <i>Use a facilitation/ University lecture</i> • <i>Group sessions</i> • <i>Hands on experience</i> • <i>A question and answer sessions</i> • <i>Show and tell</i> • <i>Preparing materials</i> <p><i>By using experts or specialised cadres in PD?</i></p> <p><i>Supervisors, training employers or academic members from universities or colleges?</i></p>		20 min
5. Access to PD	<p>Tell me, who should attend the PD programs?</p> <p>How often should teachers be able to attend PD programs?</p> <p>When should it be presented or delivered?</p>	<ul style="list-style-type: none"> • <i>Who should have access to the PD programs?</i> • <i>What is the base for doing PD?</i> <p><i>Once a year or per semester or 3 days a year? How?</i></p> <p><i>How often you do or go to PD programs?</i></p> <p><i>During school time or after school</i></p> <p><i>During holidays</i></p>	<p><i>All teachers for example?</i></p> <p><i>Alternatively, who?</i></p> <p><i>Is part of your program development?</i></p> <p><i>As decided by the principal</i></p>	10 min

6. Regulations /requirements for doing PD	<p>What regulations do you know exist for doing PD programs?</p> <p>What policy should be used to provide PD?</p> <p>Who decides your attendance at PD programmes?</p> <p>Should attendance at PD programs be assessed?</p>	<p><i>Should there be a different way to obtain permission for attendance?</i></p> <ul style="list-style-type: none"> <i>Is PD classified as one of school or ministry requirement or necessity to perform yearly?</i> <i>If your school's policy allows the process to be optional for teachers, would you still be willing to attend PD activities? Why?</i> <p><i>How should permission to attend PD be obtained?</i></p> <p><i>Does the process need to be changed?</i></p> <ul style="list-style-type: none"> <i>Should it be compulsory?</i> <i>How can it be assessed?</i> <i>How often should it be assessed?</i> 	<p><i>How should it be planned?</i></p> <p><i>Is there a definite appraisal as an outcome for doing PD?</i></p> <p><i>You ask to go?</i></p> <p><i>Or school direct you to go? Alternatively, what?</i></p> <p><i>Is it for you as teachers?</i></p> <p><i>Is it a need you ask for it?</i></p> <p><i>Is there a need for changing the regulation of PD?</i></p>	10 min
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7. Impact	<p>What can be the effects that PD have on teachers?</p> <p>How can the impact of PD be measured?</p>	<ul style="list-style-type: none"> • <i>What implications does PD have on the students?</i> • <i>How does PD affect teachers?</i> <p><i>What a scientific mechanism can be used to assess returns/outcomes?</i></p> <p><i>How does it affect references and students' performance?</i></p>	<p><i>Should database about training programmes and trainees be provided? Why?</i></p>	10 min
8. Wrap Up	<p>What big new changes would you like to be happening in the use of PD?</p> <p>What things do you want to raise about PD that has not be discussed?</p>	<p><i>What should stay the same?</i></p> <p><i>What do you want as teachers?</i></p> <p><i>Any questions or comments?</i></p>	<p><i>What should be different?</i></p> <p><i>For example, purposes, needs, practice delivery, regulations, access/attendance, and impact.</i></p>	15 min
Thank you very much for your kind support				

(أ) أتمتع عليه طلبة من التدريب والحل
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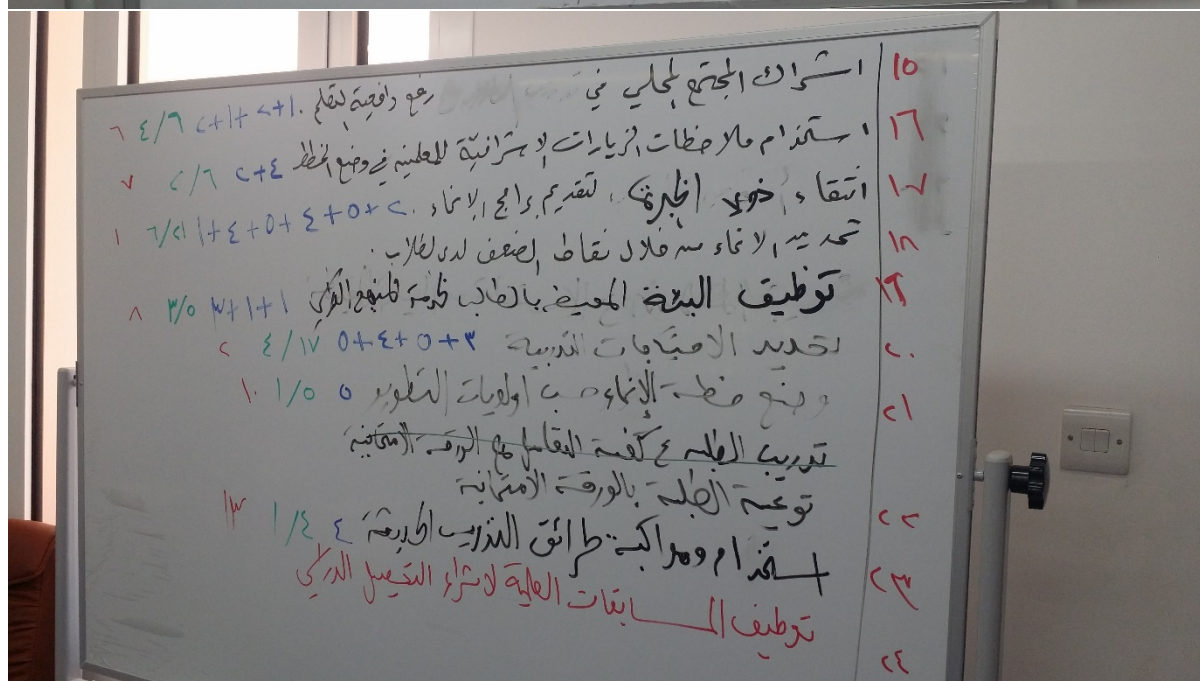
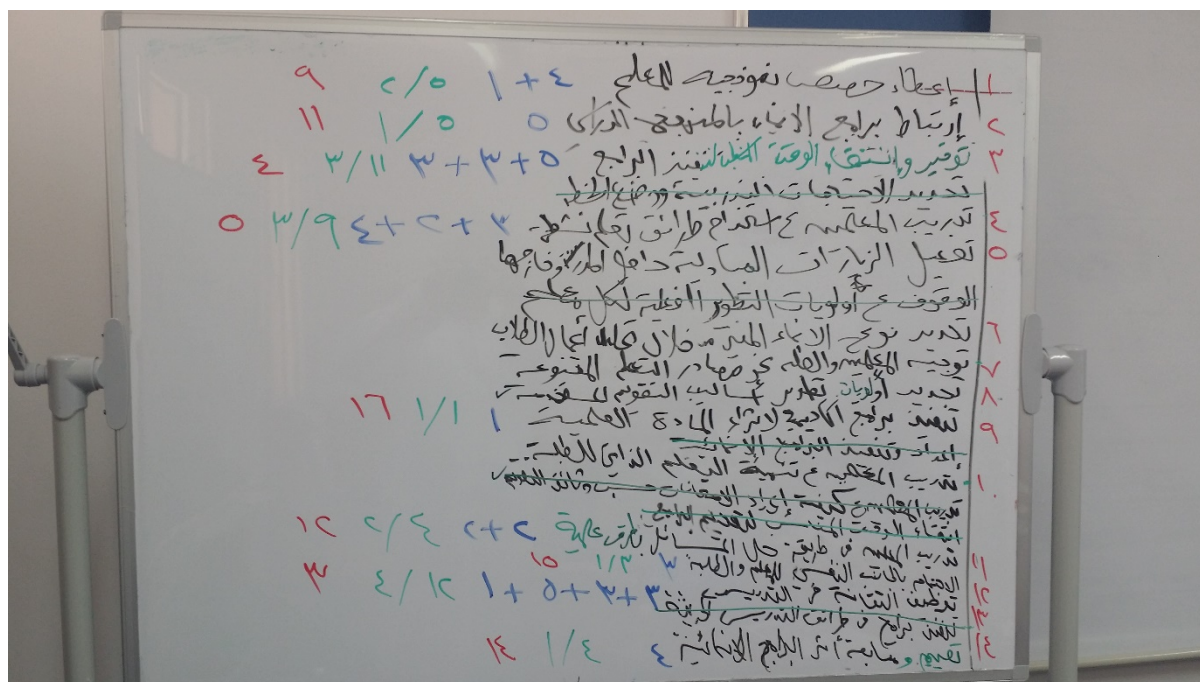
Appendix H2: Voting and Ranking Summary for the SPs

[illegible]

Appendix H3: Voting and Ranking Summary for the Ss

1	3/12	0+0+2	عدد الامتحانات التدريبية للكليات من واقع الموقف الفعلي	1
2	5/10	0+0	بناء مهارة تقدير الاحتياجات التدريبية لاداء ان للمدر	2
3	1/1	1	تنويع اساليب التدريس	3
4	2/6	2+2	استخدام طرق تدريس الاقران لنقل الخبرة	4
5	2/2	2+1	تنويع مصادر استيفاء الامتحان جانب التدريس	5
6	2/3	1+2	تعزيز الوعي عام دور تدريسيه ومهلاته كالمعلم	6
7	1/1	1	دور التدريسي في تنظيم العمل بالمدر	7
8	2/12	2+2+2	موضوعات علمية بالمدرسة لخدمة الطالب التدريسي	8
9		2	تحليل نتائج التحصيل التدريسي لاداء التدريس الاساسي	9
10	1/3	3	وجود اوقات كافية بالتدريس الزماني بالمدرسة لتفسيه التدريس	10
11	2/2	2+1	انضام المهام لاداءات تخصصية مكثفة خارج قاعة الدرس	11
12				12
13	0/10	2+0+2	ربط لبا الكهني بالاساليب التدريبية	13
14		2/1		14

Appendix H4 Voting and Ranking Summary for the Ts



Appendix I: List of Generated ideas for each Group of NGT Participants

This appendix presents the results of ideas generated in addressing the NGT questions allocated for each of the five groups of participants, Directors General (Ds-G), Human Resources Development Directors (HRDDs), School Principals (SPs), Supervisors (Ss) and Teachers (Ts).

1 The Directors General's Ideas

The question posed to the Ds-G was:

In our educational system, what particular policies are needed using teacher PD to improve/obtain better student learning outcomes for Post-basic education?

Table 1 presents the 15 ideas that the six participants generated in response to the question.

Table 1 The Directors General's Ideas (No. of participants=6)

Item No.	Items
1	Use more in-service training
2	Measure impact of PD
3	Link the career path with PD use
4	Prepare and list competencies for the PD and training of teachers
5	Choose qualified or competent trainers
6	Use a Specialised Centre for PD and training of teachers
7	Benefit from international and local reports to raise the efficiency of PD
8	Identify the primary and the subsequent competencies that must be available in teachers
9	Adopt a teaching profession license
10	Diagnose the students' real needs to establish the PD programs
11	Use Knowledge of modern developments in education
12	Record physical and human needs for PD
13	Identify the actual and real PD and training needs of teachers
14	Prepare training packages for each teacher
15	Identify the PD needs of teachers

2 The Human Resources Development Directors' Ideas

In response to the HRDDs' meeting question used:

What specific PD needs to be provided for teachers to improve student-learning outcomes for the Post-Basic Education schooling?

Table 2 presents 20 ideas that five Human Resources Development Directors generated in response to the question.

Table 2 The Human Resources Development Directors' Ideas (No. of participants=6)

Item No.	Items
1	Find a scientific approach to monitor the impact of PD use in the field of education
2	Reconsider an approach for the evaluation of the PD program
3	Activate the school as a unit for professional development
4	Support and encourage the activation of Active Learning style
5	Use academic specialist teacher programs
6	Find a unified framework to guide training centres
7	Focus on e-learning
8	Create effective learning communities in the school environment
9	Employ the concepts of citizenship and values embedded in the curriculum
10	Train teachers on professional development methods
11	Regulate the methods associated with the assessment of the levels of students
12	Benefit from the processes of knowledge management and learning communities
13	Promote a culture of compliance with rules and regulations related to schoolwork
14	Diversify sources to identify the PD needs of teachers and employment
15	Link career path with PD use and qualification
16	Strengthen the curriculum with activities in different school subjects
17	Have specialised cadres for PD use
18	Strengthen the position of the teacher in society
19	Encourage and motivate the teacher in professional self- development
20	Hire the educational cadres in professional development

3 The School Principals' Ideas

Table 3 presents 28 ideas that nine SPs participants gave in reply to the meeting question:

What specific PD support needs to be provided for teachers at your school to help improve student-learning outcomes?

Table 3 The School Principals' Ideas (No. of participants=9)

Item No.	Items
1	Adopt advanced and modern techniques
2	Use more highly qualified coach in the academic field for PD activities
3	More support for the PD trainee and the trainer
4	Provide different learning sources
5	Use expert trainers in the education field
6	Use relative important topics
7	Upgrade classrooms to teaching halls to measure the impact
8	Provide updated target data base of the participants in PD
9	Use appropriate programs to the targeted teachers
10	Knowledge-based support in all disciplines
11	Develop specific effective professional plans in time
12	Provide suitable places for teacher PD
13	Adopt specific forms for PD needs and preparation programs
14	Provide physical needs such as important training halls
15	Collaboration administrative Cadres/staff
16	Design a time plan for doing PD
17	Focus on classroom practices of the presented papers
18	Provide a PD content data base
19	Diversity development programs for teachers
20	Establish high-tech means in implementation PD programs
21	Use the right time for teacher PD use
22	Prepare the suitable place for giving the programs

23	Choose trainers who have effective personality
24	Create PD programs outside of school schedule
25	Train teachers to become qualified trainers
26	Determine the PD needs for teachers
27	Provide the necessary support for PD programs
28	Use ideas for coaches for enhancing PD programs

4 The Supervisors' ideas

Table 4 presents 12 ideas that the five Ss stated in response to the meeting question of PD policies adopted for the delivery of the PD process:

How do we achieve our goals in developing and in implementing teacher professional development to improve our students learning outcomes for the Post-Basic education schooling?

Table 4 The Supervisors' Ideas (No. of participants=5)

Item No.	Items
1	Monitor the PD needs for teachers from the reality of the classroom situation
2	Identify/determine PD needs within school administrations
3	Diversify of teaching methods
4	Use of peers in PD programs
5	Diversify sources used in determining PD programs
6	Provide sabbatical leave for teachers to improve their skills every four years
7	Link PD to the work system at school
8	Use of a systematic approach at school to assess the PD outcomes
9	Analyse students learning outcomes to identify the PD needs
10	Presence of regular times in school for PD program implementation
11	Use specialised intensive courses outside official working hours
12	Link career/professional path with PD implementation and delivery

5 The Teachers' Ideas

Table 5.5 presents 31 ideas generated by eight Ts for the meeting question:

How can we best use teacher professional development to improve our student learning outcomes at the Post-Basic education in my school?

Table 5 The Teachers' Ideas (No. of participants=8)

Item No.	Items
1	Give ideal/typical classes to teachers
2	Correlate development programs with the curriculum being used
3	Provide and use the right time for PD use
4	Use of active learning methods in PD programs
5	Train teachers to use active learning methods
6	Activate exchange visits of teachers inside and outside schools
7	Emphasise upon the development priority for each teacher
8	Identify the type of development through analysing students learning outcomes
9	Direct teachers and students towards various learning sources
10	Enhance the priorities of the continuous assessment procedures
11	Implement academic programs to enrich teacher' knowledge
12	Prepare and implement professional development programs
13	Train teachers on developing students' active learning
14	Train teachers to prepare examinations according to assessment documents
15	Choose the right time to teach PD programs
16	Train teachers on problem-solving using scientific methods
17	Consider the psychological aspect for teachers and students
18	Employ technology in teaching
19	Use modern technology in PD implementation and delivery
20	Assess and follow-up the impact of PD programs
21	Involve the community in raising the motivation of Education
22	Use notes of supervisory visits for teachers in planning PD practices

Table 5 The Teachers' Ideas (No. of participants=8) (cont'd)

Item No.	Items
23	Use experienced professionals to present PD programs
24	Determine the development through students' weaknesses
25	Link the curriculum to the surrounding environment
26	Determine the PD needs of teachers
27	Design the PD plan according to the development priorities
28	Train student upon examination papers
29	Raise students' awareness of the exams' papers
30	Use and keep up with modern teaching methods
31	Use scientific competition to enrich students learning outcomes

Appendix J : Content of the Annual PD Report 2017 in Arabic

The Appendix indicates that most of the practices are training more than PD.

الصفحة	الفهرس	الصفحة	الفصل الأول
٣٣	ثانيا :نتائج تقييم البرامج اللامركزية	١٤	برامج وفعاليات الإنماء المهني لعام ٢٠١٧م
٣٤	نتائج تقييم مستوى الرضا	١٤	أولا : برامج وفعاليات الإنماء المهني المركزية
٣٥	نتائج تقييم مستوى التعلم	١٤	١. البرامج المركزية
	الفصل الثالث	١٧	٢. البرامج والدورات الخارجية
	البرامج التأهيلية	١٨	٣. المشاركات الفردية
٣٨	أولا : الخريجون من البرامج التأهيلية	١٩	٤. برامج المركز التخصصي للتدريب المهني للمعلمين
٣٨	الخريجون داخل السلطنة وخارجها	٢٠	ثانيا : برامج وفعاليات الإنماء المهني اللامركزية
٣٩	الخريجون حسب الأنظمة الدراسية	٢٠	١. البرامج التدريبية اللامركزية
٤٠	الخريجون حسب المؤهل العلمي	٢٤	٢. المدرسة وحدة للإنماء المهني
٤١	الخريجون حسب التخصص الدراسي		الفصل الثاني
٤٢	الخريجون حسب النوع الإجتماعي		تقييم البرامج التدريبية
٤٣	الخريجون من جامعة السلطان قابوس	٢٨	أولا : نتائج تقييم البرامج التدريبية المركزية
٤٤	ثانيا : الملحقون في البرامج التأهيلية	٢٩	نتائج تقييم مستوى الرضا
٤٤	الملتحقون داخل السلطنة وخارجها	٣١	نتائج تقييم مستوى التعلم
٤٥	الملتحقون حسب الأنظمة الدراسية	٢٣	نظام تنفيذ البرامج المركزية
٤٦	الملتحقون حسب المؤهل العلمي		
٤٧	الملتحقون حسب النوع العلمي		
٤٨	الملتحقون من جامعة السلطان قابوس		
٤٩	الخاتمة		
٥١	الملاحق		

(PD Annual Report 2017)