

# **Chapter 4**

## **Data Analysis and Interpretation**

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### Data Analysis and Interpretation

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This chapter includes the detailed analysis and interpretation of the data collected during the different phases of the study, keeping the objectives of the study in mind. The data consists of both qualitative data and quantitative data. And therefore the data was analyzed by employing both quantitative and qualitative analysis techniques.

#### 4.1 Identification of Professional Development Needs of School Principals

In the first phase of the research study, the researcher administered the Principal's Professional Development Need Assessment Questionnaire (PPDNAQ) to 100 Headmasters/ Principals of Government and Government Aided secondary/ higher secondary schools situated in different parts of the state of Assam .

The PPDNAQ included 149 statements describing various task responsibilities of a school head, which were accordingly categorized under 5 dimensions namely General Management Task, Curriculum Management Task, Human Resource Management and Community Partnership related Task, Financial and Material Management Task and Management of Information related Tasks of the School Principals. These dimensions were further categorized into sub classes. The data so procured by the researcher were analyzed in terms of their descriptive statistics, mean, standard deviation and standard error of mean. Test statistics, the t-test was applied at a level of confidence of 95% with test value as 3. The results so obtained are presented dimension wise in the following Table-8.

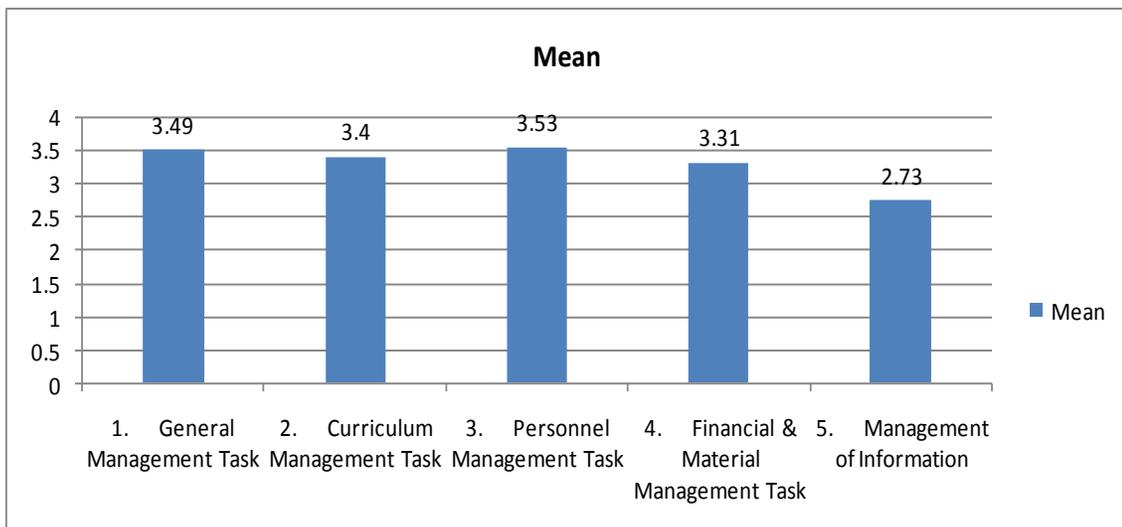
**Table-8**

**Descriptive Statistics and t value for Task Responsibility Areas of School Principals**

<b>Dimension</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Standard Error of Mean</b>	<b>t value</b>
1. General Management Task	100	3.49	0.45	0.05	11.00
2. Curriculum Management Task	100	3.40	0.25	0.03	15.69
3. Human Resource Management Task	100	3.53	0.27	0.03	19.85
4. Financial & Material Management Task	100	3.31	0.27	0.03	11.27
5. Management of Information	100	2.73	0.34	0.034	8.17

A graphical representation of the mean scores against each task responsibility areas of the school principal is made in Graph-1 below.

**Graph-1 Mean Scores of each Task Responsibility Areas of the School Principal**



As evident from the above analysis, the mean value of scores given by the respondents to various dimensions hover around 3 or above signifying that they agree to the requirement of professional development in those areas. Elaborating the same by dimension wise, in context of Human Resource Management Tasks of the School Principals, the mean score

was found to be the highest at 3.53 and the standard deviation was 0.27. This suggests a strong need for Professional Development in the area of Human Resource Management. General Management task with a mean score of 3.49 and standard deviation of 0.45 was opted as an area where the respondent felt the need for professional development. In context of Curriculum Management Task a mean score of 3.40 was obtained with a standard deviation of 0.25 and the same was responded positively as a Professional Development need. Financial & Material Management Task with a mean score of 3.31 and standard deviation of 0.27 was the next area which was expressed as a professional development need by the respondent. Management of Information related task with a mean score of 2.75 and a standard deviation of 0.34 is the final identified need for developing the professional development program for school principals.

The following section provides a detailed account of the results for each of these dimensions along with its sub classes inclusive of the descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

#### **4.2 General Management Tasks of the School Principals**

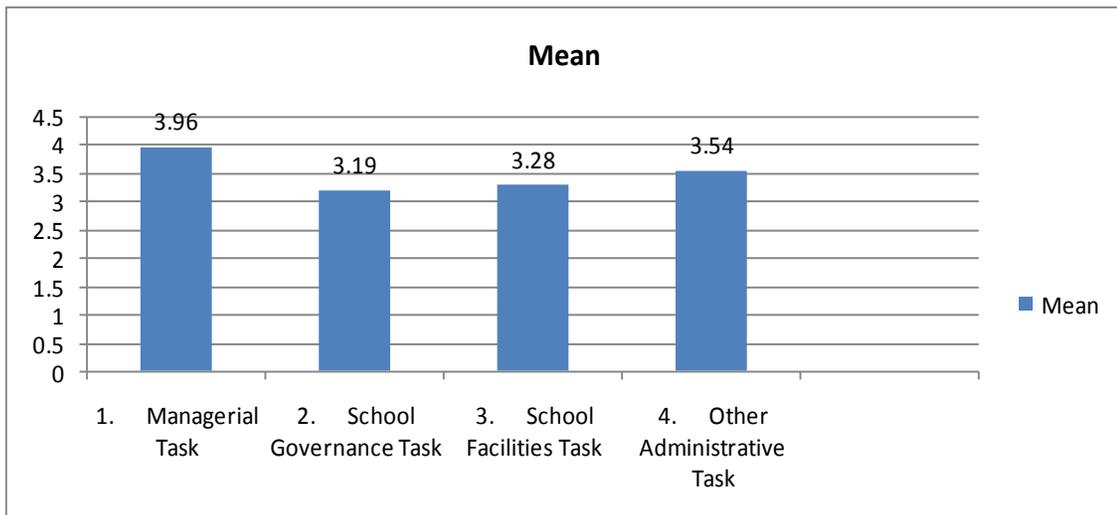
The General Management Tasks of School Principals included Managerial Tasks, School Governance Tasks, School Facilities Tasks and Other Administrative Tasks. The results obtained upon analyzing the data with SPSS are tabulated in Table-9below.

**Table-9**  
**Descriptive Statistics and t value for General Management Task of School Principals**

Particulars	N	Mean	Std. Deviation	Std. Error Mean	t value
1. Managerial Task	100	3.96	.57	.057	16.91
2. School Governance Task	100	3.19	.78	.078	2.46
3. School Facilities Task	100	3.28	.84	.084	3.40
4. Other Administrative Task	100	3.54	.95	.095	5.66

A graphical representation of the mean scores against each sub categories of task responsibility areas under the General Management Tasks of school principals is made in Graph-2 below.

**Graph-2 Mean Scores of each Task Responsibility Area under the General Management Tasks of School Principals**



Managerial Tasks with a mean score of 3.96 and a standard deviation of 0.57 was opted by the respondents as an area where there is a strong need for professional development. Other Administrative Tasks which included items related to RTE Act and RTI Act etc recorded a mean score of 3.54 and standard deviation of 0.95. School Facilities Tasks with a mean score of 3.28 and standard deviation of 0.84, and School Governance Tasks with a mean score of 3.19 and standard deviation of 0.78 are the other areas wherein the respondents expressed their requirement for professional development. In the following section a detailed account is provided for each item under the sub classes of General Management Tasks of School Principals i.e. Managerial Tasks, School Governance Tasks, School Facilities Tasks and Other Administrative Tasks.

The following section a detailed account of various items as contained under the category of Managerial Tasks.

#### **4.2.1 Managerial Tasks of the School Principals**

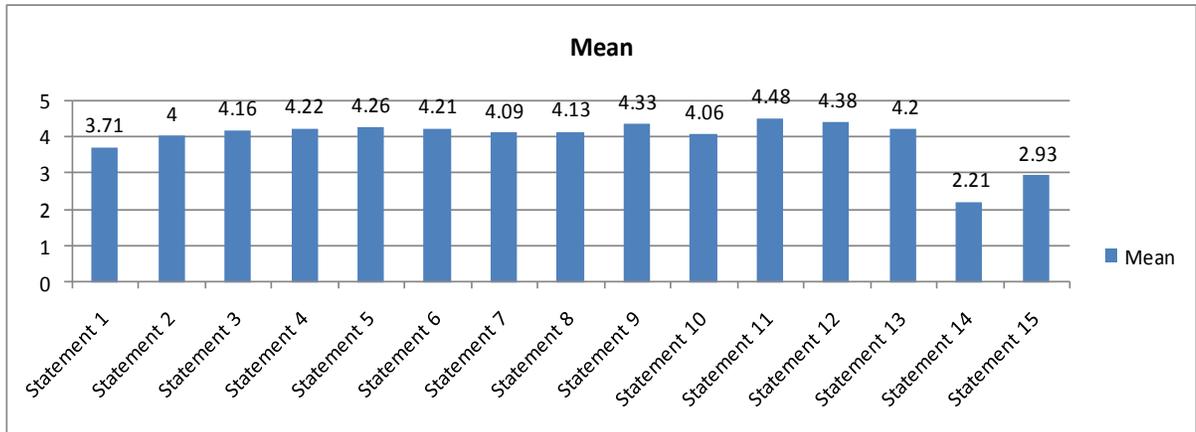
Table-10 below shows items as contained under the category of Managerial Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS. Managerial Tasks included 15 items (statements) defining tasks/ activities that a School Principal does in managing the school.

**Table-10**  
**Descriptive Statistics and t value for Managerial Task of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Promote school's vision	100	3.71	1.29	0.13	5.51
2. Work towards achieving school's mission	100	4.00	1.09	0.11	9.16
3. Set annual school objectives	100	4.16	1.01	0.10	11.46
4. Prepare annual school plans	100	4.22	0.92	0.09	13.31
5. Engage in goal-setting for every session	100	4.26	0.86	0.09	14.65
6. Delegate work to others	100	4.21	0.74	0.07	16.30
7. Establish effective channels of communication with all concerned	100	4.09	0.79	0.08	13.75
8. Provide leadership (right direction) towards attainment of set (definite) objectives	100	4.13	0.86	0.09	13.13
9. Ensure implementation of decisions taken	100	4.33	0.82	0.08	16.28
10. Monitor the progress of the school plan	100	4.06	0.92	0.09	11.53
11. Evaluate the attainment of set objectives	100	4.48	0.69	0.07	21.49
12. Ensure remedial action proactively	100	4.38	0.81	0.08	16.96
13. Manage time effectively	100	4.20	0.67	0.07	18.00
14. Ensure safety of students	100	2.21	0.73	0.07	-10.84
15. Conduct emergency drills	100	2.93	1.43	0.14	-0.49

A graphical representation of the mean scores of responses against each statement defining the task responsibility area under Managerial Tasks of school principals is made in Graph-3 below.

**Graph-3 Mean Scores of Responses to each Statement under the category of Managerial Tasks of the school principals**



From the above analysis the researcher could identify those activities defining the Managerial Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Managerial Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Evaluate the attainment of set objectives” referred to the monitoring and control mechanism that a principal needs to have in order to exercise his/ her leadership position in the school context. To this, a mean score of 4.48 was recorded with a standard deviation of 0.69 indicating a strong need for professional development. The next statement “Ensure remedial action proactively” with mean score of 4.38 and standard deviation of 0.81 was identified as an area where professional development need was felt by the respondents and this referred to aspects of control function in management. “Ensure implementation of decisions taken” referred to the ability of a school principal in

implementing decisions taken and to this; a mean score of 4.33 was recorded with a standard deviation of 0.82 which indicated a strong need for professional development.

The statement “Engage in goal-setting for every session” dealt with the aspect of goal setting for various work groups under his leadership, the teaching and non teaching staff. A mean score of 4.26 was recorded with a standard deviation of 0.86 which indicated a positive response towards the need for professional development. Almost similar response with a mean score of 4.22 and standard deviation of 0.92 was recorded against the statement “Prepare annual school plans” which referred to whether the school principals have an express need to be professionally developed in the aspect of school planning.

Response to the aspect of delegation as stated “Delegate work to others” indicated a need for professional development where a mean score of 4.21 was recorded with a standard deviation of 0.74. The next task area where professional development need was identified is “Manage time effectively” referring to time management skill of the school principal, which recorded a mean score of 4.20 with a standard deviation of 0.67.

The statement “Set annual school objectives” specifically meant to understand the engagement of the school principal in setting annual goals and targets for the school and whether they have an express need to be professionally developed on the same, a mean score of 4.16 was recorded with a standard deviation of 1.01. The next identified need for professional development is expressed in context of the statement “Provide leadership (right direction) towards attainment of set (definite) objectives”. This referred to the ability of the school principal to lead and guide his/her team in the right direction towards

achieving school's objective. A mean score of 4.13 was recorded with a standard deviation of 0.86 suggest a strong need for professional development.

The statement "Establish effective channels of communication with all concerned" sought to explore the school principal's task of communicating to their staff and students and other stakeholders. A mean score of 4.09 was recorded with a standard deviation of 0.79 indicating a need for professional development in this regard. The response to the next statement "Monitor the progress of the school plan" refers to the ability of the school principal in monitoring the progress of the school plan also indicated a need for professional development, with a mean score of 4.06 was recorded with a standard deviation of 0.92.

The statement "Work towards achieving school's mission" was included to ascertain whether the principals understood how to work towards achieving school's mission. The respondents expressed the need to be professionally developed on the same for which a mean score of 4.0 was recorded with a standard deviation of 1.09. Professional development need was also expressed in context of the statement "Promote school's vision" with a mean score of 3.71 and standard deviation of 1.29. this referred to the engagement of the school principal in working towards realizing the school's vision.

#### **4.2.2 School Governance Tasks of School Principals**

Table-11 below shows items as contained under the category of School Governance Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

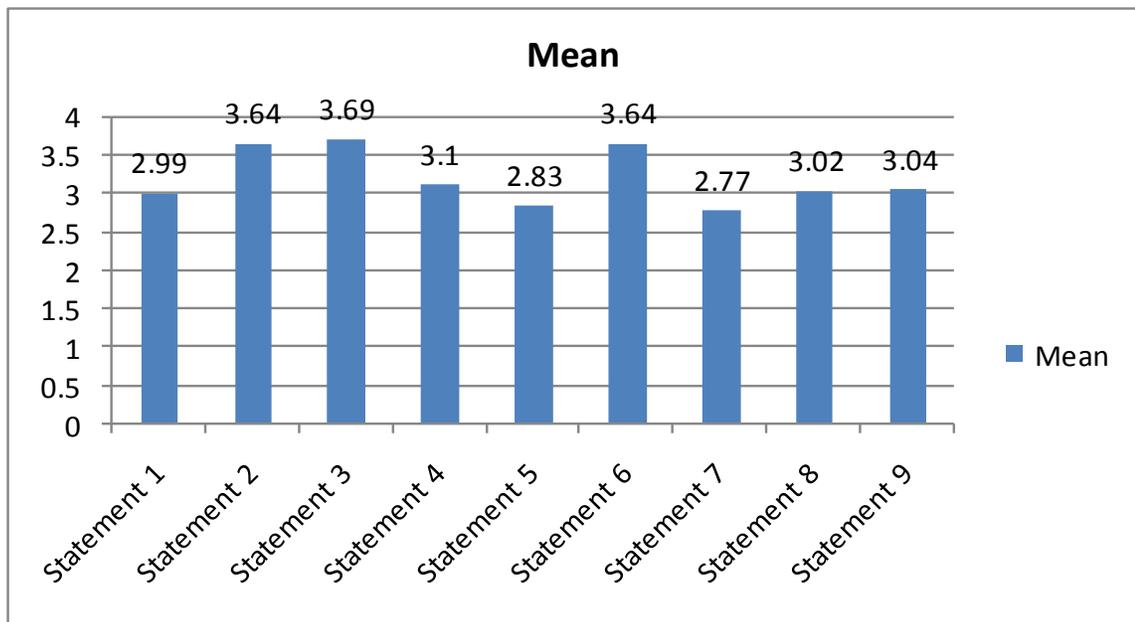
School Governance Tasks included 9 items (statements) defining tasks/ activities that a School Principal is supposed to do in carrying forward his/ her responsibility as an administrator of rules and regulations, policies etc.

**Table-11**  
**Descriptive Statistics and t value for School Governance Task of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Act in accordance with the Constitution and relevant laws, rules, regulations, Service Codes, and Codes of Conduct for Schools.	100	2.99	1.40	0.14	-0.07
2. Implement government and school policies	100	3.64	1.28	0.13	4.99
3. Initiate the development of school policies	100	3.69	1.36	0.14	5.07
4. Ensure that the school has a SMDC which functions according to Government regulations	100	3.10	1.38	0.14	0.72
5. Orient new SMDC members to their roles, duties, and powers	100	2.83	1.27	0.13	-1.34
6. Work effectively with the SMDC	100	3.64	1.36	0.14	4.71
7. Establish a Parent-Teacher Association (PTA) at the school	100	2.77	1.27	0.13	-1.81
8. Establish a Learner Representative Council (Union/ Association)	100	3.02	1.25	0.13	0.16
9. Establish alumni associations and involve past pupil in school development activities	100	3.04	1.34	0.13	0.30

Graph-4 gives the graphical representation of the mean scores of responses against each statement provided under the School Governance Task of the School Principal.

**Graph-4 Mean Scores of Responses to each Statement under the category of School Governance Tasks of the School Principal**



From the above analysis the researcher could identify those activities defining the School Governance Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of School Governance Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Initiate the development of school policies” referred to the responsibilities of the school principal towards developing new policies in his/ her school’s context, to which a mean score of 3.69 was recorded with a standard deviation of 1.36 indicating a strong need for professional development. The responses to the statement “Implement government and school policies” recorded a mean score of 3.64 with a standard deviation of 1.28, and this referred to the responsibilities of the school

principal towards implementing the established policies of Government and the school. The next identified professional development need for the school principals was in context of the task related to the statement “Work effectively with the SMDC” referring to the responsibilities of the school principal towards ensuring smooth functioning of the SMDC in accordance with the established norms where a mean score of 3.64 was recorded with a standard deviation of 1.36. Related to the same was the statement “Ensure that the school has a SMDC which functions according to Government regulations” which referred to the responsibilities of the school principal towards formation of the School Management Development Committee and ensuring its smooth functioning. A strong professional development need in this regard too was identified based upon a mean score of 3.10 was recorded with a standard deviation of 1.38.

The next identified needs for professional development of the school principal was in context of past and present students’ involvement. The statement “Establish alumni associations and involve past pupil in school development activities” referred to the responsibilities of the school principal in formation of an alumni association and ensuring its participation towards school development, to which a mean score of 3.04 was recorded with a standard deviation of 1.34. “Establish a Learner Representative Council (Union/ Association)” referred to the responsibilities of the school principal in formation of the student’s union and ensuring its smooth functioning, to which a mean score of 3.02 was recorded with a standard deviation of 1.25.

### 4.2.3 School Facilities Tasks of School Principals

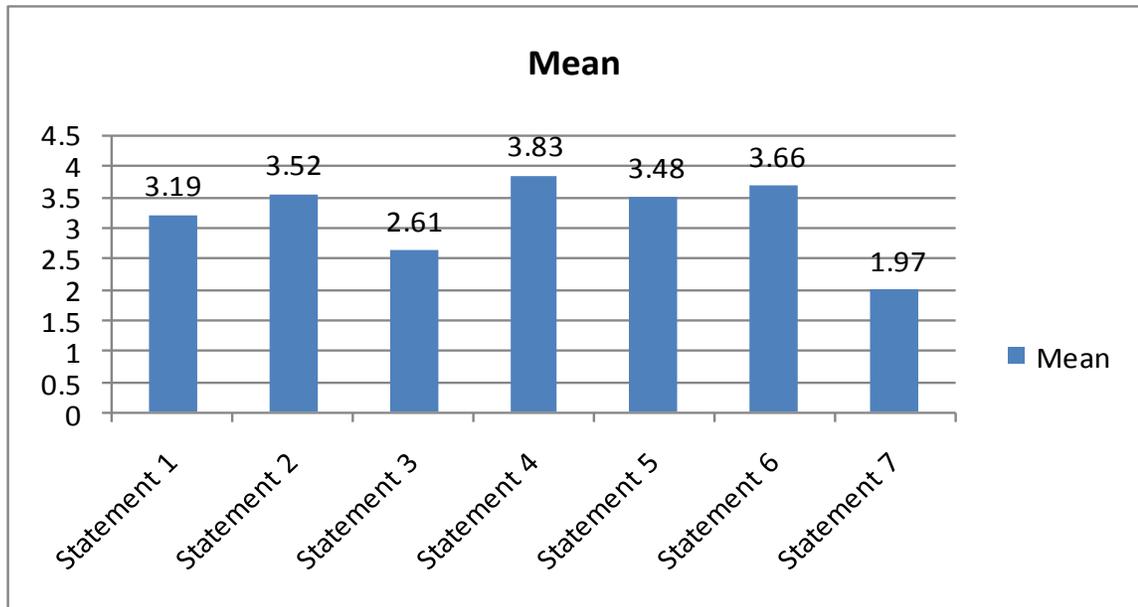
Table-12 below shows items as contained under the category of School Facilities Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS. School Facilities Tasks included 7 items (statements) defining tasks/ activities that a School Principal is supposed to do in carrying forward his/ her responsibility of creating and maintaining adequate school facilities.

**Table-12**  
**Descriptive Statistics and t value for School Facilities Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Maintain a healthy, safe, and pleasant school environment	100	3.19	0.78	0.08	4.507
2. Safeguard the facilities and physical resources of the school	100	3.52	1.14	0.11	-3.488
3. Ensure that the school grounds and buildings are well maintained.	100	2.61	1.12	0.12	7.185
4. Order suitable furniture for students and staff of the school.	100	3.83	1.16	0.12	3.741
5. Ensure that school facilities are effectively used for school and community activities	100	3.48	1.28	0.13	5.581
6. Ensure that learners, teachers, and the community respect and care for school property	100	3.66	1.18	0.11	9.303
7. Ensure proper boarding facilities for students, where applicable	100	1.07	1.15	0.12	-19.994

Graph-5 provides the graphical representation of the mean scores of responses against each statement under the School Facilities Task of the school principal.

**Graph-5 Mean Scores of Responses to each Statement under the category of School Facilities Tasks of the School Principal**



From the above analysis the researcher could identify those activities defining the School Facilities Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of School Facilities Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Ensure that learner, teachers, and the community respect and care for school property” referred to the responsibility of the school principal in creating a strong sense of belonging among the student, staff and the community towards the school and its facilities, and a mean score of 3.66 was recorded with a standard deviation of 1.18. Related to the same was the statement “Safeguard the facilities and physical resources of the school” referred to the responsibilities of a school principal to ensure proper upkeep

of the school infrastructure and facilities, to which a mean score of 3.52 was recorded with a standard deviation of 1.14. Tasks related to both these statements were identified as areas where there is a strong need for professional development of the school principal. In context of proper usage of school facilities which were highlighted in the statement “Ensure the School Facilities are effectively used for School and Community Activities” the responses recorded a mean score of 3.52 with a standard deviation of 1.14 indicating the need for professional development.

The statement “Order suitable furniture for students and staff of school” referred to the responsibility of the school principal in ensuring proper and timely availability of facilities such a furniture and fixture for both the student as well as staff. This related to the procurement function of the school principal and the responses recorded a mean score of 3.48 with a standard deviation of 1.28 which indicated a felt need for professional development. The next statement to which the respondents expressed the need for professional development was “Maintain a healthy, safe, and pleasant school environment” and this referred to all those responsibilities of the school principal that are directed towards ensuring safe and healthy environment in the school. A mean score of 3.19 was recorded with a standard deviation of 0.78.

#### **4.2.4 Other Administrative Tasks of School Principals**

Table-13 below shows items as contained under the category of Other Administrative Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS. Other Administrative Tasks included 3 items (statements) related to his/ her

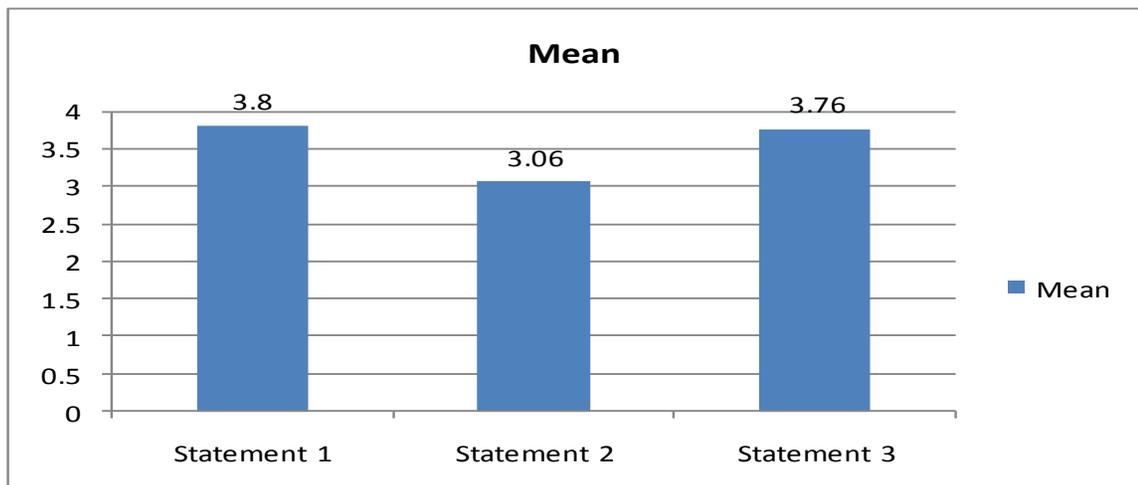
responsibility as an administrator ensuring the implementation as mandated by the statutory provisions.

**Table -13**  
**Descriptive Statistics and t value for Other Administrative Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Demonstrate appropriate levels of professional conduct.	100	3.80	1.28	0.13	6.25
2. Understand the importance of RTE Act and its implication.	100	3.06	1.31	0.13	0.46
3. Understand the importance of RTI Act and its implication.	100	3.76	1.06	0.11	7.20

Graph-6 provides the graphical representation of the mean scores of responses against the statements under the other Administrative tasks of the school principal.

**Graph-6 Mean Scores of Responses to each Statement under the category of Other Administrative Tasks of the School Principal**



From the above analysis the researcher could identify those activities defining the Other Administrative Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Other Administrative Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Demonstrate appropriate levels of professional conduct” referred to the principal’s ability to demonstrate a high degree of professionalism. A strong professional development need was identified in this context based upon a mean score of 3.80 and standard deviation of 1.28. The understanding on various Acts and provisions therein, the school principals expressed the need for professional development as highlighted by the responses to the statement “Understand the importance of RTI Act and its implication” to which the responses recorded a mean score of 3.76 with a standard deviation of 1.06. And the responses to the statement “Understand the importance of RTE Act and its implication” referred to the school principals’ recorded a mean score of 3.06 with a standard deviation of 1.31.

#### **4.3 Curriculum Management Tasks of School Principals**

The Curriculum Management Tasks of School Principals included Management of Instructions Task and Learner related Tasks of the school principals. The results obtained upon analyzing the data with SPSS are tabulated in Table-14 below.

**Table-14**  
**Descriptive Statistics and t value for Curriculum Management Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Management of Instruction	100	3.49	0.32	0.03	15.34
2. Learner related Task	100	3.31	0.34	0.03	8.94

A graphical representation of the mean scores against each sub categories of task responsibility areas under the Curriculum Management Tasks of school principals is made in Graph-7 below.

**Graph-7 Mean Scores of Responses to the Task Responsibility Areas under Curriculum Management Tasks of School Principals**



Curriculum Management Tasks of the school principal, with a mean score of 3.4 and a standard deviation of 0.25 was opined by the respondents as an area where there is a strong need for professional development. Management of Instructions Task which recorded a mean score of 3.49 and standard deviation of 0.32, and Learner Related task with a mean score of 3.31 and standard deviation of 0.34 indicates those areas wherein the respondents expressed their requirement for professional development.

In the following section a detailed account is provided for each item under the sub classes of Curriculum Management Tasks of School Principals i.e. Management of Instruction Task and Learner Related Task.

#### **4.3.1 Management of Instruction Tasks of School Principals**

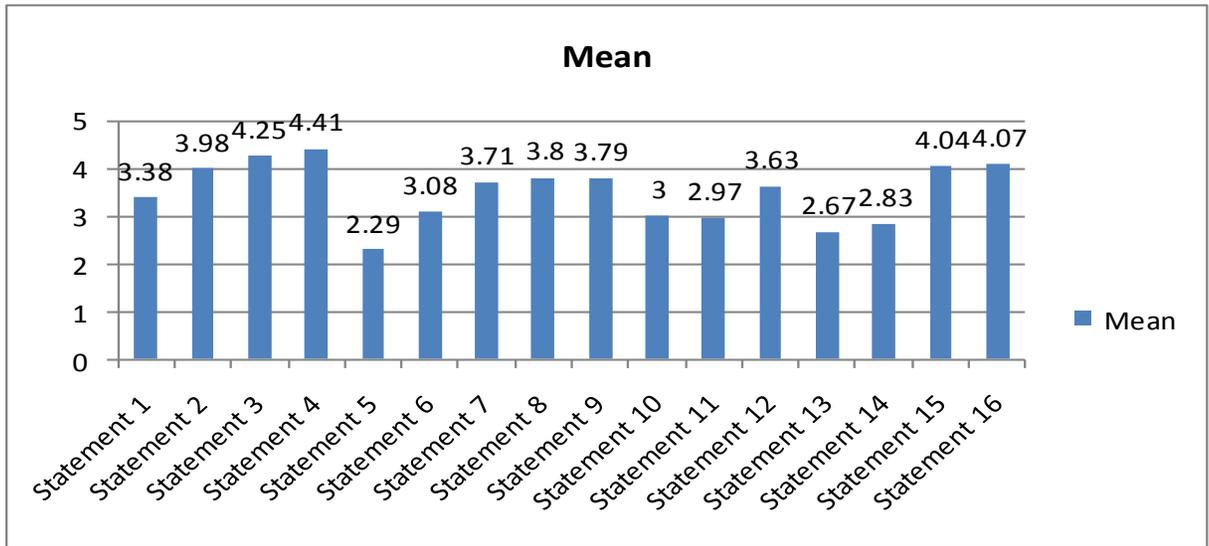
Table-15 below shows items as contained under the category of Management of Instructions Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS. Management of Instructions Tasks included 16 items (statements) related to his/ her responsibility of ensuring proper and effective conduct of teaching learning process in the school.

**Table-15**  
**Descriptive Statistics and t value for Management of Instruction Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	T Value
1. Provide guidance to teachers on pedagogical issues.	100	3.38	1.32	0.13	2.87
2. Assess school effectiveness in achieving its learning objectives.	100	3.98	1.05	0.11	9.30
3. Identify problems which affect learning and teaching	100	4.25	0.93	0.09	13.51
4. Improve pupil learning by changing factors known to affect their learning	100	4.41	0.70	0.07	20.21
5. Prepare school time table in keeping with Board/Directorate's requirements.	100	2.29	0.95	0.10	-7.51
6. Prepare annual academic calendar with details of events and activities.	100	3.08	1.27	0.13	0.63
7. Check the lesson plans of teachers.	100	3.71	1.21	0.12	5.88
8. Regularly observe teachers' performance and offer them necessary help/guidance to improve.	100	3.80	1.08	0.11	7.39
9. Evaluate teachers' performance on the basis of pupils' performance.	100	3.79	1.15	0.12	6.88
10. Ensure that teaching aids and materials so provided are used for the benefit of teaching and learning.	100	3.00	1.44	0.14	0.00
11. Counsel teachers having problem with classroom management or discipline.	100	2.97	1.43	0.14	-0.21
12. Help teachers use continuous assessment techniques	100	3.63	1.21	0.12	5.20
13. Organize and coordinate examinations (internal and external, when required)	100	2.67	1.28	0.13	-2.58
14. Ensure that guidance/ counseling services are provided to pupils in upper grades.	100	2.83	1.49	0.15	-1.14
15. Counsel and guide parents/ guardians to help them effectively support the learning of their children.	100	4.04	1.13	0.11	9.22
16. Involve parents in teaching activities at the school and in the community.	100	4.07	0.92	0.09	11.58

Graph-8 gives the graphical representation of the mean score of responses against each statement under the Management of Instruction Task of the school principal.

**Graph-8 Mean Scores of Responses to each Statement under the category of Management of Instruction Tasks of the School Principal**



From the above analysis the researcher could identify those activities defining the Management of Instructions Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Management of Instructions Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Improve pupil learning by changing factors known to affect their learning” referred to the responsibilities of the school principal initiate innovative measures directed towards improving learning. A mean score of 4.41 was recorded with a standard deviation of 0.70 which indicated a strong need for professional development. Similar professional development was expressed in context of the task related to the statement “Identify problems which affect learning and teaching” which referred to the

responsibilities of the school principal to identify problems in teaching and learning process and help provide meaningful solutions. A mean score of 4.25 was recorded with a standard deviation of 0.93.

Another area where a felt need for professional development was identified was in context of the tasks related to the statement “Involve parents in teaching activities at the school and in the community”. The responses to this recorded a mean score of 4.07 and a standard deviation of 0.92. The next statement “Counsel and guide parents/ guardians to help them effectively support the learning of their children” referred to the responsibilities of the school principal to provide guidance to the parents/ guardians to ensure their help in supporting the learning of their child. A mean score of 4.04 was recorded with a standard deviation of 1.13 indicated a felt need for professional development.

School principal’s task of making periodic assessment of the school’s performance in terms of achieving learning objectives was highlighted in the statement “Assess school effectiveness in achieving its learning objectives”. A mean score of 3.98 was recorded with a standard deviation of 1.05 indicating a strong need for professional development in this regard. In context of classroom observation as highlighted with the statement “Regularly observe teachers’ performance and offer them necessary help/guidance to improve” the responses recorded a mean score of 3.80 with a standard deviation of 1.08 indicating this to be another area of professional development. Monitoring and evaluating the performance of the teachers in terms of student performance is another area identified for professional development. A mean score of 3.79 and a standard deviation of 1.15 were recorded from the responses to the statement “Evaluate teachers’ performance on

the basis of pupils' performance". The next statement "Check the lesson plans of teachers" referred to the responsibilities of the school principal to ask for, check and provide inputs to the lesson plans prepared by the teachers. A mean score of 3.71 was recorded with a standard deviation of 1.21 indicates a felt need for professional development. Another area where professional development need was identified on the basis of a mean score of 3.63 and a standard deviation of 1.21 was in context of the task related to the statement "Help teachers use continuous assessment techniques" which referred to the responsibilities of the school principal to provide guidance to teachers on continuous assessment techniques and process.

Providing guidance and mentoring teachers on pedagogical issues as expressed by the statement "Provide guidance to teachers on pedagogical issues" is identified as another area where there is a felt need for professional development. The same is identified on the basis of the responses which recorded a mean score of 3.38 with a standard deviation of 1.32. Academic planning and preparation of academic calendar is another area where there is a felt need for professional development. This is identified on the basis of responses to the statement "Prepare annual academic calendar with details of events and activities" which recorded mean score of 3.08 with a standard deviation of 1.27. The next statement "Ensure that teaching aids and materials so provided are used for the benefit of teaching and learning" referred to the responsibilities of the school principal to ensure proper usage of the teaching aids and materials. A mean score of 3.00 was recorded with a standard deviation of 1.44 which indicated a felt need for professional development.

### 4.3.2 Learner Related Tasks of School Principals

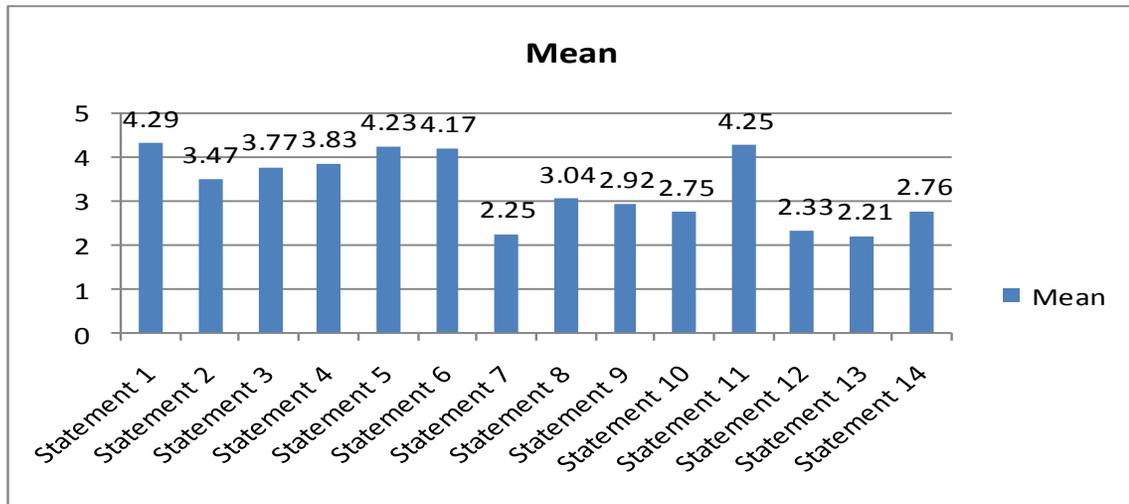
Table-16 below shows items as contained under the category of Learner Related Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS. Learner Related Tasks included 14 items (statements) describing various responsibilities that a school principal is supposed to perform in the school context.

**Table-16**  
**Descriptive Statistics and t value for Learner Related Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Ensure enrollment.	100	4.29	1.02	0.10	12.67
2. Ensure safety and security of all the children in the school.	100	3.47	1.27	0.13	3.71
3. Provide for instruction in techniques of study and effective learning.	100	3.77	1.06	0.11	7.25
4. Promote and teach students to be caring, considerate, and courteous.	100	3.83	1.22	0.12	6.79
5. Maintain a climate of high expectations for learner performance.	100	4.23	0.85	0.09	14.45
6. Discipline learners in a fair, reasonable, and consistent way.	100	4.17	0.92	0.09	12.69
7. Provide channels through which the grievances of learners can be heard.	100	2.25	0.89	0.09	-8.41
8. Effectively control absenteeism amongst learners and ensure punctuality.	100	3.04	1.16	0.12	0.34
9. Inform parents / guardians about their children's academic and social progress from time to time	100	2.92	1.03	0.10	-0.78
10. Make decisions concerning the promotion and repetition of learners.	100	2.75	1.03	0.10	-2.43
11. Maintain a regular guidance and counseling programme in the school.	100	4.25	0.85	0.09	14.79
12. Issue testimonials to learners.	100	2.33	1.21	0.12	-5.55
13. Conduct study tours and excursions	100	2.21	1.14	0.11	-6.93
14. Provide the learners with a healthy and competitive platform to bring out latent talents	100	2.76	1.22	0.12	-1.98

Graph-9 provides the graphical representation of the mean scores of responses against the statements under the Learner Related Task of the school principal.

**Graph-9 Mean Scores of Responses to each Statement under the category of Learner Related Tasks of School Principal**



From the above analysis the researcher could identify those activities defining the Learner Related Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Learner Related Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Ensure enrollment” referred to the responsibility of the school principal to ensure enrollment of new student to the school, initiating measures to check drop outs and ensuring continuation of the present student in the school. The responses to this recorded a mean score of 4.29 with a standard deviation of 1.02 indicating a strong need for professional development. The aspect of guidance and counseling as expressed by the statement “Maintain a regular guidance and counseling programme in the school” was

also identified as an area with a strong need for professional development on the basis of the responses which recorded a mean score of 4.25 with a standard deviation of 0.85.

The next statement “Maintain a climate of high expectations for learner performance” referred to the responsibility of the school principal in promoting a climate conducive to better performance of the school in terms of learner’s achievement. A mean score of 4.23 with a standard deviation of 0.85 indicated a felt need for professional development. The next identified need for professional development was in context of maintaining discipline among students as concluded by the responses to the statement “Discipline learners in a fair, reasonable, and consistent way” which recorded a mean score of 4.17 with a standard deviation of 0.92. Similarly in context of promoting behavioral skill among students as expressed by the statement “Promote and teach students to be caring, considerate, and courteous” the responses recorded a mean score of 3.83 with a standard deviation of 1.22 indicating a felt need for professional development. Need for professional development was also identified in context of promoting instructional leadership as expressed by the responses to the statement “Provide for instruction in techniques of study and effective learning” which recorded a mean score of 3.77 with a standard deviation of 1.06.

The statement “Ensure safety and security of all the children in the school” referred to the responsibility of the school principal to ensure the safety of all students during the period of their study in school. A mean score of 3.47 with a standard deviation of 1.27 indicated this as one area where there was a felt need for professional development. Another area where the respondents expressed the need for professional development was in context of controlling absenteeism as identified from the responses to the statement “Effectively

control absenteeism amongst learners and ensure punctuality” which recorded a mean score of 3.04 with a standard deviation of 1.16.

#### **4.4 Human Resource Management and Community Partnership Related Tasks of School Principals**

Human Resource Management and Community Related Task of School Principals included with a mean score of 3.53 and standard deviation of 0.58 was another area wherein the respondents expressed their desire to undergo professional development. The Human Resource Management and Community Partnership Related Task of the school principal were further divided into Manpower Planning Task, Recruitment and Selection Task, Training and Development Task, Performance Appraisal Task, Motivation Task, Conflict Management and Grievance Redressal Task and Community Partnership related Task of the school Principals. The results obtained upon analyzing the data with SPSS are tabulated in Table-17 below.

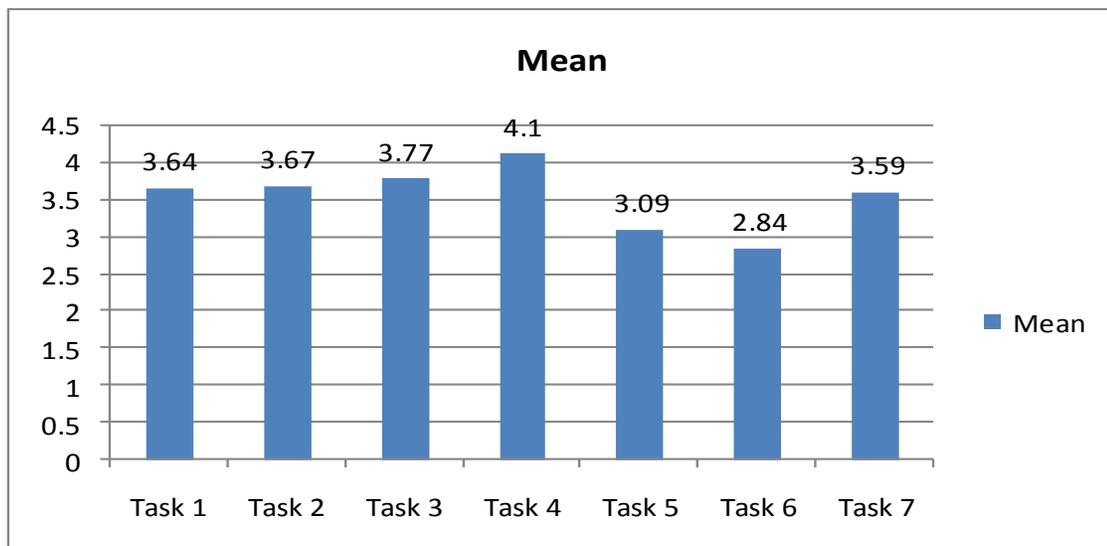
**Table-17**

#### **Descriptive Statistics and t value for Human Resource Management and Community Partnership Related Tasks of School Principals**

<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Std. Error Mean</b>	<b>t Value</b>
1. Manpower Planning Task	100	3.64	0.64	0.06	10.01
2. Recruitment and Selection Task	100	3.67	0.69	0.07	9.78
3. Training and Development Task	100	3.77	0.54	0.05	14.29
4. Performance Appraisal Task	100	4.10	0.33	0.03	32.97
5. Motivation Task	100	3.09	0.45	0.05	1.93
6. Conflict Management and Grievance Redressal Task	100	2.84	0.81	0.08	-2.05
7. Community Participation Related Task	100	3.59	0.48	0.05	12.27

A graphical representation of the mean scores against each sub categories of task responsibility areas under the Human Resource Management and Community Partnership Related Tasks of School Principals is made in Graph-10 below.

**Graph-10 Mean Scores of Responses to each Task Responsibility Areas under the category of Human Resource Management and Community Partnership Related Tasks of School Principal**



Performance Appraisal Tasks under the category of Human Resource Management and Community Partnership related tasks of school principal with a mean score of 4.10 and standard deviation of 0.33 was opined by the respondents as an area with strong need for professional development. Training and Development Task with a mean score of 3.77 and standard deviation of 0.54 was another area opted by the respondents for professional development. Recruitment and Selection Tasks recorded a mean score of 3.67 and standard deviation of 0.69 also indicates a positive response of the respondents towards professional development on the same. Manpower Planning Tasks with a mean score of 3.64 and a standard deviation of 0.64 and Community Partnership Related Task of the

school principal with a mean score of 3.59 and a standard deviation of 0.48 are the other areas wherein the respondents expressed their need for professional development. Motivation Task with a mean score of 3.09 and standard deviation of 0.45 and Conflict Management and Grievance Redressal task with a mean score of 2.84 and a standard deviation of 0.81 are two such areas under the Human Resource Management and Community Partnership Related Task of the school principal where the responses were marginal.

In the following section a detailed account is provided for each item under the category of Human Resource Management and Community Partnership Related Tasks of School Principals.

#### **4.4.1 Manpower Planning Tasks of School Principals**

Manpower Planning referred to the responsibility of the school principals in matters related to the planning for manpower positions in the school context. The Manpower Planning task of the school principal contained 5 statements describing the responsibilities of the school principal. Table-18 below shows items as contained under the category of Manpower Planning Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

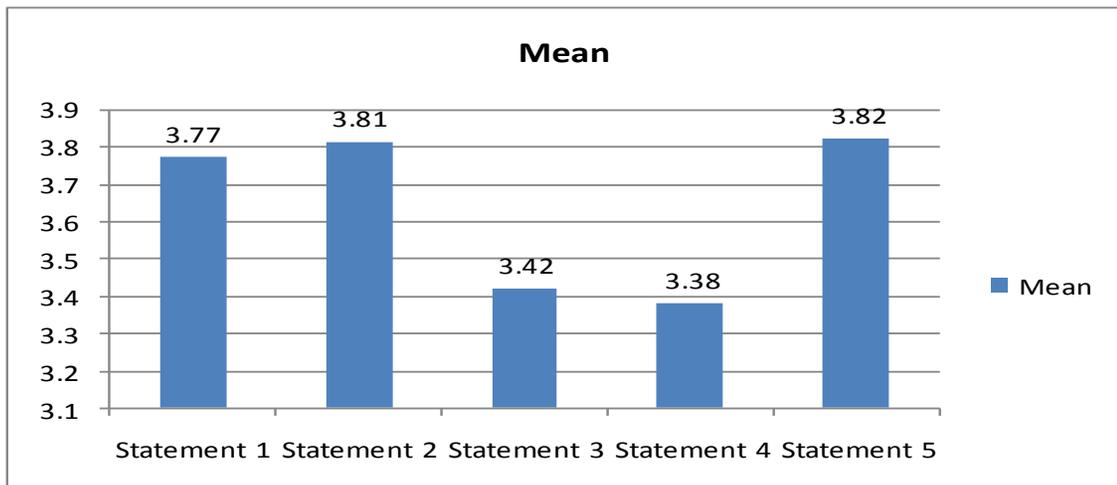
**Table-18**

**Descriptive Statistics and t value for Manpower Planning Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Prepare demand forecasting of manpower in accordance with the annual school plan	100	3.77	1.14	0.11	6.78
2. Prepare supply forecasting of manpower in accordance with the annual school plan.	100	3.81	1.10	0.11	7.38
3. Prepare a list of anticipated vacancies	100	3.42	1.27	0.13	3.32
4. Prepare a list of additional manpower required	100	3.38	1.32	0.13	2.89
5. Initiate communication with concerned authority to secure manpower positions.	100	3.82	1.15	0.12	7.14

Graph-11 provides a graphical representation of the mean scores of responses to each statement under the Manpower Planning Task of the school principal.

**Graph-11 Mean Scores of Responses to each Statement under the category of Manpower Planning Tasks of the School Principals**



From the above analysis the researcher could identify those activities defining the Manpower Planning Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Manpower Planning Tasks of the

school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Initiate communication with concerned authority to secure manpower positions” referred to the responsibility of the school principal to notify such vacancies to the Inspector of Schools, department of Secondary Education Assam, in advance such that the required processes for securing manpower is initiated in a timely manner. A mean score of 3.82 was recorded with a standard deviation of 1.15 indicating a strong need for professional development.

Professional development need was also identified in context of forecasting the manpower supply and demand position as evident from the responses to the statements “Prepare supply forecasting of manpower in accordance with the annual school plan” which recorded a mean score of 3.81 with a standard deviation of 1.10 and “Prepare demand forecasting of manpower” which recorded a mean score of 3.77 with a standard deviation of 1.14. Also felt need for professional development was identified from the responses to the statement “Prepare a list of anticipated vacancies” which recorded a mean score of 3.42 with a standard deviation of 1.27 and referred to the responsibility of the school principal to prepare a detailed account of the anticipated vacancies that may arise on account of retirement, leave etc.

Finally the aspect of preparing the demand supply gap in terms of manpower requirement and expressing the same in the form of a statement was identified as another area with a felt need for professional development. The same is evident from the responses to the statement “Prepare a list of additional manpower required” which recorded a mean score of 3.38 with a standard deviation of 1.32.

#### 4.4.2 Recruitment and Selection Related Tasks of School Principals

Though the process related to the Recruitment and Selection of both teaching and non-teaching staff are taken in a centralized manner by the Directorate of Secondary Education in the state of Assam, it is important for the school principal to have a detailed plan about the same and submit it to concerned authority in advance. In certain cases, special teaching staffs on an adhoc basis at times are being engaged by the school principal in consultation with the SMDC. Recruitment and Selection Task included 4 statements describing the responsibility of the school principal. Table-19 below shows items as contained under the category of Recruitment and Selection Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-19**  
**Descriptive Statistics and t value for Recruitment and Selection Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	T Value
1. Initiate necessary steps to advertise vacancies OR intimate concerned authorities on the same.	100	3.95	1.05	0.11	9.06
2. Conduct interviews.	100	3.74	1.16	0.12	6.38
3. Obtain/recruit teaching staff for temporary and permanent appointments.	100	4.02	1.00	0.10	10.25
4. Obtain/recruit non-teaching staff.	100	2.97	1.32	0.13	-0.23

Graph-12 provides the graphical representation of the mean scores of each statement under the Recruitment and Selection task of the school principals.

**Graph-12 Mean Scores of Responses to each Statement under the Category of Recruitment and Selection Tasks of School Principals**



From the above analysis the researcher could identify those activities defining the Recruitment and Selection Related Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Recruitment and Selection Related Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Obtain/recruit teaching staff for temporary and permanent appointments” referred to the responsibility of the school principal in making arrangement for special classes by external teachers and/ or placing temporary teachers on an adhoc basis to fill vacancy as may have arisen due to leave taken by the incumbent teacher. A mean score of 4.02 was recorded with a standard deviation of 1.00 indicating a strong need for professional development. Issuing appropriate advertisements for vacancies is another area where there was a felt need for professional development. As evident from the responses to the statement “Initiate necessary steps to advertise vacancies or intimate

concerned authorities on the same” which recorded a mean score of 3.95 with a standard deviation of 1.05. Need for professional development was also felt in conducting interviews as evident from the responses to the statement “Conduct interviews” which recorded a mean score of 3.74 with a standard deviation of 1.16.

#### **4.4.3 Training and Development Tasks of School Principals**

Training and Development Task of the school principal involving identification of training needs and initiating necessary measures to create provisions for in-service training of the teachers as well as inducting new teachers providing adequate orientation of the school context. The training and Development Task includes 6 statements describing the responsibility of the school principal. Table-20 below shows items as contained under the category of Training and Development Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-20**  
**Descriptive Statistics and t value for Training and Development Tasks of School Principals**

<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Std. Error Mean</b>	<b>t Value</b>
1. Orient/ induct new teachers and staff.	100	3.26	1.25	0.13	2.08
2. Arrange for orientation of teaching and non-teaching staff on new policy framework.	100	3.48	1.20	0.12	3.99
3. Provide for awareness training on new directives of the Board/ Directorate.	100	3.73	1.21	0.12	6.06
4. Perform skill gap analysis to assess the training needs of existing staff.	100	4.13	1.13	0.11	10.04
5. Recommend teachers for professional development and training program.	100	3.67	1.14	0.11	5.89
6. Counsel and guide teachers towards improving their teaching skills.	100	4.34	0.69	0.07	19.57

Graph-13 provides a graphical representation of the mean scores of responses to each statement under the category of Training and Development Task of the school principal.

**Graph-13 Mean Scores of Responses to each Statement under the Category of Training and Development Tasks of School principals**



From the above analysis the researcher could identify those activities defining the Training and Development Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Training and Development Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Counsel and guide teachers towards improving their teaching skills” referred to the responsibilities of the school principal that are directed towards providing guidance and counseling of the teaching staff in order to improve the quality of teaching

and learning. A mean score of 4.34 was recorded with a standard deviation of 0.69 indicated a strong need for professional development. Identification of training needs for professional development of teachers was another area with strong need for professional development. The same was evident from the responses to the statement “Perform skill gap analysis to assess the training needs of existing staff” which recorded a mean score of 4.13 with a standard deviation of 1.13.

Sensitizing and making school staff aware about the new directives is another area where felt need for professional development was identified on the basis of responses to the statement “Provide for awareness training on new directives of the Board/ Directorate” which recorded a mean score of 3.73 with a standard deviation of 1.21. The next statement “Recommend teachers for professional development and training program” referred to the responsibilities of the school principal in recommending names of teaching staff for in service training programs that are held periodically by the Directorate or RMSA. A mean score of 3.67 with a standard deviation of 1.14 indicated a felt need for professional development. Making arrangement for conducting orientation as expressed in the statement “Arrange for orientation of teaching and non-teaching staff on new policy framework” recorded a mean score of 3.48 with a standard deviation of 1.20, thus indicating a felt need for professional development.

Inducting new staff and orienting them towards the school system is another identified area for professional development as evident from the responses to the statement “Orient/ induct new teachers and staff” which recorded a mean score of 3.26 with a standard deviation of 1.25.

#### 4.4.4 Performance Appraisal Tasks of School Principals

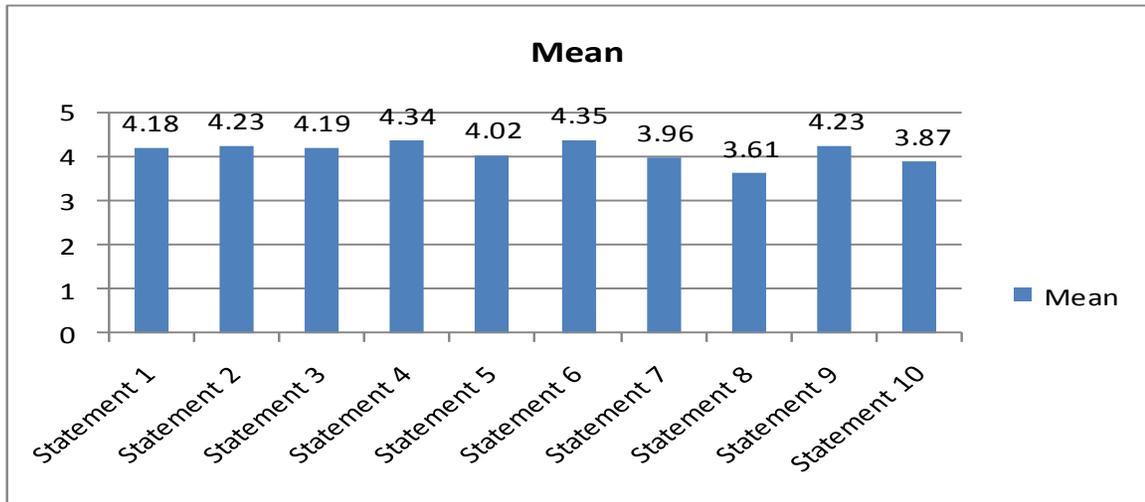
Performance Appraisal Task of the school principal referred to the responsibilities of the school principal that are directed towards conducting appraisal of staff. The Performance Appraisal Task includes 10 statements describing the responsibility of the school principal. Table-21 below shows items as contained under the category of Performance Appraisal Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-21**  
**Descriptive Statistics and t value for Performance Appraisal Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	T Value
1. Prepare job description for school personnel.	100	4.18	0.89	0.09	13.23
2. Establish standardized procedures in matters related to instruction.	100	4.23	0.95	0.10	12.92
3. Establish standardized procedures in matters related to administration.	100	4.19	0.90	0.09	13.29
4. Define roles and responsibilities of each position (Teaching and non -Teaching)	100	4.34	0.79	0.08	16.87
5. Evaluate teachers' performance on the basis of standards established.	100	4.02	1.05	0.11	9.68
6. Conduct performance appraisal of teachers and staff	100	4.35	0.76	0.08	17.83
7. Communicate performance to individual teachers.	100	3.96	1.01	0.10	9.47
8. Encourage the professional and career development of teaching and non-teaching staff.	100	3.61	1.27	0.13	4.80
9. Plan staff development activities and programs.	100	4.23	0.86	0.09	14.26
10. Train teachers and staff on-the-job.	100	3.87	1.11	0.11	7.86

Graph-14 provides a graphical representation of the mean scores of responses to each statement under the category of Performance Appraisal Task of school principal.

**Graph-14 Mean Scores of Responses to each Statement under the Category of Performance Appraisal Task of School Principals**



From the above analysis the researcher could identify those activities defining the Performance Appraisal Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Performance Appraisal Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

A strong need for professional development was identified from the responses to the statement “Conduct performance appraisal of teachers and staff” which recorded a mean score of 4.35 with a standard deviation of 0.76 and referred to the responsibilities of a school principal to periodically conduct appraisal of all school staff in a transparent and positive way. The next statement “Define roles and responsibilities of each position

(Teaching and non -Teaching)” referred to the responsibilities of a school principal in matters related to defining roles expected of different positions in the school context. A mean score of 4.34 with a standard deviation of 0.75 indicated a strong need for professional development.

The statement “Establish standardized procedures in matters related to instruction” referred to the responsibilities of a school principal in establishing standardized procedures in managing classroom instructions. A mean score of 4.23 with a standard deviation of 0.95 indicated a felt need for professional development. Planning staff development activities is identified as an area where there is a felt need for professional development, as evident from the responses to the statement “Plan staff development activities and programs” which recorded a mean score of 4.23 with a standard deviation of 0.86. Evolving and establishing standardized procedures of administration is another area with a felt need for professional development, as evident from the responses to the statement “Establish standardized procedures in matters related to administration” which recorded a mean score of 4.19 with a standard deviation of 0.90.

The statement “Prepare job description for school personnel” referred to the responsibilities of a school principal that relates to preparation of a detailed description of the job profiles in the school context. A mean score of 4.18 with a standard deviation of 0.89 indicated a felt need for professional development. Evaluation of teachers on the basis of established standards was identified as an area for professional development, as evident from the responses to the statement “Evaluate teachers’ performance on the basis of standards established” which recorded a mean score of 4.02 with a standard deviation of 1.05.

Initiating communication with teachers regarding their performance was identified as an area for professional development, as evident from the responses to the statement “Communicate performance to individual teachers.” which recorded a mean score of 3.96 with a standard deviation of 1.01. The next statement “Train teachers and staff on-the-job” referred to the responsibilities of a school principal associated with periodic supervision of classes and monitoring the teaching and learning process directed towards providing appropriate feedback to the teachers and a mean score of 3.87 with a standard deviation of 1.11 indicated this to be another area with a felt need for professional development. Task of providing encouragement to both the teaching and non teaching staff was identified as another area with a felt need for professional development. The same was evident from the responses to the statement “Encourage the professional and career development of teaching and non-teaching staff” which recorded a mean score of 3.61 with a standard deviation of 1.27.

#### **4.4.5 Motivation Related Tasks of School Principals**

Motivation Related Task of the school referred to the responsibilities of a school principal towards promoting a healthy and positive organization climate and initiating steps to keep the teaching and non teaching staff under him/ her motivated towards their duties and responsibilities. Motivation Related Task includes 7 statements describing the responsibility of the school principal. Table-22 below shows items as contained under the category of Training and Development Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

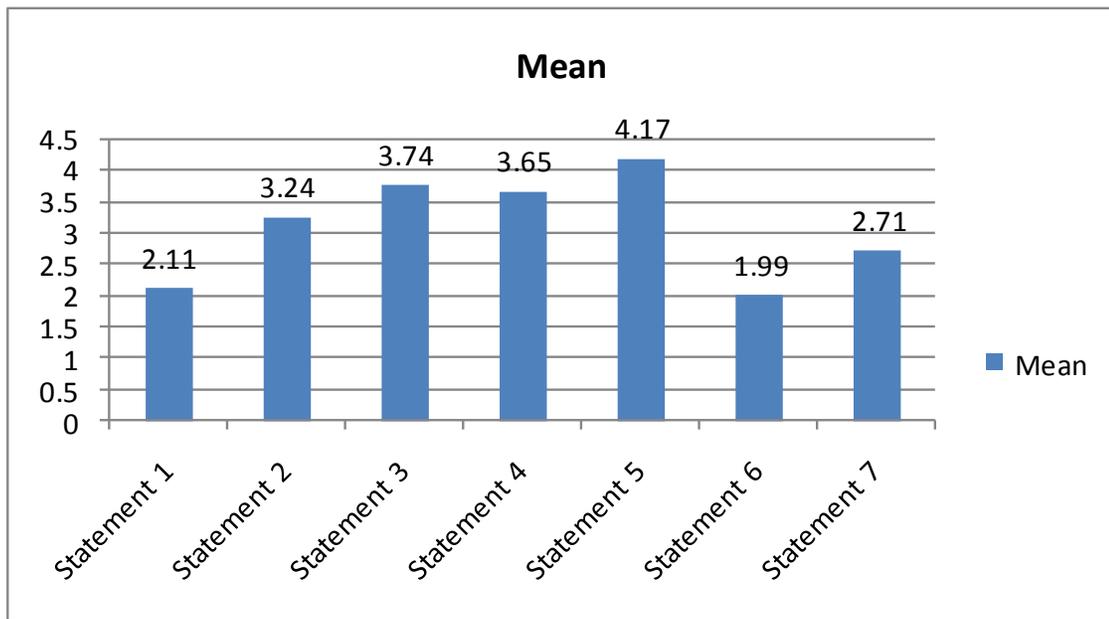
**Table-22**

**Descriptive Statistics and t value for Motivation related Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Set work groups and teams.	100	2.11	1.05	0.11	-8.45
2. Establish good working conditions.	100	3.24	1.17	0.12	2.05
3. Ensure healthy and competitive organizational climate.	100	3.74	1.05	0.11	7.05
4. Motivate teachers and staff to work hard for the success of the school.	100	3.65	1.26	0.13	5.17
5. Maintain high morale among teachers, learners, and other staff.	100	4.17	0.91	0.09	12.85
6. Monitor, approve, or recommend requests for leave.	100	1.99	0.98	0.10	-10.31
7. Recognize and appreciate good work of teachers & staff.	100	2.71	1.27	0.13	-2.28

Graph-15 provides graphical representation of the mean scores of the responses to each statement under the category of Motivation Related task of the school principal.

**Graph-15 Mean Scores of the Responses to each Statement under the Category of Motivation Related task of the School Principals**



From the above analysis the researcher could identify those activities defining the Motivation Related Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Motivation Related Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Maintain high morale among teachers, learners, and other staff” referred to the responsibilities of a school principal to maintain the morale at the highest level among the staff and students. A mean score of 4.17 with a standard deviation of 0.91 indicated a strong felt need for professional development. Maintaining an healthy competitive and positive organizational climate is identified as a strong need for professional development, as evident from the statement “Ensure healthy and competitive organizational climate” which recorded a mean score of 3.74 with a standard deviation of 1.05.

On aspect of motivating staff as expressed in the statement “Motivate teachers and staff to work hard for the success of the school” the responses recorded a mean score of 3.65 with a standard deviation of 1.26 indicating a strong felt need for professional development. Another area where a felt need for professional development was identified is in context of establishing a good working condition. This was evident from the responses to the statement “Establish good working conditions” which recorded a mean score of 3.24 with a standard deviation of 1.17.

#### 4.4.6 Conflict Management and Grievance Redressal Tasks of School Principals

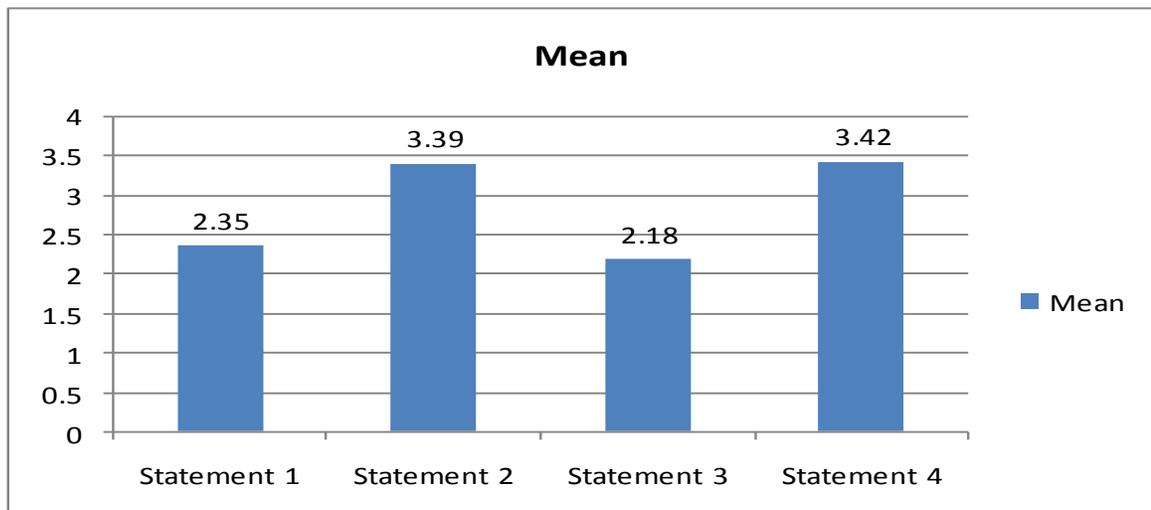
Conflict Management and Grievance Redressal Task of the school principal in context of the school relates to managing conflict between various work groups or amongst staff, and mitigating the same in order to promote healthy organizational climate. The Conflict Management and Grievance Redressal Task include 4 statements describing the responsibility of the school principal. Table-23 below shows items as contained under the category of Training and Development Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-23**  
**Descriptive Statistics and t value for Conflict Management and Grievance Redressal Related Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Deal effectively with absenteeism and ensure punctuality amongst teaching and non-teaching staff.	100	2.35	1.14	0.11	-5.70
2. Resolve/handle conflicts when disputes occur.	100	3.39	1.19	0.12	3.28
3. Provide channels through which the grievances of staff can be heard and dealt with.	100	2.18	0.96	0.10	-8.56
4. Deal with cases of staff indiscipline using appropriate procedures.	100	3.42	1.34	0.13	3.15

Graph-16 provides a graphical representation of the mean scores of responses to each statement under the category of Conflict Management and Grievance Redressal task of the school principal.

**Graph-16 Mean Scores of Responses to each Statement under the Category of Conflict Management and Grievance Redressal Tasks of the School Principal**



From the above analysis the researcher could identify those activities defining the Conflict Management and Grievance Redressal Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Conflict Management and Grievance Redressal Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Deal with cases of staff indiscipline using appropriate procedures” referred to the responsibilities of the school principal in keeping a check on acts of indiscipline by the staff. A mean score of 3.42 with a standard deviation of 1.34 indicated a strong felt need for professional development. Resolving conflicts is another area where a strong need for professional development was felt by the respondents, as evident from the responses to the statement “Resolve/handle conflicts when disputes occur” which recorded a mean score of 3.39 with a standard deviation of 1.19.

#### 4.4.7 Community Partnership Related Tasks of School Principals

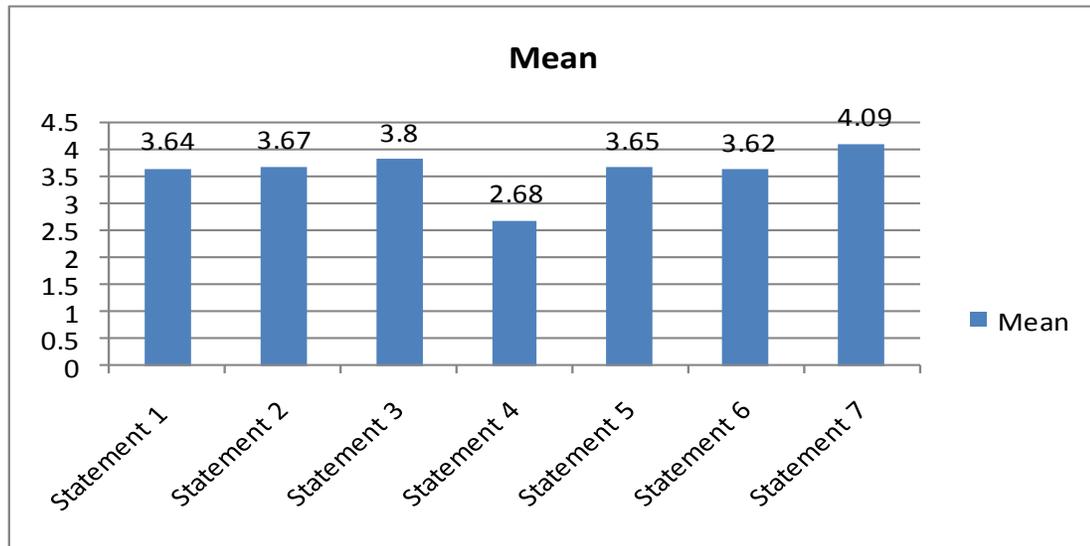
Community Partnership Related Task of the school principal encompasses all those responsibilities of the school principal in managing a positive relation with the members of the immediate school community, the parents, the guardians, community members etc and fostering a positive partnership towards school development. The Community Partnership Related Task includes 7 statements describing the responsibility of the school principal. Table-24 below shows items as contained under the category of Training and Development Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-24**  
**Descriptive Statistics and t value for Community Partnership Related Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Engage community representatives towards effective management of school.	100	3.64	1.18	0.12	5.44
2. Establish effective opportunity for dialogue with community to foster school's mission	100	3.67	1.22	0.12	5.52
3. Mobilize community's resources towards the benefit of the school.	100	3.80	1.13	0.11	7.09
4. Engage learners with the community and orient them towards social responsibility.	100	2.68	1.30	0.13	-2.46
5. Promote community participation in the school's programs and development activities	100	3.65	1.27	0.13	5.10
6. Identify community needs that can be catered for by the school and organize the school to help meet those needs.	100	3.62	1.29	0.13	4.79
7. Establish and maintain good public relations with parents and the community.	100	4.09	0.94	0.09	11.55

Graph-17 provides a graphical representation of the mean scores of responses to each statement under the category of School Community Partnership Related Task of school principals.

**Graph-17 Mean Scores of Responses to each Statement under the Category of School Community Partnership Related Tasks of School Principals**



From the above analysis the researcher could identify those activities defining the Community Partnership Related Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Community Partnership Related Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Establish and maintain good public relations with parents and the community” referred to the responsibilities of the school principal in ensuring effective public relation. A mean score of 4.09 with a standard deviation of 0.94 indicated a strong

felt need for professional development. Mobilizing community resources towards school development is expressed as another area where there is a string felt need for professional development. The same is evident from the responses to the statement “Mobilize community’s resources towards the benefit of the school” which recorded a mean score of 3.80 with a standard deviation of 1.13.

Establishing meaningful dialogue with the community is another area with a felt need for professional development as evident from the responses to the statement “Establish effective opportunity for dialogue with community to foster school’s mission” which recorded a mean score of 3.67 with a standard deviation of 1.22. Promoting community participation is identified as the next area with a need for professional development as evident from the responses to the statement “Promote community participation in the school’s programs and development activities” which recorded a mean score of 3.65 with a standard deviation of 1.27.

The statement “Engage community representatives towards effective management of school” referred to the responsibilities of the school principal in ensuring participation of the immediate school community towards better management of the school. The responses with mean score of 3.64 and a standard deviation of 1.18 indicated a felt need for professional development. The next statement “Identify community needs that can be catered for by the school and organize the school to help meet those needs” referred to the responsibilities of the school principal and the school towards the community and to look for ways by which the school can contribute towards the same. A mean score of 3.62 with a standard deviation of 1.29 indicated the need for professional development in this context too.

#### 4.5 Financial and Material Management Tasks of School Principals

The Financial and Material Management Tasks of School Principals included Financial Planning Tasks, Financial Statement Related Task, Accounting and Audit Related Task, Maintenance Task and Material management Tasks. The results obtained upon analyzing the data with SPSS are tabulated in Table-25 below.

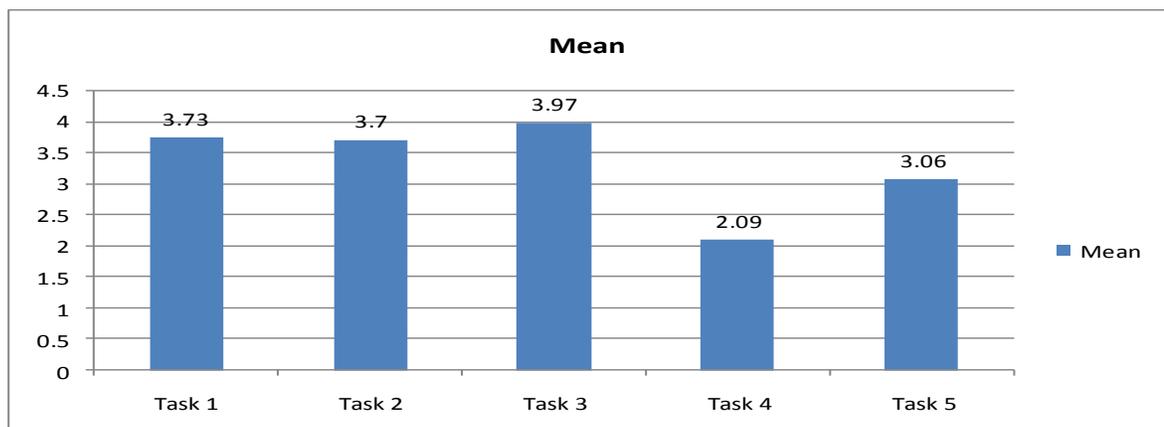
**Table-25**

**Descriptive Statistics and t value for Financial and Material Management Task of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Financial Planning Task	100	3.73	0.58	0.06	12.68
2. Financial Statements related Task	100	3.70	0.65	0.07	10.73
3. Accounting and Audit related Task	100	3.97	0.30	0.03	32.74
4. Maintenance Task	100	2.09	0.68	0.07	-13.48
5. Materials Management Task	100	3.06	0.61	0.06	0.98

A graphical representation of the mean scores of responses to each task responsibility areas under the category of Financial and Material Management Tasks of school principals is made in Graph-18 below.

**Graph-18 Mean Scores of Responses to each Task Responsibility Areas under the Category of Financial and Material Management Tasks of School Principals**



Accounting and Audit Related Task with a mean score of 3.97 and a standard deviation of 0.30 is another area where the professional development needs of school principals are strongly felt. Financial Planning Tasks with a mean score of 3.73 and a standard deviation of 0.58 was opined by the respondents as an area where there is a strong need for professional development. Financial Statements Related Task with a mean score of 3.70 and a standard deviation of 0.65 is another area where professional development need for the school principal is felt. Material Management Task with a mean score of 3.06 and standard deviation of 0.61 is another area where professional development need among school principal is felt and in context of Maintenance Task which referred to the maintenance of records related to finance function as well as cash management recorded a mean score of 2.09 with a standard deviation of 0.68, indicating a marginal need for professional development.

In the following section a detailed account is provided for each item under the sub classes of Financial and Material Management Tasks of School Principals.

#### **4.5.1 Financial Planning and Budgeting Tasks of School Principals**

Financial Planning and Budgeting Task of the school principal referred to responsibilities associated with preparation of the school's financial plan and budgeting the income and expenditure of the school in the coming academic year as per the requirement of the school development plan. Financial Planning and Budgeting Task includes 3 statements describing the responsibility of the school principal. Table-26 below shows items as contained under the category of Financial Planning and Budgeting Tasks along with their

respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-26**  
**Descriptive Statistics and t value for Financial Planning and Budgeting Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Secure departmental budget as per the requirement of the respective department's annual plan.	100	4.31	0.76	0.08	17.21
2. Prepare an overall school budget in accordance with the annual school plan.	100	4.23	0.75	0.08	16.40
3. Communicate with concerned authority about the annual school budget.	100	2.65	1.26	0.13	-2.78

Graph-19 provides a graphical representation of the mean scores of responses to each statement under the category of Financial Planning and Budgeting Task of the school principals.

**Graph-19 Mean Scores of Responses to each Statement under the Category of Financial Planning and Budgeting Tasks of the School Principals**



From the above analysis the researcher could identify those activities defining the Financial Planning and Budgeting Related Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Financial Planning and Budgeting Related Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Secure departmental budget as per the requirement of the respective department’s annual plan” referred to the responsibility of the school principal in securing various departmental budgets as per their respective departmental plan. A mean score of 4.31 with a standard deviation of 0.76 indicated a strong felt need for professional development. Preparation of the overall school budget was another area where the respondents expressed a strong need for professional development. The same is evident from the responses to the statement “Prepare an overall school budget in accordance with the annual school plan” which recorded a mean score of 4.23 was recorded with a standard deviation of 0.75.

#### **4.5.2 Financing School Development Tasks of School Principals**

Financing School Development Task of the school principal referred to the responsibilities of the school principal to secure sufficient funds for the development of the school as per the requirements of the school development plan. Financing School Development Task includes 3 statements describing the responsibility of the school principal. Table-27 below shows items as contained under the category of Financing School Development Tasks along with their respective descriptive statistics of mean,

standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

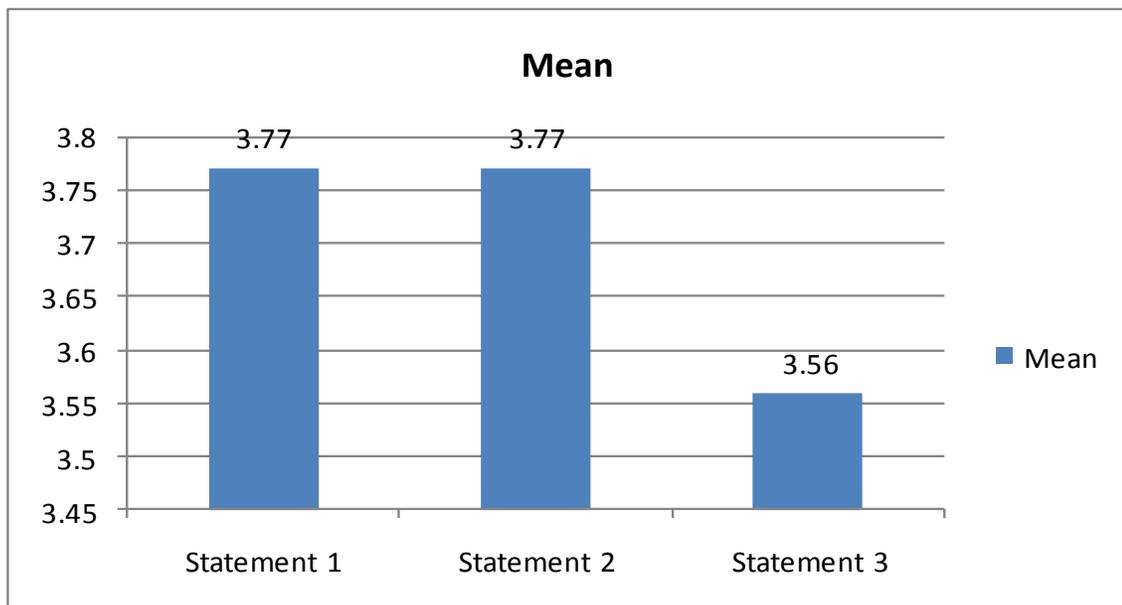
**Table-26**

**Descriptive Statistics and t value for Financing School Development Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Prepare detailed project report for projects envisaged as per the annual school plan.	100	3.77	1.14	0.11	6.78
2. Secure funds for school development from concerned authorities.	100	3.77	1.15	0.11	6.73
3. Raise funds for the school by involving community and alumni.	100	3.56	1.27	0.13	4.40

Graph-20 provides a graphical representation of the mean scores of responses to each statement under the category of Financing School Development Task of the school principals.

**Graph-20 Mean Scores of Responses to each Statement under the Category of Financing School Development Tasks of the School Principals**



From the above analysis the researcher could identify those activities defining the Financing School Development Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Financing School Development Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

Preparation of detailed project report was identified an area for professional development on the basis of the responses to the statement “Prepare detailed project report for projects envisaged as per the annual school plan” which recorded a mean score of 3.77 with a standard deviation of 1.14. The next identified area for professional development was based on the responses to the statement “Secure funds for school development from concerned authorities” which reported a mean score of 3.77 with a standard deviation of 1.15 and referred to the responsibility of the school principal to secure fund flow as per the provisions laid down by RMSA under various development heads by adhering to the requirements of RMSA. Fund raising for school development is another area identified with a strong need for professional development based on the responses to the statement “Raise funds for the school by involving community and alumni” which reported a mean score of 3.56 with a standard deviation of 1.27.

#### **4.5.3 Accounting and Audit Related Tasks of School Principals**

Accounting and Audit Related Task of the school principal referred to the responsibilities of the school principal to maintain proper book keeping records and produce the same as and when required for audit. Accounting and Audit Related Task includes 6 statements describing the responsibility of the school principal. Table-28 below shows items as

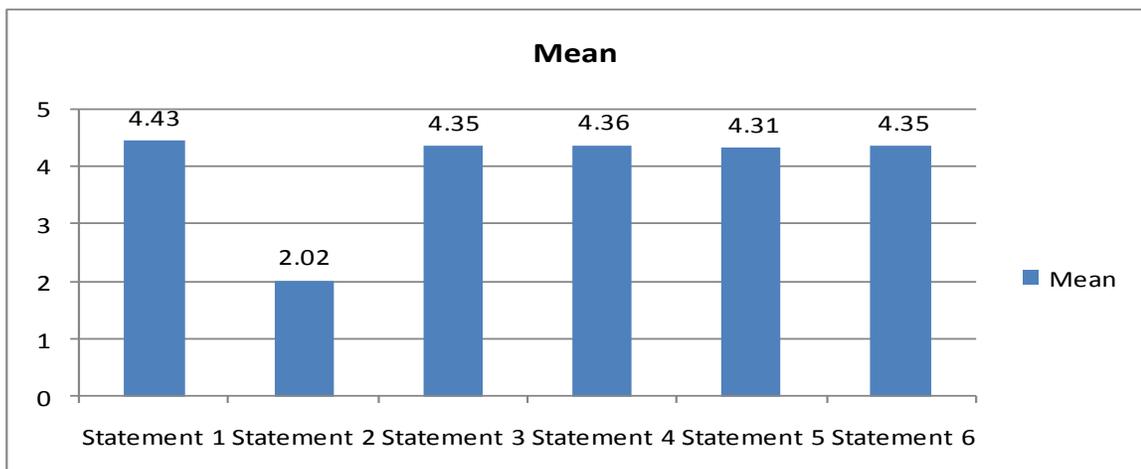
contained under the category of Accounting and Audit Related Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-28**  
**Descriptive Statistics and t value for Accounting and Audit related Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Ensure proper maintenance of the book of accounts.	100	4.43	0.71	0.07	20.02
2. Maintain a school bank account.	100	2.02	1.05	0.11	-9.30
3. Reconcile the school bank account.	100	4.35	0.80	0.08	16.96
4. Initiate internal audits.	100	4.36	0.73	0.07	18.58
5. Prepare and present an annual financial report to the School Board and parents.	100	4.31	0.81	0.08	16.12
6. Present books and accounts for auditing by appropriate authority.	100	4.35	0.72	0.07	18.86

Graph-21 provides a graphical representation of the mean scores of responses to each statement under the category of Financing School Development Tasks of the school principals.

**Graph-21 Mean Scores of Responses to each Statement under the Category of Financing School Development Tasks of the School Principals**



From the above analysis the researcher could identify those activities defining the Accounting and Audit Related Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Accounting and Audit Related Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

Accounting, maintaining proper book of accounts and auditing are area with a strong felt need for professional development. The same is evident from the responses to the statement “Ensure proper maintenance of the book of accounts” which recorded a mean score of 4.43 with a standard deviation of 0.71 and “Initiate internal audits” which recorded a mean score of 4.36 with a standard deviation of 0.73. Also the need for professional development in context of facilitating external audits was evident from the responses to the statement “Present books and accounts for auditing by appropriate authority” with mean score of 4.35 with a standard deviation of 0.72.

Reconciliation of bank statements was another area identified or professional development on the basis of responses to the statement “Reconcile the school bank account” which recorded a mean score of 4.35 was recorded with a standard deviation of 0.80. The task of preparation of annual financial reports as expressed by the statement “Prepare and present an annual financial report to the School Board and Parents” was another area with a felt need for professional development as evident from the responses recording a mean score of 4.31 with a standard deviation of 0.81.

#### 4.5.4 Maintenance Tasks of School Principals

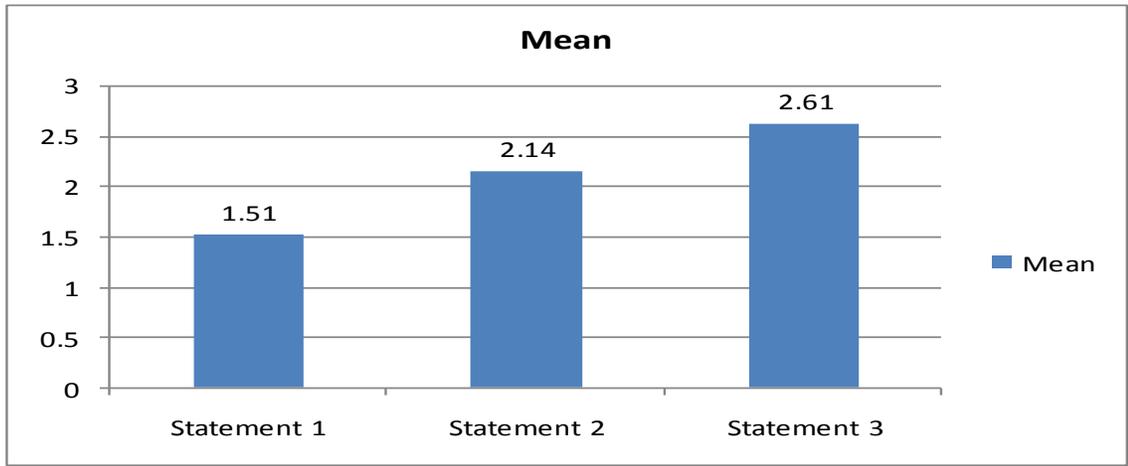
Maintenance Task of the school principal in context of financial management referred to the responsibilities of the school principal in matters related handling of petty cash, ensuring timely salary for staff as well as safeguarding staff benefits and entitlements by maintaining updated records. The Maintenance Task includes 3 statements describing the responsibility of the school principal. Table-29 below shows items as contained under the category of Maintenance Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-29**  
**Descriptive Statistics and t value for Maintenance Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Maintain petty cash.	100	1.51	0.72	0.07	-20.76
2. Ensure that staff salaries are paid on time.	100	2.14	0.80	0.08	-10.69
3. Safeguard staff benefits and entitlements.	100	2.61	1.30	0.13	-3.00

Graph-22 provides a graphical representation of the mean scores of responses to each statement under the category of Maintenance Tasks of the school principals.

**Graph-22 Mean Scores of Responses to each Statement under the Category of Maintenance Tasks of the School Principals**



From the above analysis the researcher identified marginal professional development needs taking note of the responses provided by the respondents.

#### **4.5.5 Material Management Tasks of School Principals**

Materials Management Task of the school principal referred to the responsibilities of the school principal to ensure availability of material support for proper functioning of the school. The Materials Management Task includes 6 statements describing the responsibility of the school principal. Table-30 below shows items as contained under the category of Materials Management Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

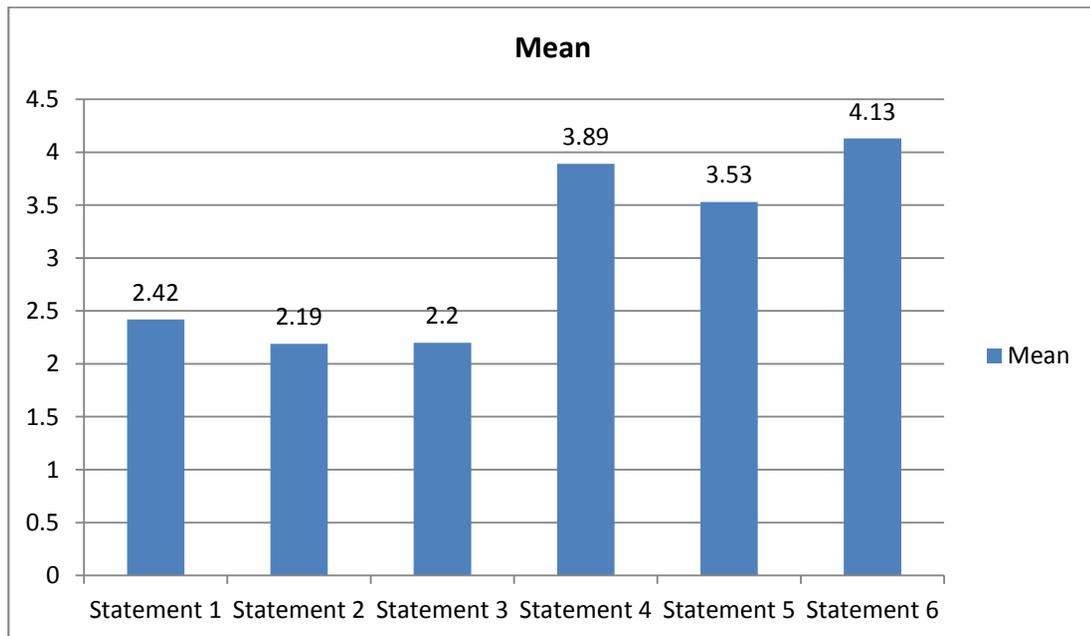
**Table-30**

**Descriptive Statistics and t value for Material Management Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Initiate process for timely requisitioning/ ordering of materials and supplies.	100	2.42	1.11	0.11	-5.22
2. Maintain inventories of supplies and materials.	100	2.19	1.03	0.10	-7.85
3. Ensure proper storage of materials and supplies.	100	2.20	1.04	0.10	-7.73
4. Maintain a permanent store register.	100	3.89	1.12	0.11	7.96
5. Maintain a consumable supplies register.	100	3.53	1.29	0.13	4.11
6. Conduct stock taking at least once a year.	100	4.13	1.01	0.10	11.17

Graph-23 provides a graphical representation of the mean scores of responses to each statement under the category of Materials Management Tasks of school principals.

**Graph-23 Mean Scores of Responses to each Statement under the Category of Materials Management Tasks of School Principals**



From the above analysis the researcher could identify those activities defining the Material Management Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Material Management Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Conduct stock taking at least once a year” referred to the responsibilities of the school principal to take stock of the inventories meant for the smooth functioning of the school. A mean score of 4.13 with a standard deviation of 1.01 indicated a strong need for professional development. Maintaining stock and supplies registers were other areas with a strong need for professional development. The same was evident from the responses to the statements “Maintain a permanent store register” which recorded a mean score of 3.89 with a standard deviation of 1.12 and “Maintain a consumable supplies register” which recorded a mean score of 3.53 with a standard deviation of 1.29.

#### **4.6 Management of Information Related Tasks of School Principals**

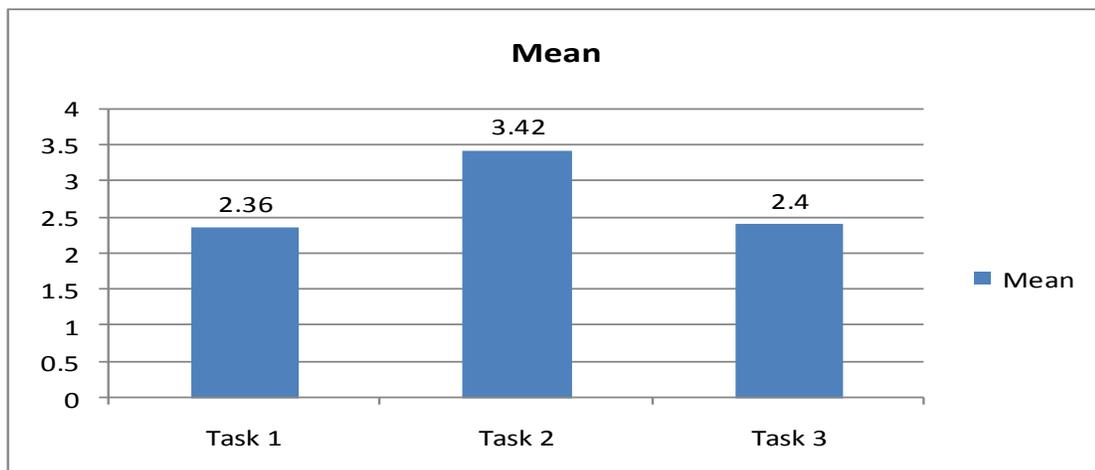
The Management of Information Related Task of School Principals included Record Keeping Task, Communication Related Task and Management Information Systems Related Tasks. Management of Information Related Task of the school principal recorded a mean score of 2.73 with a standard deviation of 0.34 indicating a marginal need for professional development. The results obtained upon analyzing the data with SPSS are tabulated in Table-31 below.

**Table-31**  
**Descriptive Statistics and t value for Management of Information Related Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	T Value
1. Record Keeping Task	100	2.36	0.58	0.06	-11.04
2. Communication related Task	100	3.42	0.58	0.06	7.21
3. Management Information Systems related Task	100	2.40	0.81	0.08	-7.41

A graphical representation of the mean scores of responses to each task responsibility areas under the category of Management of Information Related Tasks of school principals is made in Graph-24 below.

**Graph-24 Mean Scores of Responses to each Task Responsibility Areas under the Category of Management of Information Related Tasks of School Principals**



Communication Related Tasks with a mean score of 3.42 and a standard deviation of 0.58 was opined by the respondents as an area where there is a strong need for professional development. Whereas Management of Information Task with a mean score of 2.36 and standard deviation of 0.58, and Record Management Task with a mean score of 2.40 and a standard deviation of 0.81 indicated a marginal need for professional development. In

the following tables a detailed account is provided for each item under the sub classes of Management of Information Related Task.

#### 4.6.1 Maintenance of Records Tasks of School Principal

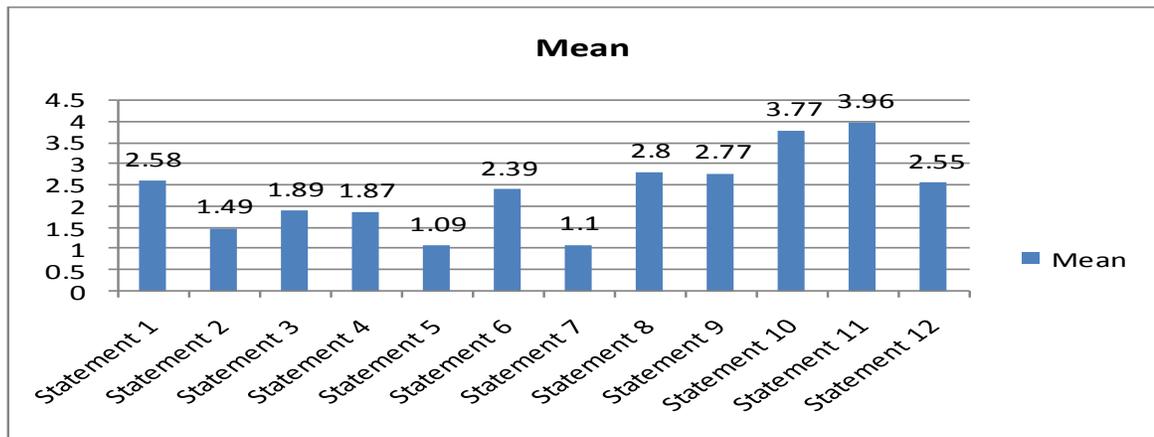
Maintenance of Records Task of the school principal referred to the responsibility of the school principal to keep updated records of various entities within the school context, keeping the same in safe custody and presenting the same when required. Maintenance of Records Task includes 12 statements describing the responsibility of the school principal. Table-32 below shows items as contained under the category of Maintenance of Records Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-32**  
**Descriptive Statistics and t value for Maintenance of Records Related Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	T Value
1. Maintain an effective filing system.	100	2.58	1.23	0.12	-3.41
2. Keep staff attendance register.	100	1.49	0.66	0.07	-22.92
3. Maintain an admission register.	100	1.89	0.99	0.10	-11.17
4. Maintain an updated enrolment list.	100	1.87	0.96	0.10	-11.77
5. Maintain class-wise attendance register for pupils.	100	1.09	0.32	0.03	-59.53
6. Maintain a visitor's book.	100	2.39	1.12	0.11	-5.46
7. Maintain a telephone register.	100	1.10	0.39	0.04	-48.81
8. Ensure that incoming mail is recorded.	100	2.80	1.31	0.13	-1.53
9. Keep accurate records of pupils' performance on internal and external assessment	100	2.77	1.31	0.13	-1.76
10. Maintain inventory records.	100	3.77	1.21	0.12	6.39
11. Keep minutes of School Board and staff meetings.	100	3.96	1.14	0.11	8.45
12. Ensure safety of school records.	100	2.55	1.28	0.13	-3.51

Graph-25 provides the graphical representation of the mean scores of responses to each statement under the category of Management of Information Related Tasks of the school principals.

**Graph-25 Mean Scores of Responses to each Statement under the Category of Management of Information Related Tasks of the School Principals**



From the above analysis the researcher could identify those activities defining the Maintenance of Records Related Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Maintenance of Records Related Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Keep minutes of School Board and staff meetings” referred to the responsibilities of the school principal to record proceedings of various meetings both formal and informal, keep minutes of such meetings. A mean score of 3.96 with a standard deviation of 1.14 indicated a strong need for professional development. Maintaining records of inventory as expressed in the statement “Maintain inventory

records” recorded a mean score of 3.77 with a standard deviation of 1.21 indicating a felt need for professional development.

#### 4.6.2 Communication Related Tasks of School Principals

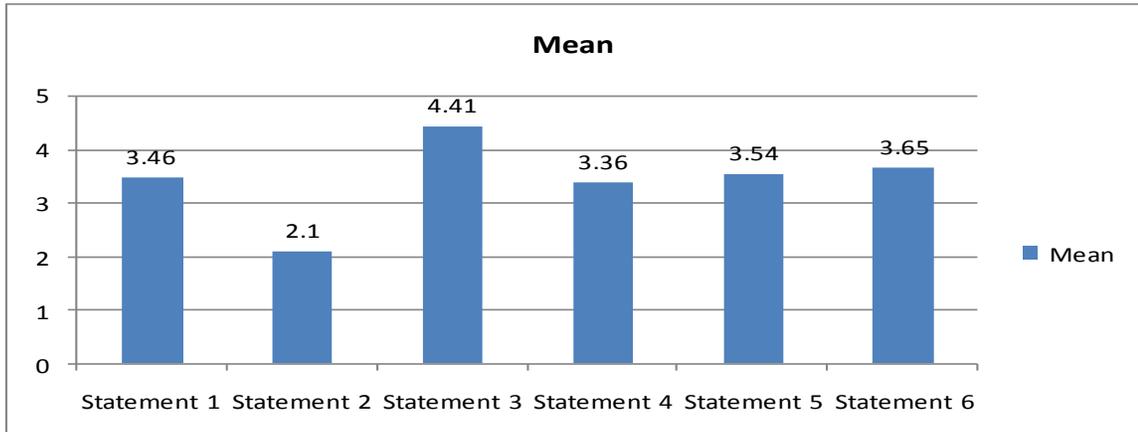
Communication Related Task of the school principal includes the responsibilities of the school principal to initiate periodic communication with various stakeholders of the school, the Directorate, Board, RMSA, the immediate community and the public. The Communication Related Task includes 6 statements describing the responsibility of the school principal. Table-33 below shows items as contained under the category of Communication Related Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-33**  
**Descriptive Statistics and t value for Communication Related Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Prepare official correspondence according to Government regulations.	100	3.46	1.53	0.15	3.00
2. Share Government circulars and official notices with concerned staff.	100	2.10	1.19	0.12	-7.54
3. Complete statistical formats as solicited by Directorate/ Boards.	100	4.41	0.71	0.07	19.80
4. Organize and conduct effective staff meetings.	100	3.36	1.30	0.13	2.77
5. Arrange proper platform for parents-teacher conferences from time to time	100	3.54	1.14	0.11	4.73
6. Establish procedures for communication so that attendance by a member of staff on in-service training courses and workshops provide benefits to other staff and the school as a whole.	100	3.65	1.46	0.15	4.46

Graph-26 provides the graphical representation of the mean scores of responses to each statement under the category of Communication Related Task of the school principals.

**Graph-26 Mean Scores of Responses to each Statement under the Category of Communication Related Task of the School Principals**



From the above analysis the researcher could identify those activities defining the Communication Related Tasks of the school principal that were opined by the respondents as important and wherein there is a strong need for professional development. The identified professional development needs under the category of Communication Related Tasks of the school principal are prioritized in accordance of their mean score and mentioned hereunder:

The statement “Complete statistical formats as solicited by Directorate/ Boards” referred to the responsibilities of the school principals to furnish data as solicited by the Directorate, Board and RMSA in a timely manner. A mean score of 4.41 with a standard deviation of 0.71 indicated a strong need for professional developments.

Developing a system of internal communication is another area in which there is a strong felt need for professional development. The same is evident from the responses to statement “Establish procedures for communication so that attendance by a member of

staff on in-service training courses and workshops provide benefits to other staff and the school as a whole” to which a mean score of 3.65 with a standard deviation of 1.46. Making arrangement for conducting parent teachers meeting as expressed by the statement “Arrange proper platform for parents-teacher conferences from time to time” reported a mean of 3.54 with a standard deviation of 1.14, was another area where the respondents have expressed a need for professional development.

“Prepare official correspondence according to Government regulations” referred to the responsibilities of the school principals to communicate with concerned authority as per the norms laid by such authorities in furnishing periodically updated information. The responses recorded a mean score of 3.46 with a standard deviation of 1.43 indicating a felt need for professional development. Conducting staff meetings is another area where the need for professional development is identified on the basis of the responses to the statement “Organize and conduct effective staff meetings” which recorded a mean score of 3.36 with a standard deviation of 1.30.

#### **4.6.3 Management Information Systems Related Tasks of School Principals**

Management Information Systems Related Task of the school principal referred to the responsibilities of the school principal to make use of present day management information systems in managing the school and cater to the requirement of SEMIS as solicited by RMSA. Management Information Systems Related Task includes 3 statements describing the responsibility of the school principal. Table-34 below shows items as contained under the category of Management Information Systems Related Tasks along with their respective descriptive statistics of mean, standard deviation and standard error of mean and the results of test statistics, t test as arrived at using SPSS.

**Table-34**  
**Descriptive Statistics and t value for Management Information Systems Related Tasks of School Principals**

Items	N	Mean	Std. Deviation	Std. Error Mean	t Value
1. Seek for implementation of Management Information System (MIS).	100	2.16	0.97	0.10	-8.65
2. Engage in use of MIS for appropriate information management.	100	2.78	1.26	0.13	-1.75
3. Integrate in-house information system with 'School Establishment Management Information System' (SEMIS)	100	2.26	0.99	0.10	-7.47

Graph-27 provides a graphical representation of the mean scores of responses to each statement under the category of Management Information System Related Tasks of the school principals.

**Graph-27 Mean Scores of Responses to each Statement under the Category of Management Information System Related Tasks of the School Principals**



From the above analysis the researcher identified marginal professional development needs taking note of the responses provided by the respondents.

During the first phase of the analysis, the researcher could identify the professional development needs of the school principals. The professional development needs so identified in terms of the school principal's task responsibility areas are enlisted in Table-35.

**Table-35 Task Responsibility Areas of the School Principals**

<b><u>I. General Management Tasks</u></b>	<b><u>II. Curriculum Management Tasks</u></b>	<b><u>III. Human Resource Management and Community Partnership Tasks</u></b>	<b><u>5. Motivation Related Tasks</u></b>	<b><u>3. Accounting and Audit Related Tasks</u></b>
<p><b>1. Managerial Tasks</b></p> <ul style="list-style-type: none"> <li>a. Promote School Vision</li> <li>b. Achieve School Mission</li> <li>c. Set School Objectives</li> <li>d. Prepare Annual School Plan</li> <li>e. Goal Setting</li> <li>f. Delegation of Authority</li> <li>g. Channels of Communication</li> <li>h. Direction</li> <li>i. Implement Decisions</li> <li>j. Monitor Progress</li> <li>h. Evaluate Attainment of Objectives</li> <li>i. Ensure Remedial Action</li> <li>j. Time Management</li> </ul> <p><b>2. School Governance Tasks</b></p> <ul style="list-style-type: none"> <li>a. Develop Policies</li> <li>b. Implement Govt. Policies</li> <li>c. Functioning of SMDC</li> <li>d. Learner Representative Council</li> <li>e. Form Alumni Association</li> </ul> <p><b>3. School Facilities Tasks</b></p> <ul style="list-style-type: none"> <li>a. Procure appropriate furniture and fixture</li> <li>b. Safeguard School Property</li> <li>c. Safeguard School Facilities</li> <li>d. Maintain Safety and Healthy Environment</li> </ul> <p><b>4. Other Administrative Tasks</b></p> <ul style="list-style-type: none"> <li>a. Professional Conduct</li> <li>b. RTE Act</li> <li>c. RTI Act</li> </ul>	<p><b>1. Management of Instruction Related Tasks</b></p> <ul style="list-style-type: none"> <li>a. Innovation in Teaching Learning</li> <li>b. Identify Problems in Learning</li> <li>c. Involve Parents</li> <li>d. Counsel and Guide Parents</li> <li>e. Assess School Effectiveness</li> <li>f. Observe Teachers in Classroom</li> <li>g. Evaluate Teachers</li> <li>h. Check Lesson Plans</li> <li>i. Help Teachers in Continuous Assessment</li> <li>j. Guide and Mentor Teachers</li> <li>k. Prepare Annual Academic Calendar</li> <li>l. Ensure Effective Use of Teaching Aids</li> </ul> <p><b>2. Learner Related Tasks</b></p> <ul style="list-style-type: none"> <li>a. Ensure Enrollment</li> <li>b. Guidance and Counseling</li> <li>c. Maintain Climate for High Expectation among Learners.</li> <li>d. Discipline Learners.</li> <li>e. Impart Behavioural Skills among Learners</li> <li>f. Promote Effective Learning</li> <li>g. Ensure Safety and Security</li> <li>h. Control Absenteeism</li> </ul>	<p><b>1. Manpower Planning Tasks</b></p> <ul style="list-style-type: none"> <li>a. Initiate Communication with Authorities to Secure Manpower Position.</li> <li>b. Supply Forecasting</li> <li>c. Demand Forecasting</li> <li>d. Prepare List of Anticipated Vacancies</li> <li>e. Perform Gap Analysis and Prepare List of Manpower Required</li> </ul> <p><b>2. Recruitment and Selection Tasks</b></p> <ul style="list-style-type: none"> <li>a. Obtain/ Recruit Temporary Staff</li> <li>b. Initiate Advertisement of Vacancies</li> <li>c. Conducting Interviews</li> </ul> <p><b>3. Training and Development Tasks</b></p> <ul style="list-style-type: none"> <li>a. Counsel and Guide Teachers</li> <li>b. Identify Training Needs</li> <li>c. Create Awareness and Orient Staff Towards New Policies</li> <li>d. Recommend Teachers Training</li> <li>e. Induct &amp; Orient New Teachers</li> </ul> <p><b>4. Performance Appraisal Tasks</b></p> <ul style="list-style-type: none"> <li>a. Conduct Performance Appraisal</li> <li>b. Define Roles</li> <li>c. Establish Standards</li> <li>d. Plan Staff Development</li> <li>e. Prepare Job Description</li> <li>f. Evaluate Teachers Performance</li> <li>g. Communicate Performance</li> <li>h. Train on the Job</li> <li>i. Encourage Professional Development</li> </ul>	<ul style="list-style-type: none"> <li>a. Maintain High Morale</li> <li>b. Positive Organizational Climate</li> <li>c. Motivate Teachers</li> <li>d. Establish Good Working Conditions</li> </ul> <p><b>6. Conflict Management and Grievance Redressal Tasks</b></p> <ul style="list-style-type: none"> <li>a. Deal with Staff Indiscipline</li> <li>b. Resolve Conflicts</li> </ul> <p><b>7. Community Participation Related Tasks</b></p> <ul style="list-style-type: none"> <li>a. Establish Good Public Relation</li> <li>b. Mobilize Community Resources</li> <li>c. Establish Effective Dialogue with Community</li> <li>d. Promote Community Participation</li> <li>e. Engage Community Members</li> <li>f. Identify Community Needs and Engage in School's Extension Activity.</li> </ul> <p><b><u>IV. Financial and Material Management Tasks</u></b></p> <p><b>1. Financial Planning Tasks</b></p> <ul style="list-style-type: none"> <li>a. Secure Departmental Budget</li> <li>b. Prepare Overall School Budget</li> </ul> <p><b>2. Financial Statements Related Tasks</b></p> <ul style="list-style-type: none"> <li>a. Prepare DPR</li> <li>b. Secure Funds</li> <li>c. Raise Funds</li> </ul>	<ul style="list-style-type: none"> <li>a. Maintaining Book of Accounts</li> <li>b. Internal Audit</li> <li>c. Facilitate External Audit</li> <li>d. Reconciliation of Bank Statement</li> <li>e. Prepare Annual Financial reports</li> </ul> <p><b>4. Materials Management Tasks</b></p> <ul style="list-style-type: none"> <li>a. Periodic Stock Taking</li> <li>b. Maintain Stores Register</li> <li>c. Maintain Consumable Supplies register</li> </ul> <p><b><u>V. Management of Information Related Tasks</u></b></p> <p><b>1. Record Keeping Tasks</b></p> <ul style="list-style-type: none"> <li>a. Keeping Minutes of Meetings</li> <li>b. Maintaining Inventory Records</li> </ul> <p><b>2. Communication Related Tasks</b></p> <ul style="list-style-type: none"> <li>a. Complete Statistical Formats as Solicited</li> <li>b. Establish Effective Internal Communication among Staff</li> <li>c. Arrange Parent Teachers Meet</li> <li>d. Prepare Official Correspondence as per required norms.</li> </ul>

The above mentioned identified professional development needs of the school principal helped the researcher to move into the next phase of this research i.e. development of the content for the e-Learning program. The next section elaborates upon the development of the e-learning program.

#### **4.7 Development of e-Learning Program**

The development of e-Learning Program was based upon the results derived from the analysis of the Principal's Professional Development Need Assessment Questionnaire (PPDNAQ). The areas so shortlisted was organized in five broad themes namely the General Management Tasks, Curriculum Management Tasks, Human Resource Management and Community Partnership Related Tasks, Financial and Material management Tasks, and Management of Information Related Tasks of the school Principals. In the previous section, the sub areas were identified and accordingly provided in Table-34. The development of the e-Learning program was done in different phases i.e. content development, validation of the content by experts, digitizing the content and making the same available in CD-ROM (the e-Learning program), Try out of the e-Learning program and implementing the e-Learning program to see its effectiveness. Each of these phases is elaborated in the following section.

##### **4.7.1 Content Development**

Curriculum is the foundation of the teaching-learning process whether it is a school, college, university or training organization. Content development for the e-Learning program too is no exception. The researcher referred to several such contents designed

for the professional development of school heads and educational administrators. The researcher referred to various models of curriculum development namely the Tyler Model and the Taba Model and formed a base for the content development of the e-Learning program.

Ralph Tyler (1949) in his classic book *Basic Principles of Curriculum and Instruction* highlighted the following 4 questions in the context of curriculum development;

1. What educational *purposes* should the school seek to attain?
2. What *educational experiences* can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively *organized*?
4. How can we determine whether these purposes are being *attained*?

The researcher took these four questions as the guiding principles for developing the content for the e-Learning program. The essence of which represents the four sequence of (1) identifying purpose of objectives, (2) selecting the means in terms of learning experiences for the attainment or achievement of these objectives, (3) organizing these educational or teaching-learning experiences, and (4) evaluating the outcome.

Hilda Taba (1962) in her book *Curriculum Development: Theory and Practices* argued that there was a definite order in creating a curriculum. She believed that teachers, who teach the curriculum, should participate in developing it which led to the model being called the *grass-roots approach*. She noted 7 steps to her grass-roots model:

1. Diagnosis of Needs
2. Formulation of Objectives

3. Selection of Contents
4. Organization of Contents
5. Selection of Learning Objectives
6. Organization of Learning Objectives and
7. Evaluation.

Further, the researcher also followed the principles of Adult Learning as the principals of the schools are essentially adult learners. Adequate emphasis was given on the adult learning (Andragogy) principles while developing the content for the e-Learning program. Malcom Knowles (1982) popularized the use of andragogy for English language reader and according to him andragogy was premised on at least four crucial assumptions about the characteristics of adult learners, a fifth one was added later (Smith, 2002). These assumptions were:

- a. *Self-Concept: As a person Matures, self concept moves from one of being dependent personality toward one being a self-directed human being.*
- b. *Experience: As a person matures he accumulates a growing reservoir of experience that becomes an increasing resource for learning.*
- c. *Readiness to Learn: As a person matures his readiness to learn becomes oriented increasingly to the developmental tasks of his social roles.*
- d. *Orientation to Learning: As a person matures his time perspective changes from one of postponed application of knowledge to immediacy of application, and accordingly his orientation toward learning shifts from one of subject centeredness to one of problem centeredness, and*

- e. *Motivation: As a person matures the motivation to learn is internal.*

The following principles of adult learning were considered and contextualized while developing e-Learning program:

- a. **Principals are internally motivated and self-directed:** necessary care was taken to set up a graded learning program that moved from a more to less structure, from less to more responsibility, from more to less interaction and supervision at an appropriate pace. Content also was provided with adequate reference and external web links to open educational resources to promote inquiry and allow learners to discover knowledge without depending much on the researcher.
- b. **Principals bring life experiences and knowledge to learning experiences:** Necessary care was taken to include activities that provided the learners to reflect upon their own experiences and apply it to the new learning experiences.
- c. **Principals are goal oriented:** Learning experiences were presented in a way that linked directly to the learner's field of work. Questions to motivate reflection, inquiry and further research were included. Task orientation of learning activities was duly considered in order to make the learner gauge the importance of the same.
- d. **Principals are relevancy oriented:** Learning objectives were included explain the purpose of the content. How the application of the same can help them in their roles and a school principal.
- e. **Principals are practical:** Scope for interaction among peers to encourage meaningful discussions on the learning experiences were provided.

- f. Principals as learners like to be respected:** The same was taken into account while and appropriate language was used in developing the content. While providing instructions it was clearly indicated that the researcher was available and accessible to the learner's as and when situation demanded.

The researcher referred to various published modules in this regard which were earlier designed and developed noteworthy among which were the modules developed by Commonwealth Secretariat (1993) titled the *Better School, Resource Materials for School Heads* and accordingly decided upon the framework. Setting learning objectives as drawn from the study in phase I and based upon a clear insight as regards to what the principals need to be equipped with (knowledge-wise) such that they gain sufficient skills for enhancing their professional competencies. In developing the content of the e-Learning program the following steps were followed:

1. Selection and Organization of Content and Learning Experiences. The researcher used self explanatory contents coupled with relevant learning experiences. Citing numerous examples in the school context, the content enrichment was applied wherever deemed fit and a serious effort was made to establish a correlation in the local context of managerial and administrative issues, problems and the solutions therein. In order to make the self learning more meaningful, self evaluative assignments were placed at at the end of each module.
2. Evaluation and Feedback. Expert's opinion was sought periodically and regular discussions were had with few senior Principals, as well as academic officers of SCERT and RMSA to evaluate the content so prepared. In order to contextualize the

content examples were drawn based upon such discussions and opinions from experts.

The content so developed for the e-Learning program included five modules, and each module had a number of units ranging from three to eight. The list of modules so developed along with its units is given below:

### **Introductory Module**

#### **Module-1: General Management Practices**

Unit-1: Understanding Educational Management

Unit-2: About RMSA and RTE (Act) 2009

Unit-3: School Vision, Mission, Values and Objectives

Unit-4: Change Management

Unit-5: Time Management

Unit-6: School Development Plan – as per RMSA

#### **Module-2: Curriculum Management**

Unit-1: Establishing the Curriculum

Unit-2: Time-Tabling

Unit-3: Organizing and Maintaining Resources to Support Curriculum

Unit-4: Assessment

#### **Module-3: Human Resource Management**

Unit-1: Recruitment and Selection of Staff

Unit-2: Training and Development of Staff

Unit-3: Organization Climate

Unit-4: Motivation

Unit-5: Performance Appraisal

Unit-6: Maintaining Records

Unit-7: Conflict Management and Negotiation Skills

Unit-8: Community Partnership

#### **Module-4: Financial and Material Management**

Unit-1: Understanding Financial Statements

Unit-2: School Budgeting

Unit-3: Basic Framework and Mechanism of Financial Management

Unit-4: Understanding Banking

Unit-5: Materials Management

Unit-6: Auditing of School Accounts Book

#### **Module-5: Management of Information and Communication**

Unit-1: Information Management

Unit-2: Management of Records

Unit-3: Communication Related Tasks

The complete module is enclosed in Appendix VII

Each module contained Introduction, Learning Outcomes, Activities, Discussions and self assessment exercises. Activities were included to provide the learners with examples of real situations such that they can relate to their past experience and accordingly express their views which were often asked in such activities.

#### **4.7.2 Validation of Content**

The content thus prepared for development of self learning modules were distributed to a group of Retired Principals, Academic officers of SEBA, SCERT and consultants of RMSA. The researcher engaged with the experts in discussions and conducted unstructured interviews, based upon which specific inputs in context of the content, the activities provided and the available learning resources with RMSA. Their valuable comments were drawn into making the overall content of the e-Learning program more meaningful.

#### **4.7.3 Development of the e-Learning Program**

After validation of the contents the researcher with the help of technical experts (software developers), digitized the content of the training modules so prepared into the e-Learning program. It was decided by the researcher to go for development of the software for Learning Management System leading to the development of the e-Learning program; with the help of software developer, instead of going for already available e-Learning platforms like MOODLE, Articulate, Adobe etc, primarily due to the following reasons:

1. The readily available learning management systems needed a lot of customization in order to match the design requirement of the researcher, and incorporate due flexibility of modifying the same.
2. The implementation of the e-Learning program being planned in an offline mode, required the overall program to be included in one CD-ROM, which, in context of available platforms were not possible, as the same needed to be installed in systems.
3. Convenience of the researcher to engage with a software developer and get the learning management system developed and added with capabilities as per perceived needs.

Hence, during the process of the development of the e-Learning program, the researcher was in constant touch with the software developer, as it was necessary to acquaint the developer with the requirements of the researcher constantly.

The researcher engaged with the software developer through constant discussions which enabled both the researcher and the software developer to understand the techno-pedagogic needs in terms of developing the e-Learning program. The discussions revolved around a number of aspects, and the same is discussed step-wise in the following paragraph:

1. Detailing the developer in terms of
  - a. The layout of the page
  - b. The expected design in terms of navigation
  - c. Explaining the internal links between contents
  - d. Providing the external links to open educational resources

- e. Links to social networking sites and blogs
  - f. Providing features for establishing immediate contact between the user and researcher in terms of help and support, with further provisions for establishing smart query support and frequently asked questions.
  - g. Explaining the sequence in which the content appears
2. Provided additional information as solicited by the developer in terms of:
    - a. Content for Home Page, About us, Contacts and Reference links to be hyperlinked.
    - b. Explaining the positioning of respective reference hyperlinks with respect to each unit/ module.
  3. Continuous testing and developing
    - a. Each development exercise by the developer was subjected to testing (trial-run) by the researcher, in order to see whether the desired results are obtained.
    - b. Such testing followed by remarks from the researcher about necessary changes, if any, and accordingly the whole process carried on in an iterative way.
  4. Once the whole content was added to the e-Learning program, the overall functioning of the program in terms of its user-friendliness, navigation, access to the hyperlinks, the clarity of content display etc were explored by the researcher and desired changes were incorporated by the developer.

The e-Learning program so developed, was then tried out on a group of 10 school principals for a period of 45 days, during which the researcher closely observed the participants and also engaged in discussions. A feedback form was developed by the

researcher to study the effectiveness of the e-Learning program. And by administering the feedback form to collect the opinions from the participating principals during the try out period, the researcher got valuable inputs to modify and further develop the feedback form to be used finally for evaluating the effectiveness of the e-Learning program.

The researcher also derived understanding about the experiences of the participants by conducting unstructured interviews depending upon the queries of the participating principals during the trial run. This helped the researcher to extract the minutest information about their experiences of using the e-Learning program.

The observations made by the participating principals mainly in terms of the challenges they faced while using the e-Learning program like:

1. Understanding using the program in terms of navigation – this was addressed by the researcher by including “how to use” section within the Home Page.
2. Issues related to connectivity – The researcher downloaded important references in the form of power points and accordingly included the same in a ppt-section. However, you-tube links to the reference videos could not be downloaded and fed into the e-Learning program as there was limitation of memory space.

The complete e-Learning program is enclosed in Appendix VIII

#### **4.7.4 Effectiveness of the e-Learning Program**

This is the final phase of the study and it included implementation of the e-Learning program and studying the effectiveness of the e-Learning program so developed by the researcher. The sample size during this phase of the study was 35 and it included serving

school principals drawn from various areas of Assam. This group of principals did not include members from the sample taken earlier.

#### **4.7.4.1 Implementation of the e-Learning Program**

The implementation of the e-Learning program involved the following sequence of activities;

- a. Orientation of the participating school principal by the researcher on the e-Learning program was done by visiting the office of the principal at an appointed date.

Orientation included:

- i. Explaining about the e-Learning program and how the same aspires to cater for the professional development needs of the school principal.
- ii. A brief about how the program was developed and the goals it seeks to achieve.
- iii. Explanation on what the e-Learning program included and how the same can be assessed.
- iv. Demonstration of working on the e-Learning program in terms of its structure and layout, assessing the content, the hyperlinks (internal and external) to reference materials in the form of audio, video and other relevant open educational resources. And assessing the external links would require internet connectivity.
- v. Requesting the participant to assess the e-Learning program and observing the same such that necessary instructions can be provided. In doing so, the importance of each section, the activities and the follow up discussions were explained.

- vi. Self evaluation.
  - vii. Availability of the researcher to offer help as and when required either by phone or email or personal visits as the situation warranted.
  - viii. Explaining the participants about a flexible time frame of 60days to explore and be involved with the e-Learning and complete the same.
  - ix. Explaining the participants about importance of completing the e-Learning program to the research and requesting them to accordingly chalk out a routine as per their convenience.
  - x. Encouraged the participants to note their experiences during the use of the e-Learning program and problems encountered, if any, so that they are in a position to inform the researcher about the same in a timely manner.
  - xi. Making the participants aware about the researcher's intent to know their overall feedback after the completion of the e-Learning, and the importance of the same for the research.
  - xii. Thanking the participant for expressing his/her willingness to be a part of the implementation process.
- b. The researcher took note of the observations made during each orientation with a purpose of rectifying the same while orienting the next participant.
  - c. Queries about doubts/ difficulties, as and when encountered by the participants and expressed to the researcher over phone, were taken care of and accordingly the researcher took note of the same for record.

- d. After the completion of a week's period on the e-Learning program by the participants, they were given information about other participants with a view to promote the establishment of a network among principals.
- e. Explaining them about the benefits peer-group learning in developing new perspectives by sharing their respective experiences of working on the e-Learning program.
- f. Explaining about the importance of Facebook, Twitter, LinkedIn and other social networking sites, where they can join professional communities and share experiences with their counterparts worldwide.
- g. The researcher also tried to explore about their progress by asking relevant questions related to a specific portion/ content whenever they contacted with some queries.
- h. The researcher called the participants occasionally to have an idea about their progress and finally after completion of 60 days they were administered the feedback form to which their opinion about the e-Learning program was solicited, the details of which is presented in the next section.

#### **4.7.4.2 Effectiveness of the e-Learning Program – Analysis and Interpretation of the Feedback Form**

In order to study the effectiveness of the e-Learning program the researcher distributed feedback forms among the participating principals. The purpose of this feedback form was to gather the opinions of the participating principals about their experience in using the e-Learning program.

In order to evaluate the effectiveness of the e-Learning program, the researcher has anchored the responses of the participating principals in terms of:

1. User-Friendliness
2. Clarity in Content Delivery
3. Relevant Learning Experience
4. Self-Motivating
5. Requirements of individual learner type i.e. self-paced learning
6. Impact on Professional Learning and
7. Challenge faced while learning.

Also the researcher took into consideration the various indicators of e-Learning effectiveness namely: learner's educational background, computing skills, learner type, learning style, obstacles faced in e-Learning, attention, self-efficacy, motivation, attitude and interest, learning outcomes, preference of e-Learning logistics etc were taken into consideration to derive meaningful conclusion.

Further the researcher also minutely noted the observations made during visits made to attend to the participating principal's queries and/ or the discussions had with them during their telephonic conversations.

### **I. General Information of the Sample Principals from the Feedback Form**

#### **1. Educational Profile:**

Table 36 below shows the educational qualification of the sample principals.

**Table-36**  
**Educational Qualifications of the Sample Principals**

Education	UG		PG		Total
B.Ed.	Y	N	Y	N	
Distribution of Sample	29 (82.6%)	0	06 (17.4%)	0	35

82.6% of the respondents were having a University graduate degree and 17.4% were post graduates. All the respondents possessed the degree of B.Ed.

## 2. Work Experiences:

Table 37 below shows the experience of the sample principals both teaching and as principals of school.

**Table-37**  
**Work Experiences of the Sample Principals**

Teaching	10-15 years		>15years		Total
As Principal	0-5years	>5years	0-5years	>5years	
Distribution of Sample	23	05	01	06	35
	(65.7%)	(14.3%)	(2.9%)	(17.1%)	(100%)

65.7% of the respondents were having a teaching experience of 10-15 years and their experience as school principals were in between 0-5years.

## 3. Working Knowledge on Computers and previous participation in Professional development program:

All respondents responded having working knowledge on computers and had experience of participating in professional development programs.

## II. Participation and Involvement of the School Principals in e-Learning:

### 4. Completing e-Learning:

All the participants responded that they have participated actively and completed in the e-Learning program.

### 5. Duration taken to complete the e-Learning:

23 out of 35 participants (65.7%) responded about completing the e-Learning program within the stipulated period of 60 days. 11 participants (31.4%) took around 61-65 days and one participant required 70 days to complete the e-Learning program.

## 6. Time spent on e-Learning:

Majority of the respondents, 62.8% opined that they sat regularly for 2hours everyday on the e-Learning. 11.5% of the respondents opined that they engaged themselves for 2-3 hours a day, but in split sessions of 45mins-60mins duration spread across the day. 25.7% of the respondents opined about assessing e-Learning for 1 hour a day, with longer sessions of 3-4hours during Sundays or holidays.

## III. Responses of the School Principals on the Effectiveness of the e-Learning Program

In order to evaluate the effectiveness of the e-Learning program, the researcher anchored the responses of the school principals in terms of certain indicators. Table-38 below shows the responses of the school principals on the Effectiveness of the e-Learning program:

**Table-38**  
**Responses of School Principals on the Effectiveness of the e-Learning program**

S. No	Component of the e-Learning program (Item No.)	Response		
		Yes	No	Open ended Remark
1.	User-Friendliness (7)	88.6%	11.4%	Yes
2.	Clarity in Content Delivery (8)	77.14%	22.86%	Yes
3.	Relevant Learning Experiences (9)	60%	40%	Yes
4.	Self-Motivating (10)	82.6%	11.4%	Yes
5.	Requirements of Individual Learner Types – Self Paced learning (11)	88.6%	11.4%	Yes
6.	Impact on Professional Learning (12)	-	-	Yes
7.	Challenge Faced while Learning in terms of following <b>Obstacles and Barriers:</b> (13)	11.4%	88.6%	Yes
	Computer Skills (13-a)			
a.	Learning Style (13-b)	-	-	Yes
b.	Content Suitability (13-c)	40%	60%	Yes
c.	Computer Access (13-d)	-	100%	Yes
d.	Internet Access (13-e)	100%	-	Yes
e.	Instructional Design (13-f)	60%	40%	Yes
f.	Personal – time and professional engagements (13-g)	-	-	Yes

Note: The researcher quantified the opinions in terms of Yes and No, followed by discussions on the opinions of the respondents which were anchored to the above mentioned indicators.

A detailed discussion based upon the above analysis and the analysis made on the opinions of the respondents about the effectiveness of the e-Learning program as anchored to the above mentioned indicators, is presented below:

**7. User-Friendliness of the e-Learning program:**

Majority of the respondents, 88.6% opined that they found it easy to explore into the contents and access the same after 3-4 days of working on the e-Learning program whereas other 11.4% expressed difficulties in accessing who needed guidance at regular interval by the researcher. This the researcher interprets as the learning time required by an average user to understand the functionalities of e-Learning.

Further it was opined by majority of the respondents that the availability of audio for each sections of a unit in the modules made it easy for them to go through the contents.

**8. Clarity of Content and Delivery:**

Majority of the respondents, 77.14% opined that the content covered necessary areas that were expected by them and that they found the same resourceful and informative. 17.14% expressed the need for detailed instructions like the “how to use” section provided in the introductory module, for each module. 5.72% expressed difficulties in understanding the content.

**9. Relevant Learning Experiences:**

60% of the respondents opined about the activities and discussions to be highly relevant and that they could connect the same to their own experiences. 40% of the respondents expressed the need for more examples especially in context of Financial Management, Accounting and Audit.

#### **10. Self-Motivating:**

Majority of the respondents, 82.6% expressed about being self-motivated in using e-Learning. This, they opined because of the new learning experiences and the sources of knowledge that they discovered. 17.4% of the respondents opined that the periodic discussions among their peer-group and the researcher kept them motivated towards the e-Learning.

#### **11. Self-paced Learning:**

When asked whether they liked learning themselves without the active participation of any instructor to guide them through the overall program. 88.6% of the respondents responded positively to this and remarked that they enjoyed self-learning at their own place and time with help from the researcher occasionally. They also opined that many times they discovered new things accidentally, while exploring through the open links. 11.4% expressed that they learning was more fruitful when they engaged in discussions with the researcher and their peer groups, sharing experiences and sorting out difficulties.

#### **12. Impact on Professional Learning:**

When asked by posing an open ended question asking opinion on the impact of the e-Learning on their professional learning, the respondents provided lucid account of what they felt. The same are being analyzed descriptively provided in the following lines:

- a. Respondents with more work experiences remarked that they never felt the necessity of professional development, and that, for them their duty was of a routine nature. After engaging in the e-Learning program they realized how

routine problems they faced during their day to day work can be mitigated through small and timely interventions. The respondents opined that their knowledge about their own professional area widened and more importantly they felt benefited by the knowledge about various sources of knowledge that the e-Learning provided them with.

- b. Respondents who were younger and comparatively new to the area of Principalship opined about their willingness to participate in professional development programs, and that they were often on the lookout for workshops and orientations. They expressed that e-Learning provided them with the right kind of experience and that they enjoyed their engagement with self-development. Prior to this e-Learning activity majority of the respondents opined that they never were aware about the vast online resources that were easily available.
- c. Majority of the respondents opined that e-Learning made the process of learning easier for them, often enabling them to engage themselves with multiple Medias which widened their horizon in terms of knowledge gained. Activities and discussions provided were opined to have given them a better understanding about their role.
- d. Overall, the opinions of the respondents were positive in this context which was evident in their expression about having gained new knowledge and learning experiences, which they could not only relate to their work context but also tried practicing the same.

- e. It was also opined that e-Learning enabled them to carry forward meaningful discussions among their peer-groups and engage proactively in dealing with anticipated problems, which were often shared.

### **13. Challenges Faced in terms of Obstacles and Barriers in e-Learning:**

The respondents were asked to give their opinion in terms of whether any of the following were acting as a limiting factor to their e-Learning: Computer Skills, Learning Style, Content, Computer Access, Internet Connection, Instructional Design, and Personal.

- a. **Computer Skills:** Majority of the respondents, 88.6% opined that they were at ease using the e-Learning and found the same informative and interesting. 11.4% responded that initially they found it difficult to engage themselves in e-Learning but eventually they were able to do the same after interacting with the researcher. They also opined that with passage of time on the e-Learning, things became easier to follow.
- b. **Learning Style:** Almost all the respondents opined that they were able to adapt themselves with the new learning experiences.
- c. **Content Suitability:** 40% of the respondents found contents in certain units to be lengthier, which at times reduced their attention.
- d. **Computer Access:** All the respondents opined that they had access to personal computers, and that this was not a limiting factor to them for e-Learning.
- e. **Internet Connection:** Almost all respondents agreed to this being a limiting factor in their e-Learning, as they found it difficult to access video files

sometimes due to slow connectivity. Access to other educational links and open educational resources was easier, as opined by the respondents.

- f. Instructional Design:** 40% of the respondents opined that it would have been better if a set of instructions were provided in each Unit of the modules, the way it was provided at the beginning of the e-Learning program. In context of the content of the program, the respondents opined about the same being resourceful and informative.
- g. Personal:** Time constraints and social commitments, professional engagements etc were cited as major personal obstacles in allowing them to focus appropriately on the e-Learning.

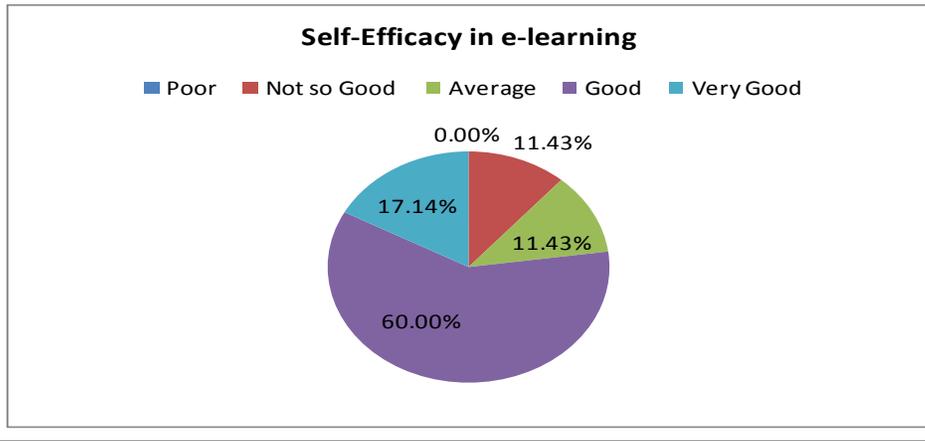
Further, certain indicators of e-Learning effectiveness were also explored upon such as: Self-efficacy in e-Learning, type of learner, attention, preference for content format, learning preference, communication preference, technology usage extending learning and learning outcomes. The analysis and interpretation is provided below:

#### **14. Self-Efficacy in e-Learning:**

When asked to rate their opinion in terms of: effectiveness and efficiency in e-Learning; majority of the respondents, 60% rated themselves as “average” on their efficacy in e-Learning. 17.14% rated themselves as “good” and 11.43% rated themselves “very good” on their self-efficacy. 11.43% of the respondents rated themselves as “not so good” on their self-efficacy in e-Learning.

The graph-28 below represents the same.

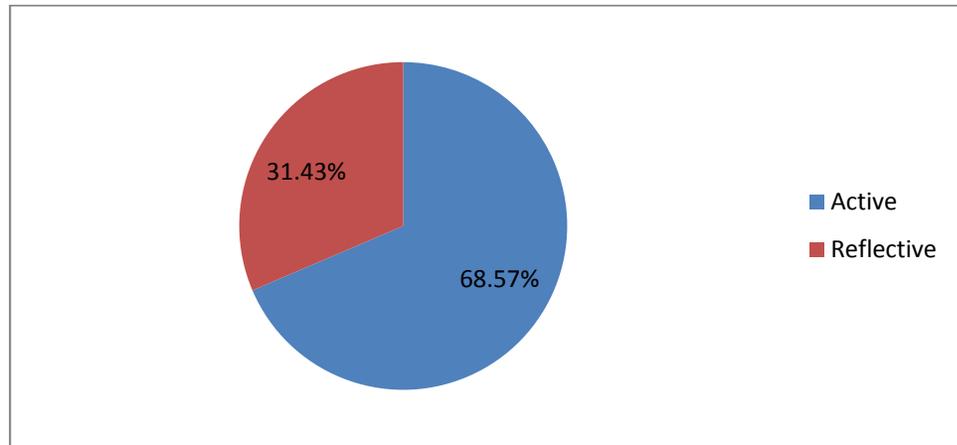
**Graph-28 Self-efficacy in e-Learning**



**15. Learner Types:**

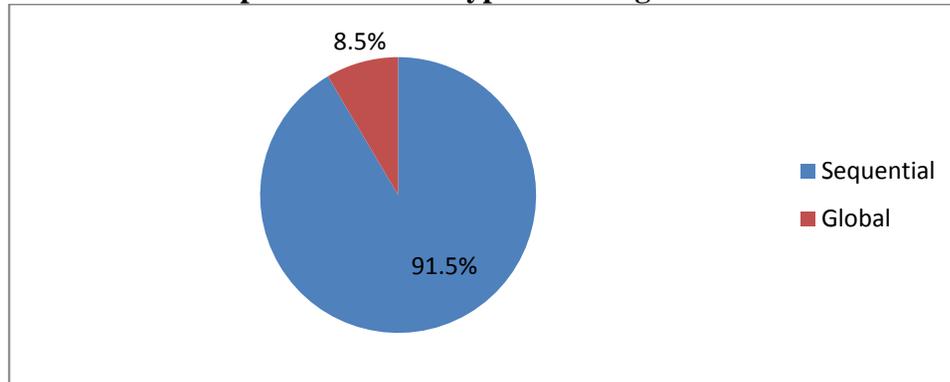
a. **Active or Reflective:** Active learners tend to retain and understand information best by doing something active and engage themselves into discussions and/ or explain their experiences to others. Reflective learners prefer to think about it quietly first. Majority of the respondents 68.57% expressed themselves as active learners while 31.43% as reflective learners.

**Graph-29 Learner Type – Active/Reflective**



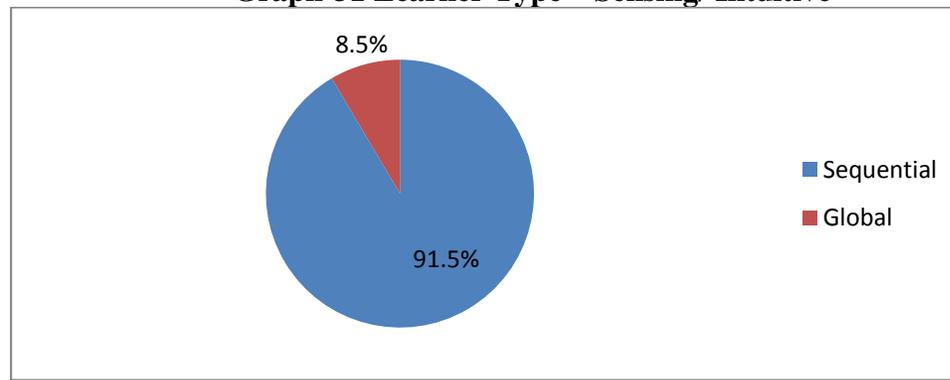
- b. **Sensing or Intuitive:** A sensing learner prefers to learn facts whereas intuitive learners prefer discovering possibilities and relationship. Majority of the respondents, 80% rated themselves as sensing learners while the other 20% rated themselves as being intuitive.

**Graph-30 Learner Type – Sensing/ Intuitive**



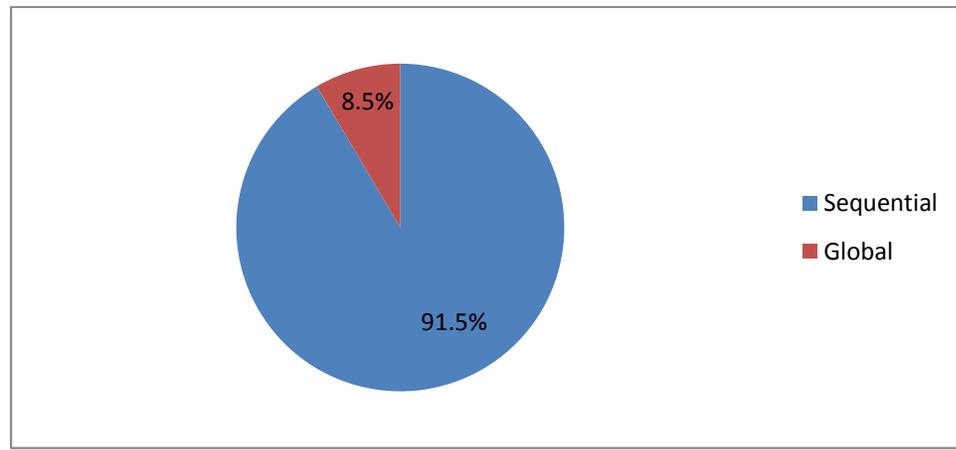
- c. **Visual or Verbal Learner:** Visual learners remember best as a result of their photo memory about what they see in pictures, diagrams, flow-charts etc whereas verbal learners get more out of words written and spoken explanations. Majority of the respondents, 60% rated themselves as verbal learners whereas 40% rated themselves as visual learners. However, upon further inquiry to this, the respondents revealed that it was a mix of both forms that best described themselves as a learner.

**Graph-31 Learner Type – Sensing/ Intuitive**



- d. **Sequential or Global:** Sequential learners prefers to gain understanding in linear steps, with each step being logically connected to the other, whereas the global learner tend to learn in large jumps, absorbing material almost randomly without seeing the connections, and then suddenly “getting it”. 91.5% of the respondents rated themselves as sequential learner while 8.5% rated themselves as global.

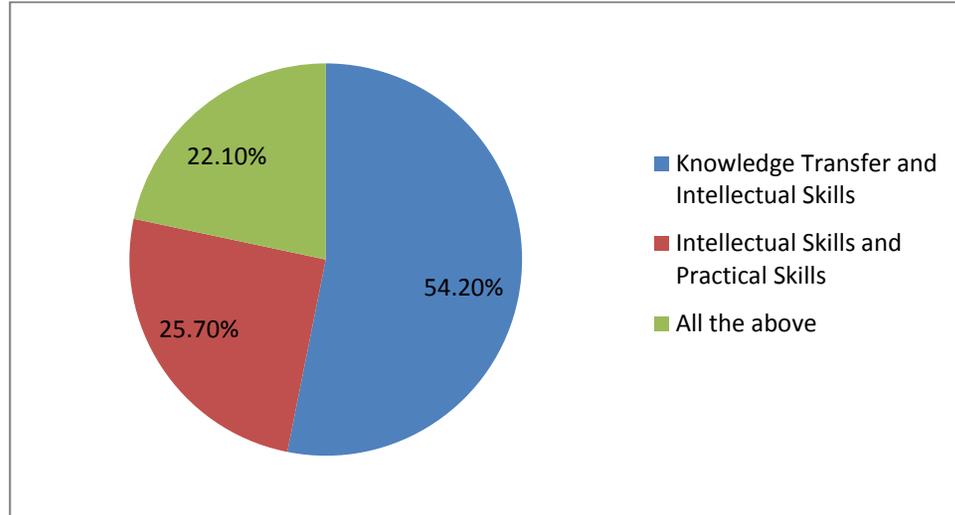
**Graph-32 Learner Type – Sequential/ Global**



**16. Attention:** When asked about what best captured the attention of the respondents in the e-Learning program, majority of the respondents, 40% opined about the activities and the discussions along with the links to the open educational resources. They also remarked that the open links tempted them towards exploring further and this many a times carried them away from what they were focusing earlier. Another 40% opined highly about you tube links and the power point presentations drawing their attention. 20% of the respondents were drawn towards the overall contents of the units in each module.

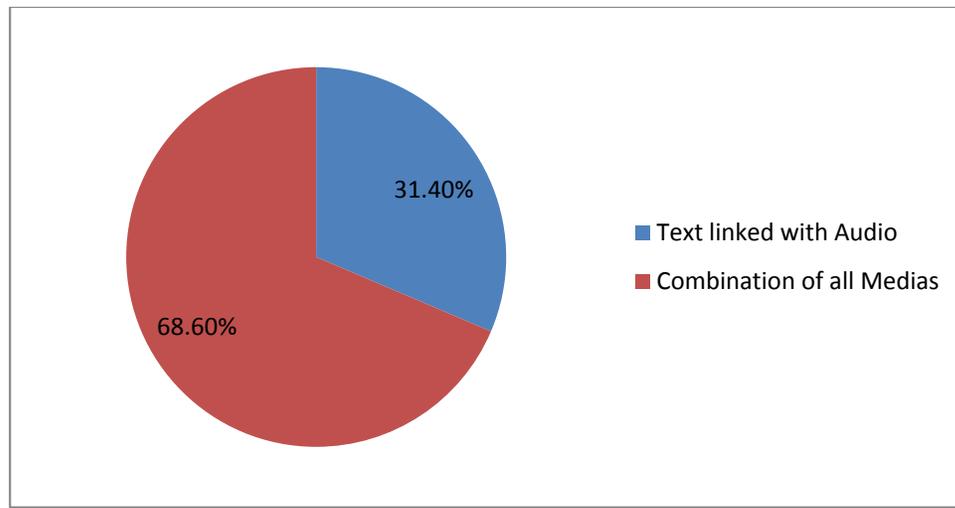
Graph-33 shows the contents in the e-Learning program that captured the attention of the user.

**Graph – 33 Contents Drawing Attention of the Participants**



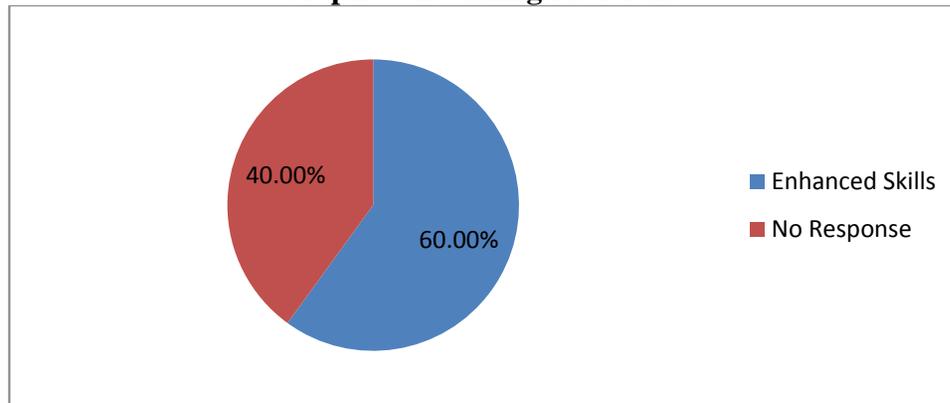
**17. Content Format:** When asked about what they liked most about the content of the e-Learning program in terms of text, illustrations, video, audio, or a combination of all etc, majority of the respondents, 68.6% liked the combination of all the Medias used in the e-Learning program. 31.4% revealed that they liked hearing the audio while reading the text of each unit.

**Graph-34 Content Format most liked by the Participants**



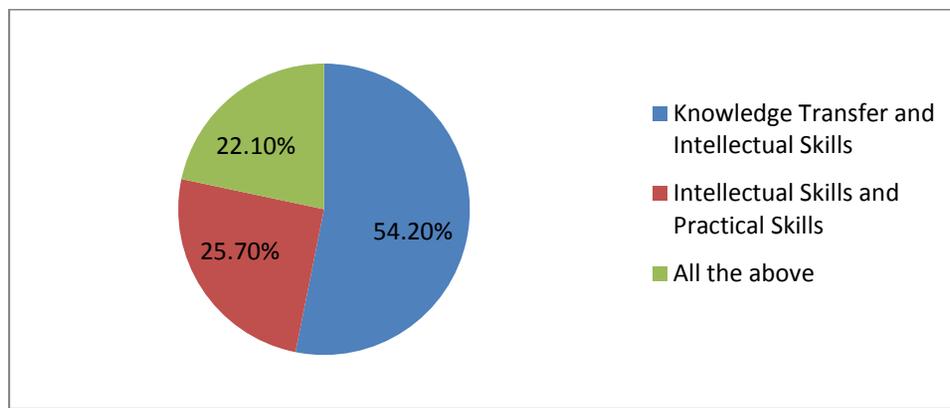
**18. Learning Preference:** When asked whether they preferred to learn in teams or alone, a similar response like that of self-paced learning was made by the respondents. 88.6% preferred to learn alone with help-support when they felt the need for, and 11.4% preferred to learn in groups and engage more in discussions and share experiences.

**Graph-35 Learning Preference**



**19. Communication Preference:** Majority of the respondents, 40% preferred telephonic and email as a medium of communication, 37.14% of the respondents preferred to meet face to face and discuss about their problems. 22.86% responded a mix of all available forms of communication that were included: face to face, telephone, email and discussion forums.

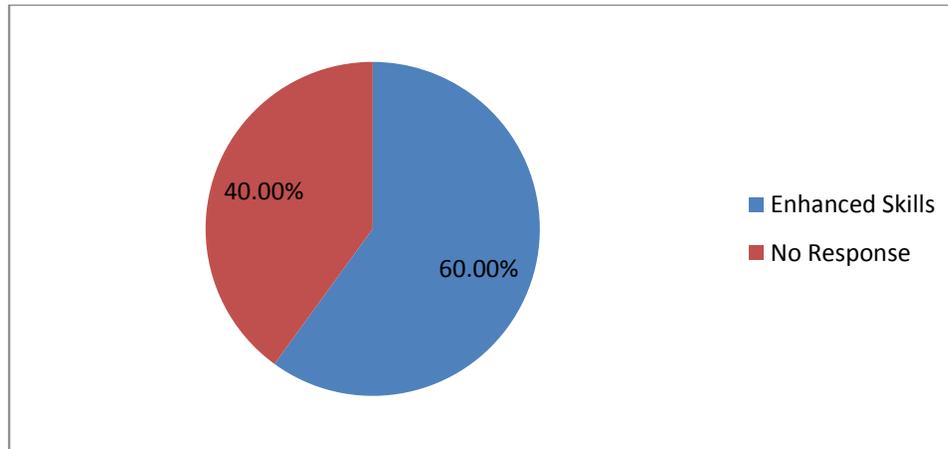
**Graph-36 Communication Preference**



**20. Technology usage extending learning:**

When asked about how they felt regarding the improvement of skills and learning by personal use of technology, majority of the respondents, 60% rated “good” felt that they have improved their skills of using technology in learning.

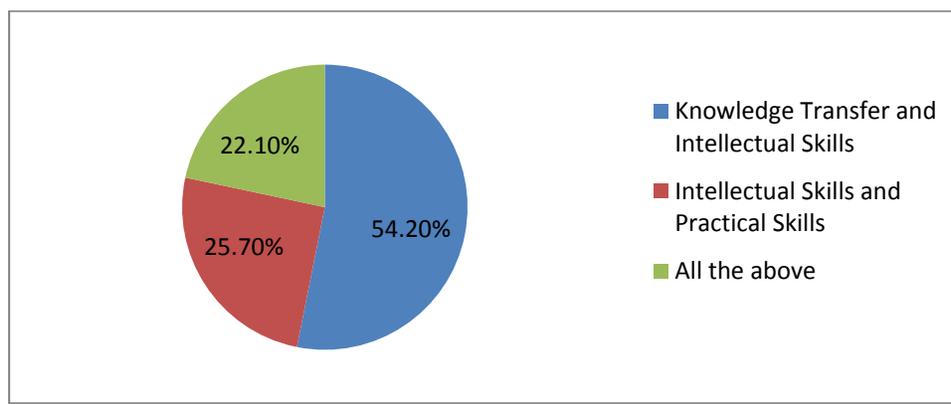
**Graph-37 Technology Usage Extending Learning**



**21. Learning Outcomes:**

When asked, what they felt about their learning outcome in terms of knowledge transfer, intellectual skills, practical skills and transferable skills: Majority of the respondents 54.2% opined that knowledge transfer and intellectual skills were the most important outcome in terms of e-Learning. They remarked about being introduced to new sources of knowledge, and this increased their urge to explore more. 25.7% opined about enhanced intellectual skills and practical skills. 22.1% opined about enhancement in all the indicators namely knowledge transfer, intellectual skills, practical skills and transferable skills.

**Graph-38 Learning Outcome**



#### **4.8 Conclusion**

In this chapter the researcher analyzed the data collected during different phases of the study. The outcome of the first phase of this study enabled the researcher to identify the task responsibility areas of the school principals and the corresponding skills required to execute those tasks. Based upon the findings of the first phase, the researcher developed the content of the e-Learning program and digitized the same with the help of the technical expert. The e-Learning program was implemented upon a group of 35 school principals spread across different districts of Assam. The last phase constituted of evaluating the effectiveness of the e-Learning program based upon the opinions of the participating principals. The results of the analysis of the data so collected reveal the appropriateness of e-Learning in terms of providing continuous professional development for the in-service school principals a mode of flexible learning. The enhancement of the participating principal's professional competencies was also reflected in their opinions. This chapter provided the base for deriving the major findings of the study and the same was presented along with the discussion in the next chapter.