CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

As mentioned previously, the government of Oman has initiated some educational reforms in order to improve the quality of the education system and human capital. One of the reforms is enhancing the effectiveness of school management and leadership (International Bureau of Education, 2001). In relation to this issue, the purpose of this study was to analyze and identify various professional development needs and leadership challenges of school principals in Muscat, and the objectives of the study were as follows:

1. To analyze and identify the important domains of professional development needs for school principals of Muscat, Oman, in the context of the ongoing educational reform.

2. To examine the highly important needs and abilities for instructional leadership and transformational leadership of school principals in Muscat city.

3. To analyze and categorize the challenges faced by school principals in their professional development in the context of educational reforms in Muscat, Oman.

4. To draw up a list of recommendations regarding school improvement and school principals development in the context of educational reforms in Muscat, Oman.

The research questions for this study were:

1. In the context of educational reform in Oman, what are the major professional development needs among school principals particularly in Muscat?

2. In the context of reform, what are the specific needs perceived by school principals to be of high importance for instructional leadership and transformational leadership of school principals in Muscat?

3. What is the extent of correlations among the identified domains or factors of professional development needs of school principals in Muscat?

4. What are the abilities of instructional leadership and transformational leadership of some school principals in Muscat, Oman?

5. What are the major challenges facing school principals in Muscat in their professional development within the context of educational reforms in Oman?

6. What are the recommendations for school improvement and principals' professional development by school principals in Muscat within the context of educational reforms in Oman?

With respect to the questions, this chapter presents the results of the data analysis and findings of this study. Data were obtained by survey questionnaires and interviews. The survey data were analyzed using descriptive statistics, while the interview data were categorized into relevant concepts and themes associated with the research questions; therefore, the analysis is divided into two parts: Part 1 on analysis of survey data, and Part 2 on analysis of interview-observation data.

This chapter begins with a discussion on the respondents' demographic background, followed by a discussion on the tenability of factor groupings of the survey questionnaire domains and items. Factorial analysis was done to see the sensibility of the item grouping and thus the construct and theoretical validity of the survey instrument. After establishing this, data were analyzed to answer research question 1.

PART 1: ANALYSIS OF SURVEY DATA

4.2 Respondents' Demographic Background

Table 4.1 shows the distribution of respondents according to gender, years of experience, school and qualification. In terms of gender, the results show that 48.8% (n=39) of the participants were male principals while 51.3% (n=41) were female principals in Muscat and the total was 80 principals who participated in this study.

Table 4.1: Summary of the Respondents' Demographic Variables

Demographic	Frequency (n)	Percent (%)
Gender		
Female	41	51.3
Male	39	48.8
Year		
5 or more years	56	70.0
Less than 5 years	24	30.0
School		
Basic Education: Cycle 1	25	31.3
Basic Education: Cycle 2	55	68.8
Qualification		
Degree	63	78.8
Master	17	21.3

Demographic	Frequency (n)	Percent (%)
Gender		
Female	41	51.3
Male	39	48.8
Total	80	100.0

In relation to the respondents' years of service, Table 4.1 shows that 70% (n=56) have been working for 5 years and above as principals, and 30% (n=24) have been working for less than 5 years. Regarding the respondents' schools, Table 4.1 shows that 68% (n=55) of the respondents were school principals at Basic Education Cycle 2 while 31.3% (n=25) were school principals at Basic Education Cycle 1. In terms of qualification, 78.8% (n=63) of the principals were Bachelor's degree holders while 21.3% (n=17) were master's degree holders.

4.2.1 Reliability and Factorial Groupings of Survey Items

Table 4.2 shows the reliability coefficient values (Cronbach Alpha values) of the survey items in fifteen domains/factor groups. Overall, the survey item groups had high reliability values, ranging from .702 to .879. According to Hair *et al* (1998) and Steven (1995), Cronbach's alpha of .50 above is satisfactory for internal consistency of the items.

Table 4.2: Internal consistencies of the factors and Reliability

No	Factors	Reliability
1	Designing, Implementing and Evaluating Curriculum	.805
2	Understanding Measurement, Evaluation and	.701

Assessment Strategies

3	Creating a learning Organization	.762
4	Understanding students' Development and Learning	.702
5	Building Team Commitment	.796
6	Team working Skills	.821
7	Problem Solving	.811
8	Building shared Decision-making	.742
9	Research Knowledge Skills	.823
10	ICT Utilization	.825
11	Defining the Core values and believes of Education	.867
12	Communicating effectively	.787
13	Setting goals and determining outcomes	.753
14	Building Community and Involvement leadership Capacity	.879
15	Resolving Conflicts (Building Consensus and negotiating Leadership Capacity)	.748

Table 4.3 shows the usage of factor analysis to check the validity of groupings and to confirm whether the items loaded on their respective fifteen factors. The eigen values were checked and exceeded 1 as stated in table 3 below. The Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin Measure were determined for sampling adequacy with chi-square of (692.634) using varimax (orthogonal) rotation and showed an adequate sample to proceed with the data as well as significant at the level. From the table it suggested that the sample was factorable (KMO=.701).

*Table 4. 3: KMO and Bartlett's Test for Principals'
Professional Development Factors*

Kaiser-Meyer-Olkin Adequacy.	Measure of Sampling	.701
Bartlett's Test Sphericity	of Approx. Chi-Square	692.634
	Df	300
	Sig.	.000

From the results of total variance explained in Table 4.4, fifteen factors were extracted and each eigenvalue exceeded 1, and according to Hair et al (1998), any factor that exceeds or has eigenvalue of 1 should be considered as a factor. As shown, each factor is greater than one, so each factor deserves to be a factor or considered as a factor. Regarding variance cumulative percentage, it ranges from 10.725 to 59.259, this means total variance of each factor falls within the acceptable confidence interval.

Furthermore, by rotated matrix analysis, the factor loadings of all the items in the measure ranged from 0.420 to 0.861. This indicates that factor loadings were above the threshold set by Hair *et al*. (2006) and demonstrated convergent item validity level.

Table 4.4: Total Variance Explained for Principals' Professional Development factors

Total Variance Explained						
Needs Domain	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.516	9.725	9.725	6.516	9.725	10.725
2	4.114	6.141	15.866	4.114	6.141	15.866
3	3.043	4.542	20.408	3.043	4.542	20.408
4	2.920	4.358	24.766	2.920	4.358	24.766
5	2.600	3.881	28.646	2.600	3.881	28.646
6	2.452	3.660	32.306	2.452	3.660	32.306
7	2.393	3.572	35.878	2.393	3.572	35.878
8	2.335	3.485	39.363	2.335	3.485	39.363
9	2.148	3.206	42.569	2.148	3.206	42.569
10	2.137	3.190	45.759	2.137	3.190	45.759
11	2.059	3.073	48.832	2.059	3.073	48.832
12	1.904	2.841	51.673	1.904	2.841	51.673
13	1.799	2.684	54.357	1.799	2.684	54.357
14	1.678	2.504	56.861	1.678	2.504	56.861
15	1.606	2.397	59.259	1.606	2.397	59.259

Based on the above results, the fifteen domains or factors of professional development needs—as in Salazar's model—that are statistically acceptable and valid are as follows:

1. Designing, implementing and evaluating the school curriculum

2. Understanding measurement, evaluation and assessment strategies

3. Creating a learning organization

4. Understanding students' development and learning

5. Building team commitment

6. Team working skills

7. Problem solving

8. Building shared decision-making

9. Research knowledge skills

10. ICT utilization

11. Defining the core values and believes of education

12. Communicating effectively

13. Setting goals and determining outcomes

14. Building community and involvement leadership capacity

15. Resolving conflicts (Building consensus and negotiating leadership capacity)

4.3 Core Professional Development Needs of Principals in Muscat, Oman

This section presents the results of data analysis and findings based on research question 1, that is:

What are the core professional development needs for school principals in the context of educational reforms in Muscat, Oman?

The respondents were asked to rate the 'importance level' of various items regarding their professional development needs, ranging from important (scale 1) to 'not very important' (scale 4). Table 4.5 shows the results of the data analyzed by descriptive statistics i.e. by frequency, percentage, mean score, and standard deviation for the fifteen domains of professional development needs.

Need Domain 1: Designing, Implementing and Evaluating Curriculum

Table 4.5: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Different Domains of Professional Development Needs on Designing, Implementing and Evaluating Curriculum

No	Statement	Important		Very Important		Mean	S.d.
		(n)	(%)	(n)	(%)		
	Designing, Implementing & Evaluating Curriculum						
1	School principals need professional development programs about curriculum designing.	13	16.2	67	83.8	3.3651	.48532
2	School principals need professional development programs about curriculum implementing.	31	38.8	49	61.2	3.5714	.49885
3	School principals need professional development programs about curriculum evaluation.	29	36.2	51	63.8	3.5238	.50344
4	Professional development programs for school principals should include skills and knowledge about how they can use different learning resources to enhance school curriculum.	28	35	52	65	3.3810	.48952
5	School principals need professional development programs about learning theories and the roles of these theories in curriculum designing.	32	40	48	60	3.4921	.50395
6	School principals need professional development programs about evaluation standards for curriculum designing.	51	63.8	29	36.2	3.5556	.50090

Note: Sd is standard deviation

In this domain, for item 1 curriculum designing, as many as 83.8% of the school principals said that this aspect was very important for their professional development, while 16.2% stated it as important, whereas, none of the respondents chose 'or very important' and 'not important'. This means that most of the school principals in Muscat need training and seminars on curriculum design and implementation. For item 2 curriculum implementation the result shows 61.2% of the respondents said that this was very important, while 38.8% said it was important, while none of the respondents chose 'not very important' or 'not important'. As for curriculum evaluation item 3 63.8% of the respondents said it was very important, while 36.2% rated it as important, while none of the respondents choose 'not very important' or 'not important'. Regarding the

use of different learning resources to enhance school curriculum item 4 65% of the respondents said it was important, while 35% agreed that it was very important, while none of the respondents chose 'not very important' or 'not important'. Therefore, the results indicate that in the context of education reforms in Oman, school principals perceived that it was very important that they understand professional training in the area of curriculum design and evaluation.

As for learning theories and the roles of these theories in curriculum designing, item 5, the result show 60% of the respondents agreed that it was important, while 40% said it was very important, while none of the respondents chose 'not very important' or 'not important'. Regarding evaluation standards for curriculum designing item 6 the results show 63.8% of the respondents stated as important, while 36.2% agreed that it was very important, while none of the respondents chose 'not very important' or 'not important'.

In general, school principals in Muscat stated that they needed professional training in the area of curriculum designing, planning, and evaluation. Most principals did not know the concepts of curriculum design and evaluation. Knowledge and skills in this area would help them in assisting teachers to modify the curriculum according to their students' aptitude level and the local context.

Need Domain 2: Understanding Measurement, Evaluation and Assessment Strategies

Table 4.6: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on Understanding Measurement, Evaluation and Assessment Strategies

No	Statement	Important		Very Important		Mean	S.d.
		(n)	(%)	(n)	(%)		
	Understanding Measurement, Evaluation and Assessment Strategies						
7	School principals need professional development programs in how to build an active plan to enhance school performance.	39	48.8	41	51.2	3.3651	.48532
8	School principals need professional development programs in how to apply continuous evaluation about the performance of their schools.	32	40	48	60	3.4921	.50395
9	The school principals need professional development programs in education strategies about school performance evaluation.	22	27.5	58	72.5	3.3016	.46263

For the domain understanding, measurement, evaluation and assessment strategies, item 7 result shows 65% of the respondents rated 'very important' on how to build an active plan to enhance school performance, and 48.8% agreed that it is important, while none of the respondents choose 'not very important' or 'not important'. In item 8 the results shows 60% of the respondents stated very important on how to apply continuous evaluation for the performance of their schools, and 40% agreed that it is important, while none of the respondents choose 'not very important' or 'not important'. For item 9, 72.5% of the respondents agreed that school performance evaluation is very important, while 27.5% completely agreed that it is important, while none of the respondents choose 'not very important' or 'not important'. With these results, it shows that there must be a professional development program on measurement and evaluation for school principals in Muscat to enable them understand measurement, evaluation and assessment strategies.

Need Domain 3: Creating learning Organization

Table 4.7: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on Creating learning Organization

No	Statement	Important		Very Important		Mean	S.d.
		(n)	(%)	(n)	(%)		
	Creating a learning Organization						
10	School principals need professional development programs in how to encourage their teachers to develop themselves in their teaching methods.	25	31.2	54	67.5	3.3651	.48532
11	School principals need professional development programs in how to encourage teachers to be knowledge seekers.	36	45	44	55	3.5238	.50344
12	School principals need professional development programs in how to encourage teachers to do educational research.	47	58.8	33	41.2	3.5556	.50090
13	School principals need professional development programs in how to apply professional development programs in their schools.	43	53.8	37	46.2	3.5397	.50243

In terms of creating a learning organization, item 10, the result shows 67.5% of the respondents rated very important on how to encourage their teachers to develop themselves in their teaching methods, while 31.2% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'.

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The item 11 result shows 55% of the respondents rated very important on how to encourage teachers to be knowledge seekers, while 45% agreed it is important, while none of the respondents chose 'not very important' or 'not important'. For item 12, the result shows 58.8% of the respondents stated very important on how to encourage teachers to do educational research, while 41.2% agreed it is very important, while none of the respondents chose 'not very important' or 'not important'.

The item 13 result shows 53.8% of the respondents rated important in how to apply professional development programs in their schools, while 46.2% agreed it is very important, while none of the respondents chose 'not very important' or 'not important'. The findings here indicate that there should be professional development training on how to create positive learning environments since it is very important as stated by the principals.

Need Domain 4: Understanding students' development and learning

Table 4.8: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on Understanding students' development and Learning

No	Statement	Important (n)	(%)	Very Important (n)	(%)	Mean	S.d.
	Understanding students' Development and Learning						
14	School principals need professional development programs to be able to provide teachers with the educational skills which lead to increase students' performance.	33	41.2	47	58.8	3.4127	.49627
15	School principals need professional development programs in how to analyze students' performance.	34	42.5	46	57.5	3.4444	.50090
16	School principals need professional development programs in how to apply educational strategies to increase school performance.	31	38.8	48	60	3.5238	.50344

For the domain 'understand students' development and learning', 58.8% of the respondents rated very important that school principals need professional development programs to be able to provide teachers with the educational skills which lead to increase students performance, and 41.2% agreed it was important, while none of the respondents chose 'not very important' or 'not important'.

For item 15, 57.5% of the respondents agreed very important that school principals need professional development programs in how to analyze students' performance, and 42.5% agreed it was important, while none of the respondents chose 'not very important' or 'not important'. For item 16, 60% of the respondent rated very important that school principals need professional development programs in how to apply educational strategies to increase school performance, and 40% agreed it was important, while none of the respondents chose 'not very important' or 'not important'.

The result of this part shows that principals' professional development programs to help the school principals in Muscat to boost their understanding of students' development and learning is seriously needed.

Need Domain 5: Building Team Commitment

Table 4.9: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on Building Team Commitment

No	Statement	Important		Very Important		Mean	S.d.
		(n)	(%)	N	(%)		
	Building Team Commitment						
17	School principals need professional development programs in how to support a positive relationship in their work environment.	18	22.5	61	76.2	3.349 2	.48055
18	School principals need professional development programs in how to activate students and teachers suggestions to increase the school performance.	32	40	48	60	3.4921	.50395
19	School principals need professional development programs in how to provide teachers a feedback about their performance.	29	36.2	51	63.8	3.4762	.50344

In relation to building team commitment, for item 17, 76.2% of the respondents represented very important that school principals need professional development programs in how to support a positive relationship in their work environment, and

22.5% agreed it is important while none of the respondents chose 'not very important' or 'not important'.

Item 18, 60% of the respondents agreed very important that school principals need professional development programs in how to activate students and teachers suggestions to increase the school performance, and 40% agreed it is important, while none of the respondents chose 'not very important' or 'not important'. Item 19, 63.8% of the respondents represented very important that school principals need professional development programs in how to provide teachers a feedback about their performance is and 36.2% agreed it is important, while none of the respondents chose 'not very important' or 'not important'. The result of this aspect indicates that professional development program on building team commitment need to be provided for school principals in Muscat to equip them with team commitment skills.

Need Domain 6: Team working Skills

Table 4.10: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on Team working Skills

No	Statement	Important (n)	(%)	Very Important (n)	(%)	Mean	S.d.
	Team working Skills						
20	School principals need professional development programs about the importance of the team working for school performance.	28	35	52	65	3.3968	.49317
21	School principals need professional development programs in how to transfer school environment to be suitable as a team working environment.	37	46.2	43	53.8	3.4762	.50344
22	School principals need professional development programs in how to make their teachers cooperative workers.	48	60	32	40	3.5397	.50243
23	School principals need professional development programs in how to exchange the information, knowledge and skills related to school performance among them.	32	40	48	60	3.5238	.50344
24	School principals need professional development programs about new methods related to team working.	43	53.8	37	46.2	3.5714	.49885

For building team working skills, item 20 result shows 65% of the respondents agreed very important that school principals need professional development programs about the importance of the team working for school performance, and 35% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. For item 21, 53.8% of the respondents agreed that professional development programs in how to transfer school environment to be suitable as a team working environment is very important, and 46.2% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. While for item 22, 60% of the respondents agreed that it is important for school principals need to know how to make their teachers cooperative workers, and 40% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'. Item 23, 60% of the respondents agreed that school principals need professional development programs in how to exchange the information, knowledge and skills related to school performance among them is very important, and 40% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. For item 24, 53.8% of the respondents agreed that school principals need professional development programs about new methods related to team working is important, and 46.2% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'.

The result of this analysis shows that Muscat school principals need professional development programs on teamwork skills for them to create to a strong teamwork among teachers, students and other staff as well.

Need Domain 7: Problem Solving

Table 4.11: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Different Domains of Professional Development Needs on Problem Solving

No	Statement	Important (n)	(%)	Very Important (n)	(%)	Mean	Std. Deviation
	Problem Solving						
25	School principals need professional development programs in problem solving skills.	34	42.5	46	57.5	3.3810	.48952
26	School principals need professional development programs in how to implement a plan about problems solving in their schools.	37	46.2	43	53.8	3.4603	.50243
27	School principals need professional development programs about how to create multi solutions for the problems which occur in their schools.	44	55	36	45	3.5873	.49627
28	School principals need professional development programs in how to investigate the problem they faced in their schools.	36	45	44	55	3.5238	.50344
29	School principals need professional development programs in how to classify the problem they faced in their schools.	49	61.2	31	38.8	3.5238	.50344

Regarding domain problem solving, for item 25, 57.5% of the respondents represented very important that school principals need professional development programs in problem solving skills, and 42.5% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. Item 26, 53.8% of the respondents rated very important that school principals need professional development programs in how to implement a plan about problems solving in their schools and 46.2% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. Item 27, 55% of the respondents agreed important that school principals need professional development programs about how to create multi solutions for the problems which occur in their schools, and 45% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'. Item 28, 55% of the respondents stated very important that school principals need

professional development programs in how to investigate the problem they faced in their schools , and 45% also agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. Item 29, 61.2% of the respondents agreed important that school principals need professional development programs in how to classify the problem they faced in their schools and 38.8% also agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'.

Problem solving skills program is needed by school principals in Muscat because the results of this analysis illustrate that there should be professional development program for school principals in order for them to know how to solve different problems that occur in their schools.

Need Domain 8: Building shared Decision-making

Table 4.12: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on Building shared Decision-making

No	Statement	Important		Very Important		Mean	Std. Deviation
		(n)	(%)	(n)	(%)		
	Building shared Decision-making						
30	School principals need professional development programs about how to make decisions for school improvement.	47	58.8	33	41.2	3.5556	.50090
31	School principals need professional development programs in how to make students contribute in the school decisions.	36	45	44	55	3.4921	.50395
32	School principals need professional development programs in how to make teachers contribute in school decisions.	47	58.8	33	41.2	3.6190	.48952
33	School principals need professional development programs about how to follow scientific methods in decision making.	40	50	40	50	3.5714	.49885

For building shared decision-making, item 30, 58.8% agreed important that school principals need professional development programs about how to make decisions

for school improvement, and 41.2% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'. For item 31, 55% of the respondents agreed very important that school principals need professional development programs in how to make students contribute in the school decisions, and 45% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. In item 32, 58.8% of the respondents rated important that school principals need professional development programs in how to make teachers contribute in school decisions is important, and 41.3% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'. Item 33, 50% of the respondents agreed very important that school principals need professional development programs about how to follow scientific methods in decision making, and 50% also agreed that it is important, while none of the respondents chose 'not very important' or 'not important'.

With these results, shared decision-making should be built and a professional development program for principals needs to conduct to indicate the importance of involving staff in the decision process in school since research has proven the effectiveness of school decisions when teachers are involved and staff participated.

Need Domain 9: Research Knowledge Skills

Table 4.13: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on Research Knowledge Skills

No	Statement	Important		Very important		Mean	Std.
		(n)	(%)	(n)	(%)		Deviation
	Research Knowledge Skills						
34	School principals need professional development programs about how to do educational research.	19	23.8	61	76.2	3.3810	.48952
35	School principals need professional development programs about how to do action	25	31.2	55	68.8	3.4444	.50090

	research related to school environment.						
36	School principals need professional development programs about different types of educational research.	45	56.2	35	43.8	3.6349	.48532
37	School principals need professional development programs about the importance of educational research in student performance.	36	45	44	55	3.4762	.50344
38	School principals need professional development programs about how data analyzing of educational research.	47	58.8	33	41.2	3.5079	.50395

Referring to research knowledge skills, item 34 result shows 76.2% of the respondents agreed very important that school principals need professional development programs about how to do educational research, and 23.8% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. Item 35, 68.8% of the respondents rated very important that school principals need professional development programs about how to do action research related to school environment, and 31.2% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. In item 36, 56.2% of the respondents agreed important that school principals need professional development programs about different types of educational research, and 43.8% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'. For item 37, 55% of the respondents agreed very important that school principals need professional development programs about the importance of educational research in student performance and 45% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. In item 38, 58.8% of the respondents rated important that school principals need professional development programs about how data analyzing of educational research, and 41.2% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'.

From the results, it shows that school principals in Muscat need to be equipped with research skills and therefore, professional development program on research knowledge skills should be provided for school principals to know how to conduct research to improve their leadership abilities.

Need Domain 10: ICT Utilization

Table 4.14: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on ICT Utilization

No	Statement	Important		Very important		Mean	Std.
		(n)	(%)	(n)	(%)		Deviation
ICT Utilization							
39	School principals need professional development programs in how to apply ICT in the school environment.	51	63.8	29	36.2	3.4127	.49627
40	School principals need professional development programs in how to enhance teachers to apply ICT in the school environment.	50	62.5	30	37.5	3.4444	.50090
41	School principals need professional development programs about the importance of ICT in school environment.	33	41.2	47	58.8	3.4286	.49885
42	School principals need professional development programs in different domains of ICT which related to school environment.	40	50	40	50	3.5397	.50243

Considering ICT utilization, item 39 result shows 63.8% of the respondents agreed important that school principals need professional development programs in how to apply ICT in the school environment, and 36.2 agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'. Item 40, 62.5% of the respondents represented important that school principals need professional development programs in how to enhance teachers to apply ICT in the school environment, and 37.5% agreed that it is very important, while none of the respondents

chose 'not very important' or 'not important'. Item 41, 58.8% of the respondents agreed very important that school principals need professional development programs about the importance of ICT in school environment, and 41.2% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. Item 42, 50% of the respondents agreed important that school principals need professional development programs in different domains of ICT which related to school environment, and 50% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'.

The result of this suggest training on how to infuse ICT in school management and professional development training needs to be conducted for school principals in Muscat for the principals to utilize technology effectively.

Need Domain 11: Defining the Core values and beliefs of Education

Table 4.15: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Different Domains of Professional Development Needs on Defining the Core values and believes of Education

No	Statement	Important (n)	(%)	Very important (n)	(%)	Mean	Std. Deviation
Defining the Core values and beliefs of Education							
43	School principals need professional development programs about the importance of applying educational beliefs in school environment.	18	22.5	59	73.8	3.3651	.48532
44	School principals need professional development programs in how to apply the school vision according to the educational believes.	24	30	56	70	3.4444	.50090
45	School principals need professional development programs in how to relate the educational development with the educational believes.	37	46.2	42	52.5	3.5397	.50243
46	School principals need professional development programs in how to support teachers with the educational believes.	35	43.8	45	56.2	3.4921	.50395

| 47 | School principals need professional development programs in how to relate the educational research with human resource development. | 33 | 41.2 | 47 | 58.8 | 3.5079 | .50395 |
| 48 | School principals need professional development programs in how to create school environment which apply the educational believes. | 32 | 40 | 46 | 57.5 | 3.5397 | . 50243 |

Looking at the definition of the core values and beliefs in education, item 43, 73.8% agreed very important that school principals need professional development programs about the importance of applying educational beliefs in school environment, and 22.5% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. Item 44, 70% of the respondents agreed very important that school principals need professional development programs in how to apply the school vision according to the educational beliefs, and 30% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. For item 45, 52.5% of the respondents rated very important that school principals need professional development programs in how to relate the educational development with the educational beliefs, and 46.2% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'.

For Item 46, 56.2% of the respondents rated very important that school principals need professional development programs in how to support teachers with educational beliefs, and 43.8% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. In item 47, 58.8% of the respondents agreed very important that school principals need professional development programs in how to relate educational research with human resource development, and 41.2% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. For item 48, 57.5% of the respondents represented very important that

school principals need professional development programs in how to create school environment which apply the educational believes and 45% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'.

For this aspect, the results mean that school principals in Muscat need professional development training which will help them to know the core values of education and believe in them. Thus, this will help them to strive to achieve the mission and vision of education in Oman.

Need Domain 12: Communicating effectively

Table 4.16: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on Communicating effectively

No	Statement	Important		Very Important		Mean	Std. Deviation
		(n)	(%)	(n)	(%)		
	Communicating effectively						
49	School principals need professional development programs about how to apply the active communication in the school environment.	33	41.2	47	58.8	3.3968	.49317
50	School principals need professional development programs about how to apply different methods of communication with other school principals.	34	42.5	46	57.5	3.5079	.50395
51	School principals need professional development programs in how to strength the communication with parents of the students.	42	52.5	38	47.5	3.4603	.50243
52	School principals need professional development programs about the scientific methods of active communication.	15	18.8	65	81.2	3.3016	.46263

For communicating effectively, item 49 the result shows that 58.8% of the respondents agreed very important that school principals need professional development programs about how to apply the active communication in the school environment, and 41.2% agreed that it is important, while none of the respondents chose 'not very

important' or 'not important'. In item 50, 57.5% of the respondent rated very important that school principals need professional development programs about how to apply different methods of communication with other school principals, and 42.5% also agreed it is very important, while none of the respondents chose 'not very important' or 'not important'. For item 51, 52.5% of the respondents agreed important that school principals need professional development programs in how to strength the communication with parents of the students, and 47.5% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'. In item 52, 81.2% of the respondents stated very important that school principals need professional development programs about the scientific methods of active communication, and 18.8% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'.

The majority of the school principals agreed on all the statements as important which means that school principals in Muscat need professional development program or training on communication since communication between school principals keeps the relationship between teachers, students and parents alive. It helps in creating a strong rapport and working together as a team.

Need Domain 13: Setting goals and determining outcomes

Table 4.17: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on Setting goals and determining outcomes

No	Statement	Important (n)	(%)	Very Important (n)	(%)	Mean	S.d.
	Setting goals and determining outcomes						
53	School principals need professional development programs about how to apply active school vision.	35	43.8	45	56.2	3.4603	.50243
54	School principals need professional development programs in how to achieve continuous high performance for their schools.	47	58.8	33	41.2	3.5079	.50395
55	School principals need professional development programs in how to create a positive culture in their schools.	40	50	40	50	3.5714	.49885
56	School principals need professional development programs in how to achieve high performance of school outcomes.	39	48.8	41	51.2	3.5238	.50344

In terms of setting goals and determining outcomes, item 53 the result shows that 56.2% of the respondents agreed very important that school principals need professional development programs about how to apply active school vision, and 43.8% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. For item 54, 58.8% of the respondents rated important that school principals need professional development programs in how to achieve continuous high performance for their school, and 41.2% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'. With regards to item 55, 50% of the respondents agreed important that school principals need professional development programs in how to create a positive culture in their schools and 50% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'. Item 56, 51.2% of the respondents agreed very important

that school principals need professional development programs in how to achieve high performance of school outcomes, and 48.8% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'.

The agreement of all school principals with all the statements indicates the importance of principal's professional development in Muscat. A professional development program needs to be given to school principals to prepare them and equip them with skills on setting goals and determining outcomes.

Need Domain 14: Building Community Involvement leadership Capacity

Table 4.18: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Professional Development Needs on Building Community and Involvement leadership Capacity

No	Statement	Important (n)	(%)	Very important (n)	(%)	Mean	S.d.
Building Community and Involvement leadership Capacity							
57	School principals need professional development programs in how to encourage teachers to develop their teaching skills.	23	28.8	56	70	3.3968	.49317
58	School principals need professional development programs in how to encourage teachers to be self learning seekers.	36	45	44	55	3.3810	.48952
59	School principals need professional development programs in how to create a positive relationship in their schools.	34	42.5	45	56.2	3.4921	.50395
60	School principals need professional development programs in how to support teachers to develop their weakness related to teaching skills.	42	52.5	38	47.5	3.5397	.50243
61	School principals need professional development programs in how to apply the educational aims in the school environment.	34	42.5	46	57.5	3.4444	.50090
62	School principals need professional development programs in how to apply the educational plan in the school	36	45	44	55	3.5079	.50395

	environment.					
63	School principals need professional development programs in how to encourage the parents to communicate with teachers.	23	28.8	52	65	3.3333	.47519

Regarding building community and involvement leadership capacity, item 57 result shows that 70% of the respondents rated very important that school principals need professional development programs in how to encourage teachers to develop their teaching skills, and 30% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. In item 55% of the respondents represented very important that school principals need professional development programs in how to encourage teachers to be self-learning seekers, and 45% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'.

Item 59, 56.2% of the respondent agreed very important that school principals need professional development programs in how to create a positive relationship in their schools, and 42.5% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. Item 60, 52.5% of the respondent rated very important that school principals need professional development programs in how to support teachers to develop their weakness related to teaching skills, and 47.5% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'.

For Item 61, 57.5% of the respondent agreed very important that school principals need professional development programs in how to apply the educational aims in the school environment, and 42.5% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. Item 62, 55% of the respondents rated very important that school principals need professional development

programs in how to apply the educational plan in the school environment, and 45% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. In item 63, 65% of the respondents agreed very important that school principals need professional development programs in how to encourage the parents to communicate with teachers, and 28.8% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'.

The results of this aspect show that school principals in Muscat need professional development skills on the importance of community and involvement leadership Capacity. When principals are equipped with skills, they will help the teachers to develop their teaching skills, become knowledge seekers, relationships with teachers and increase communication with parents.

Need Domain 15: Resolving Conflicts (Building Consensus and negotiating Leadership Capacity)

Table 4.19: Distribution of Frequency and Percentage of Principals' Responses Regarding the Importance of Different Domains of Professional Development Needs on Resolving Conflicts (Building Consensus and negotiating Leadership Capacity)

No	Statement	Important (n)	(%)	Very important (n)	(%)	Mean	S.d.
64	64- School principals need professional development programs in how to manage conflicts in school environment.	30	37.5	50	62.5	3.4603	.50243
65	School principals need professional development programs about how to change the school conflicts to positive actions in their schools.	48	60	32	40	3.6190	.48952
66	School principals need professional development programs in how to negotiate with others to control school conflicts.	40	50	40	50	3.5873	.49627
67	School principals need professional development programs in how to overcome the school conflicts with scientific methods.	45	56.2	35	43.8	3.6032	.49317

With reference to Resolving Conflicts (Building Consensus and Negotiating Leadership Capacity), item 64 the result shows 62.5% of the respondent agreed very important that school principals need professional development programs in how to manage conflicts in school environment, and 37.5% agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. In item 65, 60% of the respondents rated important that school principals need professional development programs about how to change the school conflicts to positive actions in their schools, and 40% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'. For item 66, 50% of the respondents stated very important that school principals need professional development programs in how to negotiate with others to control school conflicts, and also 50% also agreed that it is important, while none of the respondents chose 'not very important' or 'not important'. Item 67, 56.2% of the respondents agreed important that school principals need professional development programs in how to overcome the school conflicts with scientific methods, and 43.8% agreed that it is very important, while none of the respondents chose 'not very important' or 'not important'.

The results in this part show the importance of conflict resolving skills. In this sense, school principals in Muscat need professional development training on how to resolve conflict and build consensus as well as negotiating leadership capacity. This will help school principals to manage the conflicts within their schools and know how to control them.

Overall, as indicated in Table 4.20 below, the average mean values of all the 15 domains showed a skewness toward the high side, i.e. the mean score of all items and domains skewed toward "important" and "very important." This is not the fault of

Salazar's professional development needs instrument. The skewness is the result of group thinking of principals in Muscat that all the domains and items are perceived to be very important or important, because they are in a newly developing countries context, as opposed to Salazar's research in the USA, in which some domains are important and some others are less important.

Table 4.20. The Average Means of the Domains

	No of items	Mean	S.d.
Domain 1 (IL) Designing, implementing and evaluating the school curriculum	6	3.4817	.08750
Domain 2 (IL) Understanding measurement, evaluation and assessment strategies	3	3.3867	.09609
Domain 3 (IL) Creating a learning organization	4	3.4975	.08655
Domain 4 (IL) Student development and learning	3	3.4567	.05686
Domain 5 (TL) Building team commitment	3	3.4400	.07810
Domain 6 (TL) Team work skills	5	3.5020	.06573
Domain 7 (IL) Problem solving skills	5	3.4940	.07861
Domain 8 (IL) Building shared decision making	4	3.5600	.05354
Domain 9 (IL) Research knowledge and skills	5	3.4880	.09311
Domain 10 (IL) ICT utilization	4	3.4550	.05802

Domain 11 (TL) Defining core values and beliefs	6	3.4817	.06616
Domain 12 (TL) Communicating effectively	3	3.4567	.05508
Domain 13 (IL) Setting goals and outcomes	5	3.4980	.05450
Domain 14 (TL) Community involvement for school improvement	6	3.4600	.06356
Domain 15 (TL) Resolve conflicts in doing reforms	5	3.5200	.12349

Note: IL refers to instructional leadership category, and TL refers to transformational leadership category.

4.4 The Highly Important Needs for Instructional and Transformational Leadership

The analysis in this section is to answer for Research Question 2, that is:

In the context of reform, what are the needs perceived by school principals to be of high importance for instructional leadership and transformational leadership of school principals in Muscat?

Table 4.20 summarizes the average mean value of each of the 15 domains of professional development needs for school principals in Muscat city, Oman. The order of the domains follows the explanation in the previous section before. The average means of all the domain were closely similar, and this can be attributed to group thinking phenomena because they are likely to share similar feelings. It is also a developing country where many of this variables effects them directly therefore all

principals think the same. Hence, the instrument is not faulty as it has been used in other places particularly in the USA.

The original fifteen domains—as proposed by Salazar's (2002) model—can be categorized into two leadership categories, namely instructional leadership and transformational leadership. Based on the elaborate explanation in Chapter Two (Review of Literature) regarding the two kinds of leadership, and as suggested by Sufean (2014), the fifteen domains of professional development needs can be categorized as follows: into two categories of leadership, namely instructional leadership (IL) and transformational leadership (TL), as marked in Table 4.20 before.

Instructional leadership:

    i.   Setting goals and determining outcomes

    ii.   Designing, implementing, and evaluating curriculum

    iii.   Understanding measurement, evaluation, and assessment strategies

    iv.   Creating school as a learning organization—for improving school effectiveness

    v.   Understanding students' development and learning

    vi.   Problem solving for improving teaching and learning

    vii.   Building shared decision-making in curriculum delivery

    viii.   Research knowledge skills related to teaching and learning

    ix.   ICT utilization in teaching and learning

The average mean for all domains in instructional leadership is 3.4797.

<u>Transformational Leadership</u>

    x.   Defining the core values and beliefs of education

    xi.   Communicating effectively

    xii.   Building team commitment based on beliefs and values

    xiii.   Team work skills

    xiv.   Building community involvement

    xv.   Resolving conflicts (Building consensus and negotiating leadership capacity)

The average mean for all the domains in transformational leadership was 3.4774.

Therefore, the average mean for instructional leadership (3.4797) was not significantly different from the average mean for transformational leadership (3.4774). This result implies that school principals in Muscat perceived all the domains for professional development needs as highly important. The main reason for this result was that they all really needed all the nine domains of instructional leadership and the six domains of transformational leadership. They needed the knowledge and competencies necessary for effective school management and leadership to assist educational reforms in Oman.

With reference to the results in Table 4.22 again, however, specifically the most highly important needs domain for instructional leadership was Domain 8 , i.e. building shared decision-making process (mean value 3.5600), and for transformational leadership was Domain 15, i.e. resolving conflicts in implementing changes for reform (mean value 3.5200).

4.4.1   The leading item in each need Domain or Factor

What is the most leading item or highly important item for instructional leadership and transformational leadership domains?   Table 4.21 shows the rotated matrix factorial analysis for each item and the clustered fifteen domains/ factors.   From the table, the leading indicator or item was determined by looking into the highest item loading. From the table and item loading:

- Domain 1 (IL) i.e. designing, implementing and evaluating curriculum factor, the item on "s*chool principals need professional development programs about curriculum implementation"* was the highest loading item (.88).

- For need Domain 2 (IL), i.e. understanding measurement, evaluation and assessment strategies factor, item 1 "*school principals need professional development programs in how to apply continuous evaluation about performance of their schools"* was the highest loading item (.57).

- For need Domain 3 (IL), creating a learning organization factor, item 4 "*School Principals need professional development programs in how to apply professional development programs in their schools"* was the highest factor loading (.77).

Table 4.21 : Rotated Component Matrix for all factors

Item label	Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Domain 6	Domain 7	Domain 8	Domain 9	Domain 10	Domain 11	Domain 12	Domain 13	Domain 14	Domain 15
DIEC1	.740														
DIEC2	.880														
DIEC3	.710														
DIEC4	.496														
MEAS1		.571													
MEAS2		.416													
CL01			.510												
CLO2			.720												
CLO3			.445												
CLO4			.776												
SDL1				.743											
SDL2				.717											
SDL3				.857											
BTC1					.805										
BTC2					.486										
BTC3					.606										
TWS1						.656									
TES2						.484									

Item label	Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Domain 6	Domain 7	Domain 8	Domain 9	Domain 10	Domain 11	Domain 12	Domain 13	Domain 14	Domain 15
TWS3					.739					.					
TWS4					.479										
PS1						.861									
PS2						.664									
PS3						.826									
PS4						.710									
BSDM1							.677								
BSDM2							.806								
BSDM3							.637								
BSDM4							.739								
RKS1								.582							
RKS2								.483							
RKS3								.768							
RKS4								.852							
ICT1										.737					
ICT2										.690					
ICT3										.756					
ICT4										.421					
CVBE1											.799				
CVBE2											.747				
CVBE3											.544				

Item label	Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Domain 6	Domain 7	Domain 8	Domain 9	Domain 10	Domain 11	Domain 12	Domain 13	Domain 14	Domain 15
CVBE4											.534				
CVBE5											.752				
CVBE6											.685				
CE1												.443			
CE2												.755			
CE3												.848			
CE4												.709			
SGDO1													.566		
SGDO2													.714		
SGDO3													.816		
SGDO4													.627		
CIL1														.506	
CIL2														.563	
CIL3														.722	
CIL4														.666	
CIL5														.655	
CIL6														.881	
CIL7														.591	
RC1															.661
RC2															.558
RC3															.613

- For the need Domain 4 (IL), <u>Understanding students' development and learning</u> factor, item 3 *"School Principals need professional development programs in how to apply educational strategies to increase school performance"* was the highest item loading (.85).

- For need Domain 5 (TL), <u>Building team commitment</u> factor, item 1 *"School principals need professional development programs on how to support a positive relationship in their work environment"* was the highest item loading (.80).

- Item 4 *"School Principals need professional development programs on how to exchange information, knowledge and skills related to school performance among them"* was the highest item loading (.73) for need Domain 6 (TL) <u>Team working skills</u> factor.

- Item 1 "*School Principals need professional development programs on problem solving skills"* for need Domain 7 (IL) <u>Problem solving</u> factor was considered the highest item loading (.86).

- For need Domain 8 (IL), <u>Building shared-decision making</u> factor, item 2 *"School Principals need professional development programs on how to make students contribute in the school decisions"* was the highest item loading (.86).

- Under the need Domain 9 (IL), <u>Research knowledge skills</u> factor, item 4 *"School Principals need professional development programs about the importance of educational research in student performance"* was the highest item loading (.85).

- Item 3, *"School Principals need professional development programs about the importance of ICT in school environment"* was the highest item loading under the need Domain 10 (IL) ICT usage factor (.75).

- For need Domain 11 (TL), Defining core values and beliefs of education factor, item 1*"School Principals need professional development programs about the importance of applying educational beliefs in school environment" was* the highest item loading (.79).

- Under the need Domain 12 (TL), communicating effectively factor, item 3 *"School Principals need professional development programs on how to strengthen the communication with parents of the students"* was the highest item loading (.84).

- In terms of need Domain 13 (IL), setting goals and determining outcomes factor, item 3 *"School Principals need professional development programs on how to create a positive culture in their schools"* was the highest item loading (.81).

- Under the need Domain 14 (TL), building community and involvement leadership capacity factor, item 6 *"School Principals need professional development programs on how to apply the educational plan in the school environment"* was the highest item loading (.88).

- Under the need Domain 15 (TL), resolving conflicts (building consensus and negotiating leadership capacity) factor, item 1 *"School Principals need professional development programs* on how to manage conflicts in school environment" was the highest item loading (.66).

Furthermore, there are some items that need to be removed from the analysis due to a low communality (below 0.4). In addition, some were also eliminated from the analysis because they loaded on more than one component, which created complex structures. These complex structures can lead to difficulties in interpretation of results. As Coakes (2005:161) observed, "Complex variables may have higher loading on more than one factor and they make interpretation of the output difficult". After eliminating complex structures, each remaining for the analysis variable had a higher factor loading on one component only.

4.4.1 Determining the overall leading indicator (item)

From the analysis of factor analysis, looking into factor loading of each item under each factor, we can see both statements "*School Principals need professional development programs about curriculum implementation*" and "*School Principals need professional development programs on how to apply the educational plan in school environment*" came to the fore as the overall leading indicators, items and statements with the overall highest loading items followed by *"School Principals need professional development programs on problem solving skills*" item and statement, *"School Principals need professional development programs on how to apply educational strategies to increase school performance"* item, *"School Principals need professional development programs about the importance of educational research in student performance"* item and *"School principals need professional development programs on how to strength the communication with parents of the students*" item while *"School Principals need*

professional development programs on education strategies about school performance evaluation" was the overall lowest item.

4.4.2 Determining the best Factor

The table presents the best item loading and best factor as well as the best consistent item-factor. From this table, *"Problem-solving"* factor could be considered as the best factor for its items having the highest loadings. According to Black and Hair, any item loading that exceeds (.5) is considered acceptable. In terms of consistency, *"Building community and involvement leadership capacity"* tends to be the most consistent factor for its all items loaded under their respective factor and construct followed by *"Defining core values and beliefs of education"* where all its six items loaded well under their respective factor and construct.

4.4.3 Ranking the Needs Domain to Improve Principal Professional Development

Based on the analysis of factorial loading, the following list of ranking portrays the order of priority in organizing professional development programs for school principals in Muscat.

- Curriculum implementation and educational planning
- Problem-solving skills
- Strategic Planning
- Research skills
- Communication with parents

- Positive culture

- Cooperation

- Team work

- Shared decision-making (teachers)

- Shared-decision-making (students)

It can be seen from the list that curriculum implementation via teaching-learning process is at the top of the list, followed by problem-solving skills. These two domains of instructional leadership, therefore, should be the central emphasis of training programs for principals. Curriculum implementation requires school principals to know the structure of knowledge of all subjects, the structure of teaching-learning objectives, and the structure and approaches in assessment. The knowledge is vital for leading and guiding school teachers in teaching-learning process of all subjects, the core business of schools.

4.5 Correlation Among Domains of Professional Development Needs of School Principals

This section is concerned with answering Research Question 3, that is:

What is the extent of correlations among the identified domains or factors of professional development needs of school principals in Muscat?

The survey questionnaire had a total of 67 items in 15 domains concerning professional development needs of school principals, and it had ordinal scale; hence, Spearman correlation statistic is suitable for analysis. SPSS version 18 was used to condensed the

all items and correlations among the domains were accounted. Table 4.22 shows the correlation matrix at a glance on the 15 domains and how the inter item domains correlate with each other.

Table 4.22: Correlation Coefficient Matrix Among Fifteen Domains

Correlation Matrix[a]

	DOM1	DOM2	DOM3	DOM4	DOM5	DOM6	DOM7	DOM8	DOM9	DOM 10	DOM 11	DOM 12	DOM13	DOM 14	DOM 15
DOM1	1.000														
DOM2	.070	1.000													
DOM3	.447	.657	1.000												
DOM4	.068	.999	.658	1.000											
DOM5	.078	.999	.658	1.000	1.000										
DOM6	-.491	.387	.595	.388	.388	1.000									
DOM7	.491	.395	.606	.396	.396	1.000	1.000								
DOM8	.464	.664	.999	.665	.664	.594	.606	1.000							
DOM9	-.485	.403	.606	.405	.405	.999	1.000	.606	1.000						
DOM10	-.468	.648	1.000	.648	.648	.594	.606	1.000	.605	1.000					
DOM11	.512	.562	.512	.538	.537	.432	.426	.528	.422	.529	1.000				
DOM12	.073	1.000	.658	1.000	1.000	.387	.395	.664	.405	.648	.546	1.000			
DOM13	.499	.419	.631	.420	.420	.999	.999	.631	.999	.631	.453	.419	1.000		
DOM14	.170	.643	.092	.621	.625	.358	.349	.098	.352	.091	.663	.630	.360	1.000	
DOM15	.499	.434	.664	.434	.434	.996	.997	.663	.996	.663	.462	.434	.999	.351	1.000

a. This matrix is not positive definite.

Notes:
* Figures in the above table show the correlation coefficient values among the fifteen domains
* p is less than 0.05, then correlation is not significant

Dom1, 2, 3,4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15 represent Need Domain 1: Designing, Implementing and Evaluating Curriculum, Need Domain 2: Understanding Measurement, Evaluation and Assessment, Need Domain 3: Creating learning Organization, Need Domain 4: Understanding students' development and learning, Need Domain 5: Building Team Commitment, Need Domain 6: Team working Skills, Need Domain 7: Problem Solving, Need Domain 8: Building shared Decision-making, Need Domain 9: Research Knowledge Skills, Need Domain 10: ICT Utilization, Need Domain 11: Defining the Core values and believes of Education, Need Domain 12: Communicating effectively, Need Domain 13: Setting goals and determining outcomes, Need Domain 14: Building Community and Involvement leadership Capacity, Need Domain and 15: Resolving Conflicts (Building Consensus and negotiating Leadership Capacity) respectively

The analysis of the correlation matrix indicates that many of the observed relationships were very strong, that is the coefficient r = >75. The strongest relationship was between Domains 2 and 4, 2 and 5, 3 and 8, 3 and 10, 10 and 13 (r= 0.99) while variables items that display a coefficient index of r<.50 shows a weak correlation very small mean coordinate indicates these items have weak relationship and are not contributing substantially to the principal components. On the overall the correlation matrix showed a definite positive outcome.

Is there a mixed inter blending of correlations among instructional leadership (IL) and transformational leadership (TL) domains? Based on the results in Table 4.22, strong correlations (values more than 0.9) were observed between:

- Domain 2 (IL) and Domains 4 (IL) and 5 (TL)

- Domain 4 (IL) and Domain 5 (TL)

- Domain 6 (TL) and Domains 7 (IL), 9 (IL), 13 (IL), and 15 (TL)

- Domain 7 (IL) and Domains 9 (IL), 13, and 15

- Domain 8 (IL) and Domain 10 (IL)

- Domain 12 and Domains 2, 4, 5

- Domain 9 and Domains 13 and 15

However, weak correlations (coefficient values less than 0.10) were found between:

- Domain 1 and Domains 2, 4, 5, and 12 (TL)

- Domains 3, 8, 10 and Domain 14 (IL)

These findings suggest that the domains and items in the instructional leadership category overlapped with the transformational leadership category, and at times certain

domains in the two leadership categories were not related to each other. What is surprising is that Domain 11 (Defining core values and beliefs about education) was moderately related to all other domains, and this implies that values and beliefs are just moderately related to many areas of professional development.

4.6 Summary of the Survey Findings

The results of this study have shown a number of factors contending with the professional development of the school principals in Oman. Generally, the results of analysis portrays clearly the tendency towards instructional leadership needs more than transformational leadership. Based on the research results also, all the principals agreed that Omani government, especially the Ministry of Education in Oman, should conduct programs or workshops that are skill-oriented and knowledge-based on professional development which will help them to guide, supervise and govern the schools as instructional leaders and not just managers or administrators. Thus, the emphasis of training programs should be on instructional leadership.

Beside this, the study has equally shown that the Omani school principals require the will to make decisions, identify goals and contribute to the educational reform programs of the Oman based on their experience in the school as against the centralized decision being solely made by the Oman's Ministry of Education. This also pertains to instructional leadership, which requires principals to focus more on the goals of high school performance and high student achievement in learning.

In addition, this study has shown a wide gap between theory and implementation of professional development. It shows a new trend in improving principals' ability and school development. The research indicates the scarcity of professional development training in Oman to make the school principals instructional leaders. Effective instructional leadership strategies, curriculum development skills and students' achievement management skills can be developed through adequate professional trainings.

In terms of educational research, it is obvious that the school principals in Muscat have very little or no knowledge about research skills and development. It seems they are unaware of the role of research or the government is not aware of engaging school principals in Muscat in research. This has led to scarcity of action research by the school principals to know how to tackle school problems and challenges. The school principals agreed that the government needs to make them knowledge seekers by providing a lifelong learning environment which we help them to discover the needed skills and knowledge professionally required to manage schools as instructional leaders. This aspect also pertains to instructional leadership.

In addition, the professional development programs that the government perceived as a professional development did not encompass principals' needs in this global era. It did not prepare them to face the threats and challenges of the latest developments. More so, the lack of principal professional development means they are unable to equip their teachers or conduct training that is related to teachers' development as well as professional development for teachers to improve their skills. This also pertains to instructional leadership.

In addition to this, the study revealed that professional development in terms of learning new languages is needed because most of the school principals do not know how to speak other languages such as English. This is very necessary as many of the available information on professional development are published in English and made accessible through the internet and others..

Therefore, this research is a message to the Omani government to do something about this issue. This study will in no doubt help the Ministry of education to know what is lacking and missing in the school arena and assists in developing and approving school standards through leadership of the school principals as well as teachers and students' performance.

From the result of factor analysis, the domain or factor *"Problem-solving"* is considered as the biggest factor in improving school principal's professional development in Oman. This is due to the fact that without problem-solving skills, school principals will probably not be able to function as instructional and transformational leaders based on the complexity of problems that can arise within the school environment, ranging from human (teachers and students) management to others. Factor consistency is also considered in this study and the result of factor analysis shows that *"Building community and involvement leadership capacity"* and *"Defining core values and beliefs of education"* are also factors that need to be considered in improving school principals' professional development. Those two areas, however, pertain to transformational leadership.

Additionally, looking into dominant and leading items, the results of Factor Analysis have shown and proved that "*school principals need professional development*

programs about curriculum implementation" is considered as the leading and dominant item amongst items in this study. Thus, this item shows the importance of curriculum and its role in improving principal's professional development in Oman, and certainly this aspect pertains to instructional leadership.

4.7 Other Findings: Demograhic Differences in Professional Development Needs

As a matter of curiosity, t-test analysis was made separately to compare certain demographic variables—thus tables of results are not relevant to be presented here. From the result of t-test analysis, there was no significant difference between male and female school principals in Muscat in terms of their professional development needs. Thus, male and female school principals in Muscat had same perceived needs of professional development.

Testing differences between the school levels, the result of the t-test analysis indicated that the school principals from Basic Educational Cycle 1 and 2 had similar perceptions in many domains, except for the needs domain defining core values and beliefs of education and domain problem solving. Thus, Cycle 1 principals had different ways and thinking about core values and beliefs and problem solving methods compared to Cycle 2 school principals.

Moreover, principals with a bachelor's degrees or master's degrees are different in terms of building share decision making and research knowledge skills. Hence, their difference in academic background could influence the way of their thinking and their opinions towards professional development.

Comparing male and female principals, they also differed on the issues of designing, implementing and evaluating curriculum, that is, male school principals tended to have different opinions and high acceptance of designing, implementing and evaluating curriculum as a major factor for principal's professional development compared to female principals. In terms of creating a learning organization and building community and involvement leadership capacity, female school principals in Muscat believed that creating a learning organization and building community and involvement leadership capacity were very important factors for a principal's professional development compared to male school principals.

Furthermore, in terms of principals' work experiences, for issues related to creating a learning organization, it was found that principals with 5 years of experience and above perceived that creating a learning organization and building community involvement leadership capacity perhaps as very important factors compared to the principals that have less than 5 years of working experience. In addition, school principals that have less than 5 years of work experience had a higher expectation about the issues related to defining core values and beliefs of education and setting goals and determining outcomes compared to the principals that have 5 years and above working experience.

In relation to the types of schools, different means were found between principals at Basic Education Cycle 1 and 2 in principals' professional development in terms of designing and implementing and evaluating curriculum. Hence, principals at cycle 1 perceived designing and implementing and evaluating curriculum and setting goals and determining outcomes as well as defining core values and beliefs of education as perhaps

the most important factors for principal professional development compared to the principals at Cycle 2 while the principals at Cycle 1 perceived creating a learning organization higher compared to the principals at Cycle 2.

In terms of principal's qualifications, this research discovered that a principal's educational background could play a big part in understanding professional development. From the results, principals with master degrees perceived creating a learning organization and defining core values and beliefs of education as very important factors for principals' professional development in Oman compared to the principals with bachelor degrees who tend to accept building share decision making and setting goals and determining outcomes as the important factors.

PART 2: ANALYSIS OF INTERVIEW DATA

4.8   Qualitative Findings

This section presents the analysis and findings for research questions 4 and 5.   The analysis and discussions are juxtaposed in the context of educational reforms in Oman. Data were obtained by documents search and interviews with six principals and observation of school organization in Muscat.   The following sub-sections provide the contextual background, i.e. it discusses the educational reform initiatives.

4.8.1: The Context of Educational Reforms in Oman

In a journey to become an education hub and meet the Omani 2020 vision the MOE has taken steps to prepare students through the reformation of the curriculum to meet the challenges of the labor market and modern life generally. The school education was reformed, replacing the General Education system with new Basic system (Ministry of Education of Oman, 2004).   The purpose of replacing the General Education System with Basic Education System was to:

> Unify ten-year education provided by the Sultanate for all children of school age, to meet their basic education needs in terms of knowledge, skills, attitudes and values, enables them to continue their education or training based on their interests, aptitudes and dispositions, and enabling them to face the challenges of their present circumstances and future developments, in the context of comprehensive social development (Ministry of Education, 1998 & 2008).

"A new Basic Education curriculum has been developed by the Ministry of Education. The aim of this curriculum is to provide students with a learning experience that remains firmly rooted in Islamic principles and Omani cultural identity while, in

addition, follows international best practice and is relevant to the rapidly changing world of the 21st century" (Ministry of Education of Oman, 2004, p.15).

According to the Ministry of Education (2006:16), the curriculum goals of education in schools are to:

- Develop all aspects of the learner's personality within the context of preserving Islamic values and traditions.

- Strengthen national unity and belongingness to the Arab and Islamic world and to humanity in general and developing learners, abilities to interact with the world.

- Enable learners to participate effectively in the comprehensive development of Omani society.

- Provide equal educational opportunities for all.

- Provide a learner-centered education which furnishes the learner with appropriate life skills through the development of self-learning, scientific and critical thinking and the ability to understand and apply contemporary scientific and technological innovations.

- Ensure that students are adequately prepared for the requirements of further and higher education, the labour market and modern life generally.

- Reduce drop-out rates among students.

- Contribute to the eradication of illiteracy.

According to the Ministry of Education (2007) guide book, the implementation of Basic Education involved a comprehensive reform of the educational process. It began with the reform of the educational philosophy and aims and included aspects such as the length of school year and school day, the layout of school buildings, students class ratios,

the administrative and organizational structure schools, the subjects and activities to be included the curriculum, textbooks, materials and resources, teaching methodologies, assessment and evaluation instruments and the school plan.

The general goals of the education system in Oman as stated by the Ministry of Education Annual report "From Access to Success" (2006) were:

1. Developing the individual in an integrated manner with regard to physical, intellectual, spiritual, societal and emotional aspects.

2. Developing Omani originality and identity derived from Islam, the Arabic language and the country's rich culture.

3. Modernization of society and dealing with modern technology.

4. Adopting a scientific thinking approach by developing the mental abilities of individuals and providing them with scientific and critical thinking.

5. Encouraging self-learning skills in order to make education sustainable throughout an individual's life.

6. Supporting economic development and vocational training: education promotes values that complement national development aspiration.

- Encouraging national unity and a sense of belonging to the Gulf region and the Arab World.

- Developing feelings of national pride and patriotism among citizens.

- Promoting social liberation by encouraging a spirit of cooperation and collective activity in the public interest.

- Protecting the environment.

- Developing emotional attitudes and values among individuals.

- Encouraging international peace and understanding through the development of the values of tolerance, understanding & mutual respect.

In relation to this, the main new features of educational reforms in Oman are:

1. Basic education for duration of ten years. It aims to provide students with self-learning skills and to ensure the eradication of illiteracy. There are two years of secondary education in grades eleven and twelve.

2. Reforms have been implemented in learning and teaching materials and in the development of new assessment systems.

3. New subjects dealing with life skills, information technology (IT) and computers have been introduced.

4. Particular importance is given to science and English.

5. Educational supervision and inspection have been consolidated.

6. In-service training of teachers is provided.

7. The country promotes educational evaluation.

General Education was organized into three stages: elementary which lasted for six years and preparatory and secondary stages which each lasted for three years. The school year consisted of 160 school days and was divided into two semesters each lasting for 16 weeks. Most of the teaching techniques and activities involved traditional teacher-center approaches. Students' evaluation was restricted to formal tests and examinations which tended to measure low-level skills.

Table 4.23 shows a comparison between the structure of General Education and Basic Education system in Oman. It shows the development and changes that occurred in both systems. The table illustrates the year of changes and the new concepts and

programs added to the Basic Education system. In addition, the table indicates the new

challenges posed by the Basic Education system which must be faced by school teachers

and principals.

Table 4.23: Structure of General & Basic Education System in Oman and their changes

Areas of Reform	General Education 1970-1997	Basic Education 1998-Present
System	1-6 Elementary Class	Class 1 to Class 4 (Cycle One) Class 5- Class 20 (Cycle 2) Class 11- Class 23 (Post Basic Education)
Curriculum	Lack of learning activities	• More learning activities • Integration of knowledge • Skills of competence based learning, • Problem-based learning • Project-oriented courses
English Subject	Students start English from Class 4	Students start English from Class 1
Physical Education	Very little attention paid	Core
Classroom Management	Depending on teacher (Teacher-centered approach)	• Group discussion • Interactive (Student-centered approach)
School Administration	Centralized	• Decentralized

ICT	Very little attention on ICT usage	- ICT literacy - Computer Labs
Teaching Training	General	1. Specific 2. Continue their Master &Ph.D
Student Evaluation/ Assessment	Only examination Memorization	- Continuous assessment and evaluation - Problem solving - Critical thinking - Oral tests, quizzes - Reports, research, - Homework, projects, - Portfolios and student self-assessments.

The general education system had multiple shortcomings that affected instructional quality in Oman according to the EFA Assessment: Country Reports, Oman, (2000). These shortcomings and deficiencies are listed below:

- Inadequate school buildings and educational facilities

- Lack of adequate and appropriate instructional materials

- An acute shortage of qualified Omani teachers

- A preponderance of foreign teachers

- Outdated teaching/learning methodologies

- A lack of instructional technology.

In Oman and GCC countries, there are three types of challenges facing education and curriculum developments, according to International Bureau of Education: the Omani National Commission for UNESCO, (2001):

1. Global challenges which are external to the world of education;

2. Internal challenges of the education systems themselves;

3. Challenges specific to the Gulf Region

Furthermore, there are other challenges confronting the Gulf Region, such as:

1. The challenge of universal literacy

2. The challenge of a shortage of highly skilled human resources, including in the field of education;

3. The challenge of reconciling traditional orientation of education with the aspiration for modernity;

4. The challenge of privatization of schools in some countries;

5. The challenge of diversification of the economy to become less dependent on oil revenue and the consequent increase in the need for competent training and management development in other sectors of the economy;

6. The need to invest more in research in various priority areas, including education.

However, coupled with the aforementioned challenges and despite the efforts of the Omani Ministry of Education in reforming its educational system through the implementation of the new curriculum, it fails to consider or involve the school principals in the curriculum design. The entire curriculum was student-centered with little or no consideration given to the teachers and the principals who are to implement the curriculum. The principals are faced with the challenge of how to make the curriculum work without any previous training and retraining being given to them. Therefore, for the school principals to effectively perform his/her role as professional

instructional leaders and, manage the teachers and the learning resources with the utmost aim of helping the students achieving their expected performance then, the importance of professional development programs cannot be over-emphasized.

4.8.2: Instructional Leadership

This section narrates the findings concerning research question 4, *i.e. What are the abilities of school principals in Muscat in the terms of practicing instructional leadership and transformational leadership?*

To answer this question, six school principals in different zones of Muscat city were selected and they were each interviewed several times. Their school climate and management practices were also observed to check the congruence or compatibility of their answers during interview sessions.

Interview Question

> *From your opinion, what are your abilities in transformational leadership according to the educational reform in Oman?*

The word "leadership" refers to management, headship, control and power. But in Oman, "leadership" seems not to be used directly, but rather understood as synonymous with management or administration, simply out of respect to His Majesty the Sultan. However, it can be used about one leads oneself as an *Insan* (mankind) and *Khalifah* (leader) from the Islamic perspective. In this study, the school principals involved were told to use the term leadership in the liberal sense from the vantage point of Islam.

Instructional leadership of school principals in Muscat pertains to the core functions of schools, namely students' balanced development in the overall sense, school improvement, and teachers' instructional management. Hence, the school principals in Muscat generally agreed that instructional leadership was very important for achieving educational goals of Oman, and therefore principals should concentrate on this.

Furthermore, among the educational goals and aims as stated in the Ministry of Education report (2006):

1. Continuing the expansion of education to make it available to all.

2. Developing education through:

   - abolishing the double-shift system in schools;

   -expanding the implementation of Basic education;

   - developing the curriculum;

   - developing secondary education;

   - developing educational research;

   -expanding the use of technology and evaluation system;

   - developing the assessment and evaluation system

3. Encouraging the expansion of private education.

4. Developing for the abolishment of illiteracy.

5. Expanding special education facilities

However, this study found that principals in Muscat in general believed that they were lacking instructional leadership skills. Additionally, school principals in Muscat need skills and knowledge on instructional leadership for them to apply it in their schools. Generally, principals said the education system was centralized, decisions are made from the top (Ministry) and there was no freedom of expression and autonomy in

schools. Moreover, the principals claimed that they needed problem-solving skills, decision-making skills and they were eager to participate in the decisions related to teaching and learning not to just leave them as just a managers or administrators. Also, school principals in Muscat are looking for liberation from the old system and to be trained on applying instructional leadership skills. For example, school principal 1 in Muscat expressed his experience and opinion as follows:

> *I am a school principal for a basic Education school cycle 1, I believe that every school principal must be knowledgeable in how to apply instructional leadership in his school . Alhamdulillah, I have so many abilities to lead my school as an instructional leader, I feel that I have the sufficient abilities to provide inspiration motivation to the teachers in my school. This kind of motivation in my opinion is very important to make teachers work with a high performance. Also I have the abilities to encourage students to increase their learning skills. To do this kind of encouragement, I always visit the students in their classes and I give them instructions in how to increase their learning skills and I guide them on how to improve their studying level . Establishing a safe and orderly learning environment in the school is another instructional ability I have . To provide a learning environment in the school I always give my instructions to the teachers to make their classes suitable environments for learning and I always guide the teachers to deal with students using educational methods. Alhamdulillah, I also have the ability to comply with mandated educational program and in my opinion this ability is very important because it makes me gain a lot of knowledge as a school principal. I also have the ability to facilitate the positive change processes in the school and I think this ability is very important for me as an instructional leader and of course, this ability is a very important one to achieve a high performance in the school (Sp1).*

Based on the above quote, this school principal has so many abilities in instructional leadership and these abilities as he mentioned facilitate his duty as an instructional leader in his school and make him able to guide the teachers in the school to work with high performance and to achieve the mission of the school as an educational environment.

From the above statement of the school principal we can find many themes about instructional abilities. These abilities are:

1- Providing inspirational motivation to the teachers

2- The ability to encourage students to increase their learning skills

3- Complying with mandated educational programs

4- Facilitating positive change processes in the school

5- Leading his school using educational methods

6- Gaining new knowledge about instructional leadership to help him in leading his school as an instructional leader.

School principal 2 supported the above findings on professional development on instructional leadership. He stated that school principals in Muscat have instructional leadership abilities which make them able to lead their school to a high level. Principal 2 asserts that:

> *You start with me with a very tough question, of course, you know that school principal as an instructional leader must take actions in improving student achievement and he must have skills which make him/ her able to upgrade the quality of all instructional programs in his school, and for me, I have a lot of abilities which support me to work as an instructional leader for my school so I have the ability to connect the school environment with the surrounding society and I always encourage the teachers and the students to build a strong relation with this society . And pertaining to the importance of the relation between the parents and the school, I always encourage the parents to visit the school and to take care of the studying of their children. I always work with teachers to create a shared sense of purpose and direction of the school and this ability I think it is very important because it makes me able to achieve the mission of the school. Developing a school improvement plan is another instructional ability I have and this ability makes me able to investigate the strength and weakness of my school.*
> *Also, I have the ability to establish an internal communication system in the school and this kind of communication is very important to make all school staff working together to achieve the aims and the mission of the school. I as an instructional leader, I feel that I have abilities to promote significant and lasting change in the school environment. Creating a climate of high expectation is another instructional ability I have and this ability supports me in the process of the school improvement. Alhamdulillah, I have a high sense of cooperation with teachers and students and also the parents and in my opinion this kind of cooperation helps the school to increase its performance as an educational organization.*

I am very glad to mention to you that I have abilities in time management and I think this ability is a very vital for school principal as an instructional leader because time is life and without managing our time very perfectly, we cannot achieve our aims. Another instructional ability I have is my ability to encourage students to increase their learning skills and this ability leads to increase in the performance of the school. (Sp2)

With the quotation above, the major abilities raised were:

1. Connecting the school environment with the surrounding society

2. Working with teachers to create a shared sense of purpose and direction of the school

3. Developing a school improvement plan

4. Establishing an internal communication system in the school

5. Promoting significant and lasting change in school environment

6. Creating a climate of high expectation

7. High sense of cooperation with teachers and students and also the parents

8. Time management

9. Encouraging students to increase their learning skills

School principal 3 supported the above findings by saying that he has some abilities in instructional leadership and these abilities support him to lead his school and to achieve the mission of the school For example, school principal 3 in Muscat expressed his experience and opinion as follows:

I am so glad to talk to you, and I am going to answer your question very honestly . My abilities as an instructional leader are not as I hope but I have some abilities Alhamdulillah I have the ability to establish a safe and orderly learning environment in the school and I think this ability is very important because it supports me to achieve the aims of the school. I also have the ability to evaluate teacher's performance and this ability makes me able to investigate the strength and weakness of the teachers and I give them my feedback according to this investigation.
Creating a school culture and climate conductive for learning is another ability I have and this ability helped me to present the school as an educational environment. The last ability I want to mention to you is my

ability to motivate students to learn and I am always encourage my student to be active in their learning and I guide them in how to be active learners. (Sp3)

From the excerpt above, the major abilities of school principal 3 raised were:

- Establishing a safe and orderly learning environment in the school

- Evaluating teachers performance

- Creating a school culture and climate conductive for learning

- Student motivation

In addition, school principal 4 agreed with the findings above by confirming that he has instructional leadership abilities which help him to lead his school and to increase school performance. School principal 4 asserted that:

If we want to talk about school principal as an instructional leader we should put in our mind that this kind of school principal should be able to develop his school to be a learning organization and according to this, Alhamdulillah, I have some abilities which support me to lead my school. One of these abilities is my ability to create a positive home-school relations and this ability in my opinion is very important to strengthen the relationship between the parents and the school . The motivation of the student learning is another ability I have and I can motivate my students by using different educational ways.

I can also provide an adequate materials for teachers and always, I try to investigate the teacher's needs and according to that I will provide them with the adequate materials and in my opinion this process is very important because it supports the teachers and make them have the materials which help them during their teaching. Also, I have the ability to maintain a visible presence and last ability I want to talk about is my ability to establish a safe and orderly learning environment in the school.(Sp4).

Based on the above quotation, the major abilities highlighted were:

- Creating positive home-school relations

- Motivate student learning

- Providing an adequate materials to teachers

- Establishing a safe and orderly learning environment in the school

- Maintaining a visible presence

- Developing a school improvement plan

Furthermore, school principal 5 supported the above findings saying that school principals in Muscat have abilities to be an instructional leader . School principal 5 asserted that:

> *Firstly, I am so glad to talk with you and I wish to be able to answer your questions very honesty. In my opinion the main task of school principals as an instructional leader is to create a culture of learning among teachers and students and to do so, the school principals should have certain abilities and also he must be supported by the ministry of education, For me as a school principals I have some abilities which make me able to work as an instructional school leader but I feel that I still need a lot of abilities in this domain. Alhamdulillah, I have the ability to play an active role in school improvement and always I share with the teachers in the school in establishing active plan for school improvement. I also have the ability to integrate school climate which make all staff in the school feeling that they are working in a real educational environment and ensure that the school environment is a safe, efficient, and effective learning environment. I have also the ability to facilitate the positive change processes in the school and the last ability I want to mention to you is my ability in time management skill.(Sp5)*

Based on the above quotation, the major abilities raised were:

1– Playing an active role in school improvement process

2– Developing of integrated school climate

3– Ensuring safe, efficient, and effective learning environment

4– Facilitating positive change processes in the school

5– Time management

Subsequently, school principal 6 agreed with the above results saying that school principals in Muscat have some abilities to lead their schools as an instructional leaders . For example, school principal 6 in Muscat expressed his experience and opinion as follows:

I am a school principal and I believe that my duty is to develop the performance of my school and to do so I need an Instructional skill to implement a systematic method for continuous growth, and I should shift from bureaucratic task and concentrate my effort in teaching and learning . I want to tell you that I have some abilities to work as an instructional leader but these abilities are not sufficient to support me as I wish to be. Alhamdulillah, I am able to provide inspirational motivation to the teachers and I think this kind of motivation is very important to make the teachers work with a high performance. Another important ability I have is my ability to connect the school environment with the surrounding society and I always encourage the teachers and also the students to build a strong relations with the outside society. Encouraging students to increase their learning skills is another ability I have and also I have the ability to establish a safe and orderly learning environment in the school and Alhamdulillah also I have the ability to manage my time during my work and I am always guide the teachers in the school to manage their time very well because as always we say our time is our life so we must manage it perfectly(Sp6)

Regarding above quotation, the major abilities raised were:

1- Providing inspirational motivation to teachers

2- Connecting school environment with surrounding society

3- Encouraging students to increase their learning skills

4- Establishing a safe and orderly learning environment in the school

5- Time management

6- Guiding teachers in how to be active in school improvement.

4.8.3 Transformational Leadership

<u>Interview Question</u>

From your opinion, what are your abilities in transformational leadership according to the educational reform in Oman?

Based on the interviews, school principal 1 asserted that he had some abilities in transformational leadership, but as he mentioned his abilities in this domain are insufficient:

> *Really I am not so knowledgeable about the transformational leadership but if I am not mistaken I think to practice this kind of leadership the school principal must be able to attract the teachers and the students and change their mind toward a positive values and beliefs, for me I am trying to use this attitude but I am not so skilled in this kind of leadership. Really I able to practice as a positive and active person on team working and I able to arrange and direct training workshop for teachers also Alhamdulillah I have the abilities in individual consideration*

In relation to the above quotation, the major abilities raised were:

1- Team working abilities

2- Arranging and directing training workshops for teachers

3- Individual consideration

School principal 2 asserted the following abilities in transformational leadership.:

> *I do my best to change my teachers to apply the new methods during their works and also I always encourage them to use many information resources during their reading, I have been able to facilitate the positive change process in the school and also Alhamdulillah I am able to apply the new educational programs implemented by the ministry of education but I still feel I do not understand this kind of leadership and I wish to be involved in courses and professional programs about this kind of leadership.* (SP2).

Referring to the above quotation, the major abilities raised were:.

1− Playing a positive role in changing teachers to use new educational methods during their work

2– Encouraging teachers to use new information resources to refresh their skills and to be able to work together in changing the school environment for the better

3– Applying new educational programs

School principal 3 expressed his abilities in transformational leadership as follows:

> *I want to be honest with you that my abilities as transformational leader are not so much and I wish to have more training in this kind of leadership . I am going to mention to you the abilities which I have in transformational leadership. I have the ability to motivate teachers to change their mind and thinking to be able to apply the issues of the new educational reform which is implemented by the ministry of education and also I have the ability to empower the teachers to do what is the best for the school according to the changes which happened by the new educational reform.(Sp3)*

Based on the above quotation, the major abilities highlighted were:

1-Motivating teachers to follow-up educational reform

2- Applying the issuers of the new educational reforms

3 - Empower teachers to do what is the best for the school

School principal 4 mentioned the following abilities in transformational leadership:

> *Of course I as a school principal, I am trying to broaden and elevate the interests of my teachers and students and I hope to be able to transform my school to be a real educational environment but I want to be honest with you I am as a school principal and I think most of other school principal lack the skills, knowledge, and abilities which make us able to work as a transformational leaders. I have the abilities to apply an advanced educational programs but these abilities are not as I wish. Also I have an ability of individual consideration(Sp4)*

Based on the above quote, the major issues raised were:

1- Applying advanced educational programs

2- Individual consideration

School principal 5 Muscat expressed his abilities in transformational leadership as follows:

> *I am always emphasize my teachers to consider the moral and ethics of teaching as a sacred job and from this I am trying to instill in their mind the importance of education and the real roles which the teachers must practice according to new educational reform in Oman. Also I am so considerable arranging and directing training workshop for teachers and also I am always empowering teachers to do what is the best for the school.*(SP5).

From the above quote, the major issues raised were:

- Arranging and directing training workshops

- Encouraging teachers to apply educational reform issues during their work

- Encouraging the teachers to do what is best for the school

School principal 6 mentioned the following abilities about transformational leadership:

> *First of all, let me think you for interviewing and asking me some questions related to school principals in Muscat. Really my abilities in transformational leadership are not so much but I want to mention to you that I have the ability of individual consideration and in my opinion this ability is very important for school principal and also Alhamdulillah I able to apply the new educational programs implemented by the educational reform in Oman and finally I am able to empower the teachers to do what is the best for the school(Sp6)*

The abilities mentioned by school principal 6, are:

- Individual consideration

- Ability to apply new educational reform programs

- Ability to empower the teachers to improve school performance

4.9 Challenges of Basic Education System

This analysis in this section is to answer research question 5, that is:

What are the challenges faced by school principals in their professional development in the context of educational reforms in Oman?

To answer this question, some official reports and research papers were reviewed in order to serve as a checkpoint and contextual background to the findings from interview sessions with school principals. Six school principals were interviewed to answer this question.

At the helm of every development and change, there are challenges. The greater the development, the greater the challenge and expectation. Education reform took place in Oman to provide better educational services for the community and to prepare the young generation for the future. Many changes were made to replace the old system with the new one. Significant adjustments, additions, deletions and modifications were all made in the Basic Education system.

In this situation, this research intends to show the core of education reform in Omani education system and the challenges facing the school system, teachers and school principals in Oman generally and Muscat specifically. Therefore, below are the explanations of the new developments and challenges facing the Basic Education System in Oman:

a) Curriculum

Before the General Education System was converted to Basic Education, students' learning and performance used to be measured by using only formal

examinations. A student's admission to university was based on a students' progress and performance on the day of the examination.

The Basic Education System curriculum was developed by the Ministry of Education with the aim of equipping pupils with a learning experience adorned with Islamic principles and Omani cultural identity. Additionally, it focuses on knowledge and skills to help prepare young Omanis for life and work in the world and encourage them to engage in life-long learning, while in the past the main criticism of General Education was its concentration on theoretical content. This kind of method and curriculum are concerned with knowledge acquisition, restricting the curriculum to a single textbook and eventually, the learners have to memorize in order to pass the final examination (Al Khaaf, Jindal-Snape & Roger, 2011).

   b) Changes in Curriculum Content and Textbook Development

In Oman the idea of the new reformation according to Rassekh (2004) was based on many aspects and changes in the curriculum. The two most important issues were

   1. The content of the curricula

   2. the teaching methods

One of the major innovations of the Basic Education curricula was the shift away from using a single resource in the classroom, i.e. the textbook, to using a wide variety of print and non-print resources. The aim is to encourage students to learn how to use a variety of resources, including new technologies, demonstrate an understanding of technological applications and apply appropriate resources to solve different problems. In this reformation, teachers were advised about different methods and trained to refrain from basing their grading when it comes to teaching and assessment solely on learning and memorization. In addition, they were also encouraged to concentrate on learning

through experience and activities instead of basing learning on textbooks (Rassekh, 2004). Apart from this, textbooks and extensive teachers' guides for each subject were provided by the Ministry of Education. One of the major challenges in curriculum development is to ensure that the reform is consistent across all subjects. To help achieve this, the ministry introduced a committee structure for curriculum development. Review committees for the development of textbooks have been established in each subject area. These committees, which usually comprise of supervisors and teachers, as well as curriculum and assessment specialists, work together to ensure that the learning materials produced by the writers are pitched at an appropriate level and are consistent with the aims of the ministry's education policy. A follow-up of the use of the books in schools is made and appropriate amendments take place every two years. Moreover, an overall coordinating committee has been established to look at the development of the curriculum across and within all subjects in order to ensure that the content and skills included in the course materials are integrated (Ministry of Education, 2007).

c) Teaching and Learning Methodologies

Recent research has suggested that students learn in different ways. Students display differences in terms of their intelligence, abilities, attitudes, desires, in their ways of thinking and in their preferred learning strategies, and all of these factors should be taken into consideration before teachers decide on the desired goals for each learner.

In recognition of this research evidence, the ministry decided that a student-centered approach to teaching and learning should be adopted in Basic Education. Rather than encouraging students to become passive learners who depend on the teacher to tell them what and when to learn, a student-centered approach focuses on active learning in which students seek knowledge through interactive teaching and learning techniques.

The aim of the Basic Education teacher is to create a learning environment that makes it possible for students to learn how to learn and encourages them to take responsibility for their own learning.

d) ICT

In Oman, computers were first introduced to schools starting from the Basic Education system in 1998. Furthermore, ICT use first took place in mixed gender first cycle schools in September 1998. Since then, the number of computers has increased, and schools have been supplied with computers (Ministry of Education of Oman, 2008).

With the sense of moving towards a new modern society and a technological era, education reform tends to be the fast mechanism for development. Oman, as any other country in the Middle East, is confronted with many challenges one of which is the globalization of ICT. The challenge that ICT is posing is obvious and surmountable. Globalization whether it is economic or technological has a positive influence on the society as a whole (Issan, & Gomaa, 2010). In Oman, some teachers are not computer literate and have no proper training in IT. According to the Omani Ministry of Education (2008), ten general learning outcomes for ICT during the ten years of Basic Education were established:

- Respect the social, cultural, ethical, political, legal and religious concerns of others and of the Sultanate of Oman.

- Operate, control and troubleshoot information technology systems.

- Explain the concepts and vocabulary of information technology systems.

- Plan and integrate the use of information technology in appropriate aspects of their studies.

- Access data within information technology systems.

- Interpret, select and validate data in information technology systems.

- Input, edit and process data in information technology systems.

- Communicate ideas with others using information technology systems.

- Construct knowledge based upon information gained in data analysis.

- Present knowledge using information technology systems.

The issue of ICT in schools in Oman needs to be addressed in terms of utility and application. The concept of ICT and computers are provided but are the teachers well trained to use it and infuse it in their teaching as mentioned in the aims?

Another challenge is the internet and using online materials to enrich teaching. These parts seemed not to be utilized efficiently. Very few teachers encourage students to learning from the internet and use internet resources to enrich their teaching.

e) Student Assessment

With the problem of proper assessment in the General Education System, the Ministry of Education has introduced a wider range of evaluation and assessment instruments into the Basic Education System, with continuous assessment being given greater prominence in assessment and evaluation (Ministry of Education, 2006 & Al Khaaf, Jindal-Snape & Roger, 2011).

In the Basic Education System, the idea is to make the students the centre of the assessment process by using techniques which enable teachers to assess the progress and performance of their students' higher order thinking skills such as problem solving, critical thinking and searching for reasons rather than focusing on memorizing and recalling information (Ministry of Education, 2007). Therefore, teachers are now

expected to assess the performance of students in different ways, such as short written or oral tests, quizzes, performance assessment tasks, reports, research, homework, projects, portfolios (Al Khaaf, Jindal-Snape & Roger, 2011, p.5).

Table 4.24: Contrast between assessment and evaluation in General and Basic Education

Variables	General Education	Basic Education
Description of Assessment	Focuses on final assessment which provides a judgment about the student	Considers formative assessment that aims at achieving improvement in student's performance
Areas	Recall and memorization of facts	Covers knowledge of higher thinking skills
Tools	Depends on pen and paper examination only	Comprehensive approach that includes practical test, checklists, portfolios, case studies, self-assessment in addition to pen and paper
Student's Role	The teacher has the sole role in judging the students' performance	Student is given the opportunity to assess his own learning through self-assessment
Criterion	Assesses students in comparison to their peers in the class	Assesses students against a set of objectives
Standards of Performance	Students are not informed of the learning objectives	Students are informed of the learning objectives
Feedback	Students received feedback in the form of marks or percentages and it is based on pass or failure	Provides descriptions indicators of the performance of the students; e.g. 'Excellent achievement of the objectives' or 'need more

		time to achieve objectives'
Pass/Fail	Students who failed one subject at the end of the year were forced to repeat the year	No grade level failure for students in grades 1-4. In grades 5-11, students who fail two or more subjects have their cases reviewed by an Attainment Follow-up Committee to decide on retention or progression to the next grade.

Source: Ministry of Education, (2007)

<u>Improved teacher training</u>

The successful implementation of any reform initiative depends on a well-trained and well-informed staff. The Basic Education program involves a fundamental reform of curricula, teaching and learning methodologies and assessment practices and in order to be effective in this new system, teachers are required to update and improve their own knowledge and methods throughout their career. As a result, the ministry regarded the devising of an appropriate model for the high quality professional development of teachers as an essential component of the reform process.

Generally, the key to every education reform relies on the qualifications and the attitudes of the teachers. Two important issues have been addressed in Oman in order to prepare teachers to implement the reform. The first issue was to provide an in-service training program to assist teachers already in the system to comprehend the concept of reformation and to teach in accordance with the new demands. The second issue was to provide training for current elementary teachers with two years to upgrade their

qualifications to a bachelor degree in education. Moreover, the idea was also to send

.teachers abroad for study in the educational sciences (Rassekh, 2004

The ministry has adopted a cascade organizational model for in-service training. This has involved identifying trainers situated in all regions of the country, training these trainers centrally at the ministry, and then instructing them to go back to their regions to replicate the training with all teachers, headmasters and subject supervisors. The number of centrally organized training organized by the ministry has increased considerably in recent years, as has the number of trainees attending (see Table 4.25).

Table 4.25: Number of in-service training programs and trainees (1997-2006)

Year	Central		Non-central	
	Number of	**Trainees**	**Number of**	**Trainees**
1997	46	614	203	8709
1998	96	2316	292	11167
1999	112	3884	377	13436
2000	145	4328	524	19095
2001	239	6851	761	26018
2002	134	5677	1228	29351
2003	119	3372	1185	40735
2004	125	6107	1260	44459
2005	126	6689	1303	31476
2006	222	9731	1377	38654

Source: Ministry of Education, (2007)

Upon the change in the educational system, challenges emerged with teachers unable to perform their jobs due to a lack of skills. These challenges also occurred for school principals as it was difficult for them to motivate their teachers to perform to their full potential. In addition to this, the challenge of the new subjects emerged such as

science, mathematics and English. Moreover, teacher training was conducted based on the cascade system, but this seemed to be insufficient as there was a need to enlarge and strengthen the training system further.

f) School Organization

The school year and school day have been lengthened, both to accommodate new subjects and strengthen existing subjects in the curriculum, and to allow more time for new teaching and learning approaches.

1. The school year has been increased from 160 to 180 school days.

2. The school day, lesson duration and school plan have been extended. The school day consists of 8 lessons and two breaks. The first break is after the third lesson and the second starts after the sixth lesson. The school day starts at 7.15 a.m. and ends at 2.00 p.m. (summer timings) and each lesson is of 40 minutes duration. Table 2 shows the timings of the Basic Education school day.

3. The physical lay-out of the school building has also been changed. In addition to others rooms and facilities, the number of classrooms in all Cycle One Schools has been increased to 30, while 40 classrooms have been allocated to Cycle Two Schools. Moreover, the number of students in each class has been limited to 30 in Cycle One and 35 in Cycle Two. The ministry believes that smaller class sizes are an essential requirement for the promotion of a student-centered approach to teaching and learning and to encourage mobility in classrooms.

4. The shift system (morning and evening school) is not applied in Basic Education which enables the teaching and administrative staff to fully utilize their school building. Moreover, "flying classes" are applied in Basic Education school

whereby each subject is allocated a classrooms and the students move between classrooms. All subject classrooms are fully equipped with appropriate teaching aids.

5. The teaching force and school administration in grades 1-4 have been "feminised".

Table 4.26: Timings of the school day

School day timetable	Summer timing		Winter timing	
	from	to	From	to
Assembly	7:15	7:25	7:30	7:40
1st lesson	7:25	8:05	7:40	8:20
2nd lesson	8:10	8:50	8:25	9:05
3rd lesson	8:55	9:35	9:10	9:50
Break 1	9:35	9:50	9:50	10:05
4th lesson	9:50	10:30	10:05	10:45
5th lesson	10:35	11:15	10:50	11:30
6th lesson	11:20	12:00	11:35	12:15
Break 2	12:00	12:20	12:15	12:35
7th lesson	12:20	1:00	12:35	1:15
8th lesson	1:05	1:45	1:20	2:00

Source: Ministry of Education, (2007)

g) The School Plan

In order to achieve the desired goals of Basic Education, a number of significant reforms were made to the school curriculum. For example, several new subjects such as life skills and information technology were included in the curriculum. Life skills incorporates skills in specific practical topics which the ministry previously had been promoting in other subjects. It aims at equipping students with performance skills related to the topics of health and safety, home education, world of work, citizenship and

globalization and personal and social skills. Moreover, IT was introduced in Cycle One and computing was introducing as a subject in Cycle Two.

Tables 4.27: Teaching hours in Basic and General Education (grades 1-10)

	Subject	Number of teaching hours		Difference
		Basic Education	General Education	
1	Islamic Studies	1176	915	261
2	Arabic Language	1992	1381	611
3	English Language	1200	541	659
4	Math	1777	933	843
5	Science	1200	635	565
6	Social studies	696	448	248
7	Physical Education	384	299	85
8	Arts	336	187	149
9	Music	216	168	48
10	Vocational activity	-	149	149
11	Practical activity	-	37	37
12	Life Skills	240	-	240
13	IT	120	-	120
14	Computer	264	-	264
	Total	**9600**	**5693**	**3907**

Source: Ministry of Education, (2007)

h) <u>Assessing the Quality of Education</u>

Again, assessing to the quality of education in Oman under the Basic Education system has highlighted some areas of development and at the same time posed new challenges for school improvement (EFA Assessment: Country Reports, Oman, 2000). Below are the new and intentions:

- Design of an appropriate, context-based curriculum.

- Emphasis on ability to adopt and ability to learn.

- The 'what' and ' how' of learning: content and process

- Learner-centered rather than teacher-centered teaching/learning approaches, with an optimal balance between the two approaches.

- Emphasis on the student assuming responsibility for learning.

- Emphasis on problem-based learning.

- Emphasis on experiential learning.

- A holistic integrated approach to knowledge versus compartmentalized subjects.

- Systematic changes and evolutionary development and implementation.

i) Parents Trust

Lastly, parents do not appreciate the importance of basic education and sometimes, instead of being of some assistance, they themselves seem to need help. (International Bureau of Education: the Omani National Commission for UNESCO, 2001)

4.10 Challenges in Implementation of Educational Reform

Interview sessions were held with six principals in Muscat city to elicit information regarding the realities and challenges they faced in implementing educational reform in Oman. All the six principals were very eager to 'pour out their hearts.'

School principal 1 believed that in Muscat, school principals in Muscat face many challenges and they were not well trained to face them. Besides, he mentioned that another challenge facing them is that training given and provided by the government are not that relevant. Also, school principals lack professional development simply because

they are overloaded with work. For example, school principal 1 in Muscat expressed his experience and opinion as follows:

> *Indeed we are grappling in serious problems and we are challenged by several issues in our professional development, let me start to mention to you that most of programs given to school principals are not serious programs and not meet the real needs of school principal. I am as a school principal, I am suffering from heavy work load and I do not have sufficient time to search and read to develop my abilities as a school principals. A lot of responsibilities are given to school principals and these responsibilities make school principals not able to manage their time in professional development side.* (SP1).

Based on the above quote, the major issues raised were: evaluation of the programs, intensive professional development training, and development through academic activities. These findings imply that one of the challenges facing school principals is evaluating the programs.

School principal 2 agreed with the findings above and added that there are many roles for school principals. Thus, the roles are not clear and their responsibilities are not deeply explained. School principals need training to expose them to the new developments and training on changing mentality and see other people's development as well as their methods. Last not the least, he stated that another challenge of school principal is about the training and programs provided by the Ministry as they are considered as irrelevant. School principal 2 asserted that:

> *School principals are struggling in a lot of challenges in professional development, In my opinion one of those challenges is the real roles of school principals are still ambiguous and not so clear , as you know we are in 21 century and the world around us are changing rapidly so if we want to keep space with the world around us we must change our view about school principals professional programs. Now the programs which are given to school principals I cannot classify them as a professional development program because professionalism is not easy concept. The programs which are given to school principals are not planned well and not built according to the real needs of school*

principals. We wish to see programs which are support us as school principals not as administrators or managers. (SP2).

Regarding the above quote, a major issue raised was: too many roles. Instructional and transformational leadership need program benchmarking, learning from others, using professionals for designing the program, and must serve principal needs. These findings imply that principals in Muscat need training on instructional and transformation leadership (IL and TL training). Also they need their role to be reduced for leadership effectiveness and efficiency.

School principal 3 supported the above findings saying that school principals in Muscat are lacking in training on professionalism and there is a need for this training to be provided for them to boost and upgrade their professionalism. Moreover, he stated that school principals face the problem of self-development where they don't have the skills or training that could help them to upgrade themselves academically while another problem is about the training given to them is repeated. School principal 2 asserted that:

> *Let me be honest with you, the school principals facing a lot of difficulties about their professionalism, for example there are no programs given to school principals about how to develop themselves as school principals most of programs which are given to them are repeated and do not concentrate in the professional development issues. We wish to be provided by professional development programs which help and support us to work as real school principals not as administrators. Really we need professional development programs according to our real needs not but most of programs which we are receiving are just repeated and do the contents of those programs are very superficial.* (SP3).

With regards to the quote above, the major issues raised were: roles need to be reduced, inconsistency of the roles, irrelevance of the training and delivered and program and training assessment. These findings imply that school principals' duties need to be reduced and they should be consistent and focused as well as more training needed.

School principal 4 seemed to agree with the results above, saying that there is no proper training on professional development to prepare themselves for the 21st century's challenges. However, he mentioned that training provided only focuses on preparing them for administrative work. School principals in Muscat face heavy workloads which is another challenge and there is no time for professional development training. For example, school principal 4 in Muscat expressed his experience and opinion as follows:

> *School principals in 21st century must be well-prepared and must be provided by professional development program which enhance their skills, abilities and knowledge as school leaders. I am going to be honest with you our programs lack the professional side, those programs concentrate on the management and administrative sides. I think we still so far from the professionalism, to be professionals we must be able to manage our time very well and also we must be able to manage the changes but we still crawling in this side.* (SP4).

Based on the above quote, the major issues raised were: the need for skills for self-learning, ministry responsibility for professional development and need for professional experiences. These findings imply that principals in Muscat need PDT on how to develop their learning individually and seek more knowledge. Additionally, PDT should be regularly provided by the ministry.

School principal 5 agreed with the above findings saying that school principals are not that equipped with professional development training and skills and the training given or conducted by the government are irrelevant which does not solve school principals' problems. He argued that the and training need to be evaluated before delivered and time management is one of the challenges facing the school principal. For example, school principals 5 in Muscat expressed his experience and opinion as follows:

If you want me to talk honestly about challenges, I want to say that the most challenges in our professional development is there is no professional development. The programs which are given to school principals are very far from their real needs. Those days the programs which are given to school principals must be well-studied before the application. I want to mention to you that we are lack so experiences like time management, conflict management, change management and we wish to be provided with programs which support us to overcome our professional development issues. (SP5).

Based on the above quotation, the major issues raised were: focusing on the area of needs for training, problem identification, prioritizing programs and training, research skills and ICT usage. These findings imply that the major problem facing school principals in Muscat is that government has to emphasize on the areas that are needed and provide training for those areas.

School principal 6 agreed with the results above and mentioned that the Omani government needs job specification for school principals. In addition to this, the roles and principal duties need to be very clear for school principals to know what they need to do. He said that the system and the roles are very rigid in Oman and planning and implementation are the biggest challenge for principals. For the school principals to handle these duties, the school principals in Muscat are demanding professional development training. School principal 6 asserted that:

Indeed our roles as school principals are not clear those roles are still ambiguous and I think because of that we are grappling in a lot of challenges and difficulties. We cannot adapt with rapid changes in school principal ship. In my opinion the planning process is the most challenges we are facing, most of the programs which are given o school principals are not well-planned. I am as a school principal I need a professional programs as a school principal not as administrator , I wish to be receive professional development programs according to a my real needs . (SP6).

With the above quote, the major issues raised were: upgrading knowledge, need of new skills, training on skills application, needing academic activities and needing research skills. These findings indicate that principals' knowledge in Muscat needs to upgraded with more training, research and activities needed.

4.8.2   Summary of Challenges in Professional Development of Principals

The following table summarizes the common areas of concern posed by the interviewed principals in Muscat.

Table 4.28: List of challenges and what should be done (Solutions)

No	List
1	Training provided by the Ministry is not relevant
2	Too many roles
3	Workload
4	Lack of time to think about professional development
5	Lack of job description
6	Lack of job specification
7	Lack of exposure
8	Problem of mentality
9	Meeting up with 21st century expectations & ICT
10	Lack of professionalism
11	Problem identification
12	Identifying areas of needs
13	Problem solving skills
14	Lack of knowledge development skills

15	Awareness of school latest development
16	Lifelong learning
17	Attending conferences, seminars and workshops
18	Lack of instructional and transformational leadership skills
19	Education reform (Curriculum & Textbook)
20	Self-learning skills and dependence

Table 4.28 above illustrates principals' voices in Oman, the challenges facing them, why professional development is not in place in Oman, the factors that contributed and the solutions. The listed challenges need to be addressed and these issues need to be treated by the government for principal's professional development to take place and properly implemented.

4.11 Improving School Leadership and Management

This section provides the answer research question 6, i.e.:

What are the suggestions by school principals concerning school improvement and principals' professional development in the context of educational reforms in Muscat, Oman?

Interview Question

To help educational reform to be fully successful, what are the suggestions from school principals to improve the school management and leadership in Oman?

School principal 1 believed that the Omani government needs to examine first of all the problems facing the implementation of education reform. With this reform, professional development needs to be provided for school principals in Muscat. In

addition, he said that school principals need to attend conferences, workshops and seminars. School principal 1 asserted that:

> *In my opinion, it is very important to investigate all the difficulties and the challenges which are faced by school principals. We are facing problem of training. No proper training on professional development in Oman given by the government. For educational reform to take place well, government needs to follow up the result of formation and constant evaluation. Also I want to say to you that we must arrange an educational function like workshop, seminars, conferences but these functions must be concentrated in the real issues of school principals professional development needs.* (SP1).

From the above quote, the major issues raised were: evaluation of the programs, intensive professional development training and development through academic activities. These findings imply that program evaluation is suggested in carrying out the reformation successfully followed by providing professional development training and more academic training.

School principal 2 supported the findings above and stated that the Omani government needs to adjust or reduce the roles of the school principals. Hence, if these roles have to performed, the principals in Oman need instructional and transformation leadership training. With this application, he said that there should be benchmarking of programs between Oman and other countries' programs. Oman needs to learn from other countries how they manage their schools and progress. Indeed, Oman needs to allow experts to be involved in designing professional development programs and must reflect the school needs in Oman. For example, school principal 2 in Muscat expressed his experience and opinion as follows:

> *I want to start with you by saying that it is very important to review the school principals roles and it is very important to give school principals courses in instructional and transformational leadership and I want to say that it is very important to know to which level the other countries reach so we can learn from them an applied it in our schools. I want to add something else, the professional development programs must be designed*

by experts and must be according to the real needs of school principals.
(SP2).

Based on the above quote, the major issues raised were: too many roles, instructional and transformational leadership training needed, program benchmarking, learning from others, using professionals for designing the program and the program must serve principals' needs. These findings imply that to carry out education reform, the workload of school principals in Muscat must be reduced, instructional and transformational leadership training should be provided, and the situation in other countries need to be examined to learn from them.

School principal 3 seemed to agree with the findings above saying that the government needs to restructure school roles and a principal's duties for them to carry out the education mission in Oman. He stated that roles of the school principals in the present and the past are different, and government roles given and programs and training provided are not in line with what principals need. Therefore, the government should evaluate any program and training before application. School principal 3 asserted that:

> *The most important suggestion from my side is to be redesigned the roles of school principals according to our educational vision and we must know that the roles of school principals now are so different than the past, and that mean our professional development programs should be implemented according to that roles. I want to mention to you that the most of the educational functions given to school principals like seminars and conferences are not meet the real needs of school principals, so I suggest that it is very important to investigate the needs of school principal before the arrangement of the function.* (SP3).

Based on the above quote, the major issues raised were: the number of roles, inconsistency of the roles, irrelevant of the training and provided and program and training assessment. These findings imply that to carry out the education reformation

successfully, school principals' roles need to be reduced, the training should be consistent and relevant as well as evaluated.

School principal 4 tended to agree with the above findings saying that school principals need skills on how to seek more knowledge by themselves and the importance of self-learning. In addition to this, he said that up-to-date professional development programs need to be provided by the Ministry and these programs should meet world standards. In light of this, according to this principal, professional development is seriously needed and should be conducted by professionals. For example, school principals 4 in Muscat expressed his experience and opinion as follows:

> *If you asked me about my suggestion, I want to say that the school principals must be knowledge seekers and they must search for information from different resources and also the ministry of education must provide school principals with recently professional development programs which applied in other countries. I want to confirm that the programs which are given to the school principals must be professional programs and also must be given by professionals.* (SP4).

Based on the above quote, the major issues raised were: needing skills for self-learning, ministry responsibility for professional development and needing professional experiences. These findings imply that more skills for self-learning, the ministry taking responsibility in providing PD training are needed to carry out the education reformation successfully.

School principal 5 supported the above findings as he stated that the government needs to investigate first the area of needs for professional development for principals in Oman. However, government needs to explore first the problems and challenges facing school principals for the government to know what programs should be provided. Thus, the government needs to classify the most important and prioritize professional

development training for principals. From his argument, he argued that school principals should be trained on how to do research and to search for information using the internet and others. School principal 5 asserted that:

> *Firstly the needs, problems, challenges, and difficulties of school principals must be studied then classified then professional development programs must be given according to that classification. In my opinion the classification will help the ministry of education to overcome the problems facing school principals and also the classification will give a very clear view about the real challenges and needs of the school principals. I want to add that we are as school principals we are still not so skilled in researching of information and I want to suggest that ministry of education should provide school principals by a professional programs in how to search for information from different resources like Internet, journals, educational magazines and so on and those programs must be given by educational experts.* (SP5).

Based on the above quote, the major issues raised were: focus on the area of needs for training, problem identification, prioritize programs and training, research skills and ICT usage. These findings imply that to carry out a successful education reformation, the training provided should focus on the important areas, problem solving, research skills and accessibility of technology.

School principal 6 supported the above findings and stated that school principals seriously need to be equipped with new knowledge and apply ICT in their work. Additionally, school principals need new skills and development training for them to obtain these skills. He said that to obtain these skills, school principals need to attend conferences, seminars and workshops for further knowledge and development. Research skills are so important and school principals need to have knowledge about doing research. Hence, they need training how to apply what they learnt in training in their schools. For example, school principal 6 in Muscat expressed his experience and opinion as follows:

> *I want to tell you, and of course you know that there is no improvement without knowledge so if the school principals want to improve their schools they must be knowledgeable and to achieve that they must attend and cooperate in different educational functions like conferences, seminars workshops, university courses ....etc. The school principals to be professional in their work first they must be professional in their reading and also they must know how to do different kinds of educational research school principals so the ministry of education should provide school principals by professional development programs in how to practice professional reading and how to implement educational research.* (SP6).

In relation to the above quote, the major issues raised were: upgrading knowledge, need of new skills, training on skills application, needing academic activities and research skills. These findings imply that school principals' knowledge needs to upgraded, new skills and more training and research skills are all needed for the successful transformation to take place.

4.12   Summary of Principals' Suggestions for Improving the Education System in Oman

Curriculum:

The curriculum is one of the most important factors if it not the core of reforming the education system in Oman. After the reformation and huge changes in curriculum as well as bringing in many new things, challenges still remain in the implementation and outcomes of the changes from school principals, teachers and students.

Therefore, this research has suggests what should be done and areas to be improved with the following suggestions:

1   Evaluation of the implementation

2   Evaluate whether the new curriculum reaches its target

3   Evaluate if the new curriculum in Basic Education system takes Omanis to next level and prepares them for the future.

4   Evaluate the new curriculum in Basic Education system to find out if it helps short term or long term achievement.

5   Conduct research or interview seeking community perceptions about the current curriculum in terms of effectiveness compared to the General Education system.

Textbook:

Changing textbooks is one of the tabled issues under curriculum since the old text book in General Education system seemed not to serve its purpose. In Basic Education system, different textbooks are used but the challenges remain in terms of whether textbooks from western countries fit Omani society and reflect students' performance. Therefore, this research has suggested the following issues to improve textbooks in Oman:

- A new textbook used in Basic Education system should be assessed and evaluated in terms of cognitive, effective and intelligence.

- The new textbooks should be examined whether it improves students' knowledge and performance

- Evaluating the new textbooks whether they fit Omani context and culture.

- Evaluating the new textbooks in terms of language used in the book whether the pupil understand it.

- Checking whether they treat the current issues.

Teaching & learning Methods:

New teaching and learning methods were proposed during the reformation and in the Basic Education system. The challenges remain as to whether the school teachers are

using the new methods and whether the students are learning in new ways. There is no proper evaluation about whether the new teaching is effective and if new methods of student learning are appropriate.

Therefore, this research suggests the following issues to improve and upgrade methods of teaching and learning in Muscat if not the whole of Oman:

- Teaching observation needs to be conducted to test whether the school teachers are using new methods of teaching and its effectiveness.
- A teaching outcomes test among students needs to take place to see whether the school students are productive with the new teaching and learning methods.

ICT:

Information Communication Technology plays a huge role in facilitating teaching and learning. Providing the best technology service was one of the pillars of education reform in Oman. After the reformation, schools were upgraded with ICT equipment and provided with computers for teaching and learning. But the challenges are whether the school teachers and principals are well equipped with the skills of using the provided ICT facilities and digital devices. Therefore, this research has suggested some improvements to the system in terms of ICT which are as follows:

- Teachers need to be equipped with new skills and properly taught how to use the latest technologies
- They need to be assessed about the applicability of the new devices in the classroom and their outcomes.
- Teachers need to be evaluated in terms of encouraging students to use ICT and Internet for their learning and assignment.

Student Assessment:

During the education reformation, student assessment methods were one the most important issues discussed and replaced with major adjustments to the new assessments in the Basic Education system. New student assessments posed a new challenge for teachers as they were exposed to previously unknown assessment types. They also created additional work and effort for the teachers

Therefore, this research has suggested areas that need to be improved in assessment system which are:

- Evaluating the effectiveness of the new assessment whether it reaches it target.
- Looking in the appropriateness of the new assessment and judging if it really is gauging the students' performance.
- Examining whether the teachers are adhering to the new system of assessment.

Teacher training:

Teacher training was included in the reformation for the Basic Education system as it was believed that school teachers in Oman need to be trained and sent to complete their degrees, masters and Ph.Ds. The idea was successful and many Omanis were sent abroad to further their studies to improve school standards and systems. This is a new challenge for some school teachers to leave their families to study abroad and challenging to come back to teaching after a long gap of studying. Another challenge is posed as Sultan Qaboos University is the only public university in the Sultanate of Oman and it is the only university could provide proper training for teachers.

Moreover, the next challenge concerned what type of training should be provided and whether this training should be provided by the University or the Ministry. This research has suggested what should be done or added to improve the training:

- Evaluating training provided whether they are relevant to teachers and students

- Evaluating whether the training given improves teachers ability, teaching and learning.

- Looking into the training given whether it is about professional development of teachers and school principals to improve school performance and upgrade teachers' and principals' leadership.

4.13 Summary of Findings Based on Interviews

Based on the findings from the interview sessions with six school principals, the researcher summarizes the important competencies and areas of development needed by school principals in Muscat to carry out the educational reform in Oman.

Table 4. 29: List of Competencies and Areas for Principals' Professional Development

List
Lack of Professional development programs on:
1. Instructional leadership skills
2. Transformational leadership skills
3. Supervision skills
4. Research skills
5. School leadership and management skills
6. ICT skills

7. Problem-solving skills

8. Decentralization of educational system

9. Evaluation of the programs before implementation

10. Reduce the rigidity of the school roles

11. Focusing on the area of needs and prioritize programs

12. Relevance of the training and programs to school principals' needs

13. Proper planning and assessment

14. Participation in decision-making

15. Academic freedom and autonomy

16. Program benchmarking

17. Reform of the curriculum

18. Relationship with the community

19. Creating learning environment skills

20. Time management skills

Looking at Table 4.28, the table presents significant competencies and areas of focus which were frequently repeated and emphasized in the answers by the school principals. The repetition indicates the high importance of that statement or word. The competencies and focus areas discovered in this study are very important for the development of school principals in Muscat. Moreover, they can also be used to identify the areas to improve a principal's ability and performance.

From the interview sessions, it was discovered that school principals in Muscat were lacking in instructional leadership and transformational leadership skills and the programs and training that are supposed to be conducted to enhance these skills were not provided. In this study, the school principals complained about the irrelevance of the

training provided by the Ministry and repetition of the same program again and again which does not serve the purpose or principal's needs and does not help them in managing their schools. In addition, the school principals claimed that the programs provided by the Ministry did not incorporate the latest issues in the educational arena.

With the reference to above problems, school principals indeed need school leadership training such as instructional leadership and transformational because instructional leadership as defined by scholars, is an action, step and movement that a school principal takes or delegates to teachers and other staff to promote growth in student learning and performance. Also, it is a step that a school principal takes to improve a teacher's ability and develop their knowledge. If this is true, Muscat school principals should not be left behind in attaining the information and skills to upgrade their schools and raise standards.

School principals need to be encouraged to achieve educational aims and objectives by placing instructional quality as his or her top priority in the school and embark on a journey of making the vision, aims and objectives realized. These are the duties of instructional leaders and this is why they need to be trained and equipped with skills that could assist them in completing these responsibilities and duties.

For transformational leadership, this skill is crucial for school principals and organizational leaders because it is about a leader enhancing his subordinates' motivation, improving their morale, abilities and upgrading the followers' performances by using various methods and techniques. According to Burns, this leadership is about transforming people and organizations and making positive changes to enhance performance and outcomes. With these descriptions of these leadership skills, if the

school principals in Muscat lack these skills, it will be hard for them to work with their teachers to achieve the intended school and education mission and vision.

If the Omani government, especially the Ministry of Education in Oman, does not equip their school principals with transformational leadership skills, it will be a major setback for educational development in Oman. Moreover, it will hinder achieving quality education which the government has been working towards since the 1980s.

 Crucially, school principals in Muscat need to be trained in instructional and transformation leadership for the school to work on achieving its mission and vision inOman. They need to training on how to improve learning and instruct their staff for better performance. In addition, Muscat school principals need to be equipped with transformational skills in order to know how to transform people under them and make positive changes in their schools to achieve the expected goals now and in the future.

From the results, it is clear that school decisions are made by the Ministry without consultation or participation of the school principals and school principals are overwhelmed with their many duties despite research showing the negative effect of workload and work performance. If school principals are too busy with many unnecessary duties, and have no job description and specification, this will seriously affect their leadership performance and they will not have a time to manage and administer their schools.

School principals in Muscat tend to be dissatisfied with the many roles imposed on them. Their concerns are repeatedly shown in the interview results where their hands are tied and they are unable to manage their schools effectively. In addition to this,

bureaucracy is a major concern for school principals in Muscat as it always takes time for approval for any training which could kill or delay the process. Also, it affects the implementation of whatever they might learn in the training.

4.14 Overall Summary

There seems to be a considerable degree of coherence between the results of the survey part and the interview part of the study. This could be noticed by comparing the results from descriptive statistics, factorial analysis, and correlation analysis with the results of interview. However, the findings from interviews gave some additional inputs particularly on the problems and challenges in school leadership and management in Muscat, as well as suggestions for school improvement in order to achieve the educational goals in reformation era.

The results of the survey have shown the importance of all 15 domains or factors of principal professional development in Oman. Results have indicated that school principals need to be involved in designing, implementing and evaluating the curriculum decision-making process. In addition, they need to be trained how to create a learning environment for their schools and teachers. They need to have the skills to understand students' development and learning in Oman.

Results from the survey and interviews have shown that school principals in Muscat seriously need problem-solving skills, research skills, to know the core values of education, to gain skills in building teams and working together to achieve educational goals, mission and vision. Moreover, the results of quantitative and qualitative have

confirmed that school principals are lacking in ICT skills, coping skills to face the 21st century's challenges and resolving conflicts.

Significantly, interview results have shown a centralization of the educational system in Oman, it has shown that all the decisions related to education and schools are taken by the Ministry and school principals are not allowed to be involved or participate in the decision-making process. Thus, the educational system in Oman is a top down system full of bureaucracy and rigidity where school principals have many unnecessary roles, and no proper job specification and description.

Overwhelmingly also, the interviews have confirmed that school principals are overloaded with many duties. It confirmed that there is problem of instructional and transformational leadership skills where school principals in Muscat are not well-equipped with these skills. Also, it confirmed that school principals are only trained to perform their administrative duties, not as instructional and transformational leaders. Thus, school principals are not geared to learn new skills and upgrade their knowledge. They complain of lacking skills to manage and supervise their schools and teachers as well as lacking skills to face new challenges.

In this study, the interviews have shown various results on principals' professional development needs in Oman. The results from interviews are mostly concurrent with some findings in the survey part. Furthermore, the results of interviews indicate irrefutable evidence of the scarcity of principals' professional development needs and have shown that to improve the education system in Oman, it is necessary to improve school standards, upgrade teachers performance and students achievement, and

school principals in Muscat need to be trained and well-equipped with professional development skills.

The following themes were synthesized based on the responses of the interviewed principals to the posed research questions:

- Admirable and Adaptable Instructional Leadership Abilities

In response to the first research question the respondents asserted their admirable instructional leadership qualities exemplified in their abilities to provide motivational inspiration to teachers and students, encourage new teaching and learning skills, facilitate positive change processes, establish conducive teaching and learning environment, create good communication between society (including the families of pupils) and school and excellent time management skills.

- Good Transformational Leadership Qualities

Upon questioning on their transformational leadership abilities the principals' responses indicted they had good team spirit, ability to organize improvement-driven training workshops and implement new and advanced educational programs that foster positive educational reforms.

- Hindrances and Limitations in the Implementation of Transformational Reforms

Challenges implicated by the responses of the interviewed principals to transformational reforms include the inability to evaluate professional training and educational programs, overwhelming roles and activities that reduce effectiveness and efficiency of principals as instructional and transformational leaders and the absence or irrelevance of transformational leadership training programs.

- The Way Forward

Suggestions of the participating principals on ways to implement and improve educational reforms included organizing relevant professional development programs and encouraging principals to attend conferences and seminars that foster professional development, development of schemes that evaluate the impact and success of professional training programs and reduction of principals' workload to allow for the development and implementation of education reform.