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**The relationship between Learner Achievement and Qualification,  
Training and Experience of grade 6 Teachers  
in Namibia**

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**The Abstract**  
**Qualification, Training and Experience of Grade Teachers and Learner**  
**Achievement in Namibia**  
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The quality of education has been a major concern in Namibia since independence 1990. Two studies conducted by SACMEQ projects in 1995 and 2000 found that there were disparities in the quality of education across regions. Low learner achievement was found among regions. In order to determine the cause of low learner achievement in Namibia, there was a need to conduct a comparative study between regions. Learner achievement can be influenced by inputs, process and output factors. However, this study is mainly focused on the teacher (input variables) as key factor in improving quality of education.

The study used SACMEQ I and II data from the four regions out of seven educational regions in Namibia. It analysed the relationship between learner achievement and levels of qualification, training status and length of experience of teachers. The study also compared the findings of SACMEQ I and II projects between the four regions.

The study found that teacher's qualification, training and experience has influence on learner achievement.

## **Acknowledgements**

This paper is part of a study conducted about qualification, training and experience of grade 6 teachers in Namibia at IIEP in 2004. The study was mostly informed by the SACMEQ study that was conducted in 1995 and 2000. Using SACMEQ data then this study based on comparative analysis of the findings.

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## Abbreviations

AT	Advisory Teacher
BED	Bachelor of Education
BETD	Basic Education Teacher Diploma
EFA	Education for All
IEA	International Educational Achievement
MASTEP	Mathematics and Science Teacher Extension Programme
MBESC	Ministry of basic education sport and culture
MOE	Ministry of Education
NIED	National Institute for Educational Development
ISC	Instruction Skills Certificate
SACMEQ	Southern Africa Consortium for Monitoring Educational Quality
SE	Sampling error
UNESCO	United Nations Educational, Scientific and Cultural Organisation

## **Part I**

### **Introduction**

#### **1.1 Back ground of the study**

The provision of quality education is one of the major goals of the Ministry of Education (MOE) in Namibia. The aim is to render quality education and prepare the Namibian children for responsible citizenship and adult life. By doing so MOE wants to ensure that every school is a quality school. However, the efficiency and quality of the education system has been a cause for concern among members of the public since independence in 1990.

The Presidential Commission Report on Education, Culture Training (1999) highlighted the issue of quality and observed that there were different views on the factors contributing to the poor quality of work done in primary schools. Other people tended to blame the new teaching methods as responsible for poor quality. Meanwhile others argued that the teaching and learning environments do not create conducive atmosphere for effective English learning and also that basic competencies are not established well enough to implement a second language as a medium of instruction on a formal basis. Irrespective of these different views, qualified and trained teachers are an essential element in improving the quality of education.

The levels of qualification of teachers in the Namibian education system vary widely. Some teachers have qualification levels of less than Grade 12, some are Grade 12 graduates but not trained and only few teachers are qualified and trained\*.

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\* Qualified and trained teachers are referred to those who have Grade 12 plus minimum of three years teacher training qualification



In other words, Namibia has a majority of untrained primary teachers who were inherited from the former colonial education system. According to the education statistics (2001) showed that there were only 29.4 percent in 1999; 36.1 percent in 2000; and, 41.1 percent in 2001 of qualified teachers at primary education level.

## **1.2 The research problem**

There were two studies conducted with the assistance of Southern Africa Consortium for Monitoring Education Quality (SACMEQ) in 1995 at Grade 6 in reading comprehension and in 2000 the study was repeated into learner achievement in Grade 6 reading and mathematics. The SACMEQ I report showed that low level of mastery in Reading (English) and overall low achievements were found in the following regions<sup>\*</sup>: Katima Mulilo, Rundu, Ondangwa East and Ondangwa West while other regions: Windhoek, Keetmanshoop and Khorixas performed well. Therefore, the presentation of the findings in this paper was done according to the above mentioned 7 old educational regions.

Even though learner achievement can be influenced by various factors, many researches showed that teacher competencies, training, qualification and experience have a high degree of influence on learner achievement. Therefore, there is a need to investigate the relationship between learner achievements and levels of qualification, training status and length of experience of teachers. This paper attempts to investigate the above-mentioned variables and more specifically to address the following research question.

### **The research question**

Does the level of reading in English and Mathematics for Grade 6 learners vary according to teacher's qualification, training and experience in Namibia?

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<sup>\*</sup> Since 2002, the ministry has decentralized its operation from the seven educational regions to the thirteen political regions: Katima Mulilo (Caprivi), Rundu (Kavango), Ondangwa East (Oshikoto, Ohangwena), Ondangwa West (Omasati and Oshana), Windhoek (Otjozondjupa and Khomas), Keetmanshoop (Omaheke, Hardap and Karas), and Khorixas (Kunene and Erongo).

### **1.3 Scope and objectives of the study**

The aim of the study is to analyse and compare the professional characteristics (qualification, training, experience) of the Grade 6 reading and mathematics teachers and learner achievements in Namibia, particularly, in the following education regions: Rundu, Ondangwa East, Windhoek and Keetmanshoop. It was hoped that the professional characteristics of teachers would have influence on learner achievement and that the findings of this study will inform the policy.

The objectives of the paper are:

- To analyse the variations in the level of qualification, training status and the length of experience of Grade 6 teachers.
- To ascertain a relation between Grade 6 teachers characteristics and levels achievement of Grade 6 learners in reading (English) and mathematics.
- To analyse the findings and draw conclusions

### **1.4 The research methodology**

The study was conducted using the descriptive method. According to the International Institute for Educational Planning (IIEP) research methodology (2003/04) descriptive research answers questions concerning what is happening. Therefore the study tried to look at the relationship between learner achievement and professional characteristics of teachers by comparing and analysing the findings of SACMEQ studies. The SACMEQ I and II data archive was the main source of the data that was used in this study. SACMEQ is a research project designed to provide assessments of the conditions of schooling and quality of education provided by primary education system. The aim is to monitor progress towards the achievement of the educational quality goals defined in the 1990, Jomtien conference on “Education for all”. The Ministry of Education of Namibia is one of the fifteen members of SACMEQ. In Namibia, MOE conducted the study at Grade 6 level in order to compare the findings of SACMEQ with the National Learner Baseline Assessment study done in 1992 at Grade 4 and Grade 7 learner achievements. The participation in SACMEQ research project allowed Namibia to make an international comparison among other SACMEQ countries such as Botswana, Zimbabwe, Malawi,

South Africa, Mauritius, Zambia, Kenya and others. This study did not make use of the entire SACMEQ data archive. It was only the Namibian data that was used focusing only on 4 regions, namely, Rundu, Ondangwa East, Windhoek and Keetmanshoop. The selection of the regions was done purposefully, based on the Namibian SACMEQ reports that showed great variation in learner achievements in reading, mathematics. The overall low learner achievement was found in Katima Mulilo, Rundu, Ondangwa East and Ondangwa West while Windhoek, Keetmanshoop and Khorixas performed well. SACMEQ I study was conducted in 160 schools involving 4940 Grade 6 learners and their teachers. In 2000, when the study was repeated number of schools was increased to 275, with 5048 learners and 600 reading and mathematics teachers..

The following table presents the sample of schools that were selected for participation in the two SACMEQ studies.

<b>SACMEQ I</b>		<b>SACMEQ II</b>	
Regions.	No. of schools	Regions.	No. of schools
Katima Mulilo	20	Caprivi	15
Rundu	20	Kavango	25
Ondangwa East	25	Ohangwena	35
		Oshikoto	25
Ondangwa West	30	Omusati	35
	25	Oshana	25
Windhoek		Khomas	25
		Otjozondjupa	15
Keetmanshoop	20	Hardap ,	15
		Karas	15
Khorixas	20	Erongo	15
		Kunene	15
<b>Total</b>	<b>160</b>		<b>275</b>

The paper is structured into four parts. Part one is the background of the study; in part two the analysis of professional characteristic of teachers is made and in part three the analysis of the relationship between qualification, training, experience of teachers and the level of learner achievement in reading and mathematics. Part four provides the conclusion and recommendations.

## **Part II**

### **Professional Characteristics of Grade 6 Teachers in Namibia**

The existence of a teaching force, which is well qualified and available in sufficient numbers, is one of the main pre-conditions for good quality educational provision (UNESCO, Education For All: 2003/4). There are still some developing countries where half of the teachers have received no pedagogical training. According to the Education for All (EFA) report for 2003/4 the proportions of trained teachers were particularly as small as less than 50%, in some Sub-Saharan African countries of including Namibia.

The Presidential Commission Report on Education, Culture and Training in Namibia (1999) found that many of teaching posts were occupied by untrained and under-qualified teachers who could not serve the children well as fully qualified teachers would do. The Ministry of Basic Education, Sport and Culture (MBESC) EMIS statistics (2000:78) shows that only 70. Percent of all teachers were “qualified to teach”. This implies that 30 percent of the teachers were not qualified to teach. %.

In 2000, the MBESC developed a strategic plan 2001-2006 to address the fundamental problems such as equity and the quality of education. The strategic plan identified the Teacher Education and Support as one of the national priority areas of the Ministry to

improve quality of education because teachers were key element of the quality of education.

In this section of this paper an analysis of the professional characteristics of Grade 6 teachers in Namibia and their educational background is made from the two educational policy studies conducted under the SACMEQ project. The analysis focuses on teacher qualification, training, experience, in-service courses attended, and their perception of the role of Inspectors of Education as well as Advisory Teachers (AT) (subject specialist) including the teacher's job satisfaction. The data presented in the tables used in this section relates to the professional characteristics of Grade 6 teachers in four educational regions only namely, Keetmanshoop, Rundu, Ondangwa East and Windhoek.

## **2.1 Qualification of Teachers**

For Namibian teachers to be considered as qualified they were expected to have at least a Grade twelve certificate and a minimum of three years of teacher training. Teachers, who had two years teacher education obtained prior to independence in 1990, were considered to be under-qualified (Storeng, 2001). The graduates of Basic Education Teacher Diploma (BETD) are therefore considered to be better qualified than those who have less formal years of teacher training, although they may have years of teaching experience. The BETD is completed in the three years of pre-service training while In-service teachers have duration of four years to complete it. Meanwhile Bachelor of Education Degree (B.Ed) being offered at the University of Namibia is the highest under graduate qualification and is a four year pre-service training. For teachers teach at primary level (Grade 1-7) and junior secondary level (8-10), the ideal qualification for them is BETD, while teachers teaching at senior secondary level (11-12) must have B.Ed qualification.

### 2.1.1 Levels of Qualification of Grade 6 Reading Teachers

Table 2.1(a), presents the academic education of Grade 6 reading teachers in four regions only in SACMEQ I.

**Table 2.1 (a): Academic Education of Reading Teachers by Regions (SACMEQ I)**

<b>Region</b>	<b>Average years of academic education</b>	
	Mean	SE
Keetmanshoop	11.8	0.43
Ondangwa East	11.2	0.39
Rundu	11.1	0.29
Windhoek	13.8	0.51
<b>Namibia</b>	12.3	0.18

In 1995, at the national level the mean year of academic education of reading\* teachers was 12.3. This indicated that the Grade 6 teachers had attended primary, secondary or post secondary academic levels of education. There was a very little variation among regions. The overall mean for the three regions Keetmanshoop, Rundu and Ondangwa East was almost the same, ranged from 11.1 to 11.8. The lowest mean of years of academic education of teachers was found in Ondangwa East and Rundu regions 11.2 and 11.1, while the highest mean was in Windhoek 13.8. The mean for Windhoek was higher than the national mean. The findings revealed that at the regional level the Grade 6 learners were taught by teachers who had completed junior secondary education in the three regions. Meanwhile the Grade 6 learners in Windhoek were taught by teachers who completed senior education and post senior secondary education.

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\* Reading teacher is referring to English teacher in this study.

However, the data collected in 2000, on teacher's qualification was defined in 5 categories (primary, junior, secondary and A-level and tertiary education) instead of years of academic education.

The data in table 2.1(b) presents the percentage of academic education qualification of Grade 6 reading teachers by regions as was presented in SACMEQ II findings.

**Table 2.1(b): Academic Education of Reading Teachers by Regions (SACMEQ II)**

<b>Region</b>	<b>Primary</b>		<b>Junior secondary</b>		<b>Senior secondary</b>		<b>A-level</b>		<b>Tertiary</b>	
	%	SE	%	SE	%	SE	%	SE	%	SE
Keetmanshoop	12.4	6.07	4.1	4.11	40.9	9.79	18.7	7.16	23.9	8.16
Ondangwa East	9.0	3.78	11.6	4.05	50.5	6.70	16.8	4.96	12.0	4.36
Rundu	18.0	7.58	20.0	8.50	51.5	10.21	10.5	5.95	0.0	0.00
Windhoek	15.6	5.10	7.3	3.43	21.8	5.80	20.2	5.35	35.1	6.51
<b>Namibia</b>	13.6	2.18	9.2	1.81	46.5	3.18	17.8	2.38	13.0	1.96

In 2000, at the national level the lowest percentage of teacher academic education attained was 9.2% for junior secondary education and the highest was 46.5% for senior secondary education level. This means that total of 87.1% of Grade 6 reading teachers did not have tertiary education qualifications. Meanwhile 22.8 percent of teachers did not attain senior secondary qualification. There was a great variation across regions. The percentage was 16.5 for Keetmanshoop, 20.6 for Ondangwa East, 38 for Rundu and 22.8 for Windhoek of teachers who had not attained senior secondary education or Grade 12 certificates. The large proportion of Grade 6 reading teachers was found in Rundu (51.5%) and Ondangwa East (50.5%) who had attained senior secondary education, while Windhoek had only 21.8 percent.

The teachers who had A-level qualification or did some further study but not a first degree or diploma in teaching profession was 17.8 percent at the national level. There were very few percentages of reading teachers who had done the above mentioned

qualifications. However, the findings revealed that 20.2 percent of teachers in Windhoek and 18.7 percent in Keetmanshoop had tried to upgrade their education level compared to teachers in Rundu 10.2 percent.

At the national level, the percentage for the Grade 6 reading teachers who had tertiary education qualification was only 13.0 percent. There was a great variation across regions. The highest percentage of teachers who had tertiary level qualification was found in Windhoek 35.1, in Keetmanshoop 23.9, and Ondangwa East had only 12.0%. Unfortunately Rundu had 0.0 percent, which means that in Rundu there was no Grade 6 teacher who had tertiary qualification in 2000. This means that the Grade 6 reading learners in Rundu were taught by teachers who did not have tertiary qualification, while Windhoek had many qualified reading teachers.

The findings in Rundu had raised a serious concern because the majority of Grade 6 reading teachers had attained senior secondary education qualification only. This means that the Grade 6 teachers in Rundu were either unqualified or under-qualified teachers. The appropriate question to bear in mind was whether quality education was rendered in Rundu or not? A look at the Namibian Broad Curriculum for Basic Education outlines the learning objective for various subjects. For example, one of objective for English as a subject is to enable learners to communicate effectively and writing English as well as Namibian mother tongues of Namibia. Also another objective is to develop competence in English as the official language for the purposes of education and public life. (National Institute for Educational Development, 1996). However, a question arises as to what extent the Grade 6 learners were prepared to achieve the above learning objectives in such a situation.



### 2.1.2 Levels of Qualification of Grade 6 Mathematics Teachers

The data in table 2.1(c) presents the percentage of Grade 6 mathematics teacher academic education qualification by regions as was presented in SACMEQ II in 2000.

**Table 2.1(c): Academic Education of Mathematics Teachers by Regions (SACMEQ II)**

<b>Region</b>	<b>Primary</b>		<b>Junior secondary</b>		<b>Senior secondary</b>		<b>A-level</b>		<b>Tertiary</b>	
	<b>%</b>	<b>SE</b>	<b>%</b>	<b>SE</b>	<b>%</b>	<b>SE</b>	<b>%</b>	<b>SE</b>	<b>%</b>	<b>SE</b>
Keetmanshoop	3.5	3.46	2.2	2.16	61.2	9.10	10.6	5.31	22.7	8.11
Ondangwa East	20.0	5.23	8.3	3.67	47.4	6.72	15.3	4.62	9.0	3.49
Rundu	11.6	5.66	1.3	1.27	52.0	10.19	32.2	9.56	3.0	3.01
Windhoek	10.3	4.30	13.0	4.86	31.0	6.37	17.2	5.06	28.4	6.05
<b>Namibia</b>	17.8	2.42	8.5	1.72	45.6	3.19	17.9	2.39	10.2	1.70

The levels of academic qualifications of mathematics teachers vary widely from education levels. At the national level there was a total of 89.8 percent of mathematics teachers who had not attained tertiary education level. There were still teachers who had less than Grade 12 qualifications or senior secondary qualification of 26.3 percent at the national level. The largest proportion of teachers who still had primary education and junior secondary qualification was in Ondangwa East 28.3%, compared to other regions. Keetmanshoop had the least percentage of teachers who had primary education and junior secondary qualifications only 5.7 percent.

The findings revealed that the majority of the Grade 6 reading and mathematics teachers in had senior secondary qualifications - 45.6 percent at the national level. There was a variation across regions. The lowest was 31.0 percent for Windhoek and the highest was 61.2% for Keetmanshoop, 52.0% in Rundu and 47.4% in Ondangwa East region. It was found that the percentage of the Grade 6 mathematics and reading teachers who had only

senior secondary qualifications was almost the same. However, in 2000, the results showed that the proportion of mathematics teachers and reading teachers who had senior secondary education qualification was the highest compared to other levels of education qualifications in both regions.

It was noted that the percentage of mathematics and reading Grade 6 teachers in Namibia who did some study after they had completed senior secondary qualification was almost the same, only 17.9 percent. The percentage was ranged from 10.6 to 32.2. The lowest was found in Keetmanshoop (10.6%) and the highest in Rundu (32.2%). The findings revealed that the percentage of mathematics teachers who had A-level or did some further studies were higher than for reading teachers. This means that at least there were teachers in Rundu who had tried to upgrade their qualifications after five year period.

Meanwhile the percentage of teachers who had tertiary education qualification, at the national level was only 10.2 percent. There was a great variation across regions. The lowest was 3.0 and the highest was 28.4 percent. Rundu had very few qualified for Mathematics teachers only 3.0 followed by Ondangwa East 9.0 percent. Windhoek and Keetmanshoop had many qualified teachers - 28.4% and 22.7% respectively, which was above the national percentage. Teachers in Rundu were the least qualified compared to other regions. This means that in 2000, the majority of Grade 6 mathematics teachers were taught by unqualified and under-qualified teachers.

## **2.2 Training of Teachers**

In Namibia teacher training is offered either through Pre-service training which lasts three years or through In-service training which lasts four years. Teachers are now expected to undergo one of the above mentioned teacher training courses in order to be certified as a qualified primary or secondary teachers. However, Namibia has different approaches of recruiting teachers compared to other SACMEQ countries such as Mauritius and Zambia whereby teachers must attend teacher training before commencing their careers. Some teachers in Namibia were recruited without attending any of the

above mentioned teacher training courses. Those teachers who never attended any formal teacher training courses are regarded as unqualified.

The data in table 2.2 presents the mean and SE for training of reading and mathematics teachers at the national and regional levels as was presented in SACMEQ I (1995) and II (2000). It should be noted that information on mathematics teachers was collected in SACMEQ II in 2000 only.

In 1995, for Namibia the overall mean for reading teachers training was 1.9 years.. The lowest mean was found in Rundu region that had a quite very low mean 0.8. Ondangwa East had at least a better number of professional teachers who had 1.6 years and it was very close to the national mean. Windhoek and Keetmanshoop regions had mean of 2.6 and 2.2 years of teacher training. These were above the national mean. The highest number of professional qualified teachers was found in Windhoek and Keetmanshoop compared to Rundu and Ondangwa East.

**Table 2.2: Means and Sampling Errors for Training of Reading and Mathematics Teachers by Regions (SACMEQ I and SACMEQ II)**

<b>Region</b>	<b>Training (Years)</b>					
	<b>SACMEQ I</b>			<b>SACMEQ II</b>		
	<b>Reading teacher</b>		<b>Reading teacher</b>		<b>Mathematics teacher</b>	
	Mean	SE	Mean	SE	Mean	SE
Keetmanshoop	2.2	0.36	3.0	0.21	3.0	0.15
Ondangwa East	1.6	0.26	2.5	0.13	2.5	0.13
Rundu	0.8	0.22	2.2	0.24	2.6	0.15
Windhoek	2.6	0.28	3.1	0.12	2.9	0.14
<b><i>Namibia</i></b>	1.9	0.11	2.7	0.06	2.6	0.05

Over the period of five year, the overall mean years of training for reading teachers, at national level had increased by 0.8, ( from 1.9 to 2.7 years). The lowest mean was in Rundu (2.2). However, although Rundu had the lowest mean, there was great improvement compared to the findings in 1995. This indicated that more effort was done in Rundu to increase rapidly by 1.4 years of training within five year period. Windhoek and Keetmanshoop still were found the best for having largest number of professional qualified teachers in 2000. The mean years of teacher training had increased from to 3.1 and 3.0 for Windhoek and 2.2 to 3.0 for Keetmanshoop. Ondangwa East had improved from 1.6 to 2.5 years. This showed that after five year period much was done in improving the qualifications of reading teachers in the four regions through teacher training to at least 2.7 years which was very close to three years teacher training requirements.

For mathematics teachers, the overall mean was 2.6 years of teacher training undergone by the teachers who taught the Grade 6 learners in Namibia. There was little variation across regions. The lowest mean was 2.5 for Ondangwa East and the highest was 3.0 for Keetmanshoop. Many teachers in Keetmanshoop and Windhoek were qualified with 3.0 and 2.9 years training and these were above the national mean. The mean found in Rundu was 2.6 years and in Ondangwa East it was 2.5 years. This was quite reasonable compared to the national mean. This showed that most of the Grade 6 mathematics teachers in the four regions had undergone through teacher training programmes.

The analysis on Grade 6 teacher qualification revealed that many teaching posts in Rundu and Ondangwa East were occupied by unqualified and under-qualified teachers. After Independence 1990, the provision of teacher training was one of the priorities. Therefore, teachers in Rundu and Ondangwa East need to be encouraged to enrol in In-Service Teacher training programmes to upgrade their qualifications. However, the findings for SACMEQ I and II, showed that there was an improvement in that many unqualified and under-qualified teachers were engaged in upgrading teaching programmes. It seemed that the Ministry had considered the policy suggestion 13 in SACMEQ I report for Namibia said that *“Design financially sustainable programmes to upgrade the training of primary teachers and to utilize teachers efficiently who have insufficient training. Consider a redeployment of in-service training opportunities to gain greater equity across regions.”*(P.33)

In addition, the Presidential Commission Report on Education, Culture and Training, 1999 made a strong recommendation that: *“Those unqualified or under-qualified teachers who are not prepared to take courses, relevant to the Namibian situation, which would lead to their qualification, or who are unable to reach the necessary standard and adopt new teaching methods, should be replaced whenever fully qualified teachers are available”*. (p.179). It seemed that the MBESC had implemented the recommendations of the report.

### 2.3 Teaching experience

The situation in Namibia was that many young qualified teachers had completed their tertiary education level just after independence in 1990. Therefore, it would not be surprised to find the great variation of years of teaching experience across regions.

Table 2.3 below presents the mean years of teaching experience of Grade 6 reading and mathematics teachers by regions as have been presented for SACMEQ I and II.

**Table 2.3: Means and Sampling Errors for Experience of Reading and Mathematics Teachers by Regions (SACMEQ I and SACMEQ II)**

Region	Experience (Years)					
	SACMEQ I			SACMEQ II		
	Reading teacher		Reading teacher		Mathematics teacher	
	Mean	SE	Mean	SE	Mean	SE
Keetmanshoop	16.4	1.95	15.5	1.84	15.0	1.63
Ondangwa East	7.4	0.86	8.0	0.79	9.7	1.00
Rundu	7.9	1.35	6.8	0.79	8.7	1.01
Windhoek	12.9	1.89	12.5	1.08	15.4	1.03
<b>Namibia</b>	9.3	0.52	10.0	0.42	11.7	0.48

In 1995, the overall mean years at the national level was 9.3 for reading teachers. There was a great variation among regions. The lowest mean was 7.4 and the highest was 16.4. The findings revealed that the mean in Ondangwa East and Rundu was almost the same number of years of teaching experience, which was 7.4 and 7.9. Keetmanshoop had many experienced reading teachers with a mean of 16.4 years, followed by Windhoek region with 12.9 years of experience.

In 2000, there was a slightly change in the average mean for the national level. It had increased from 9.3 to 10.0 years. The mean in Ondangwa East had increased from 7.4 to 8.0. The results showed that the mean of teaching years of experience for Keetmanshoop had decreased from 16.4 to 15.5. The same happened in Rundu from 7.9 to 6.8 mean. In Windhoek, the mean almost remained the same as in 1995. The results show that Keetmanshoop and Windhoek had reading teachers who had more than ten years teaching experience while teachers in Ondangwa East and Rundu had less than ten years experience.

At the national level, the average number of years of teaching experience for Mathematics teachers was 11.7 years. The lowest mean was 8.7 years for Rundu and the highest was 15.4 for Windhoek. There was no significant difference between years of teaching experience of teachers in Windhoek and Keetmanshoop. They had almost the same mean years of 15.4 and 15.0. Ondangwa East and Rundu had a difference of 1.0 mean years of teaching experience, which was 9.7 and 8.7. This means that most of the Grade 6 mathematics and reading learners were taught by teachers who had more than five years teaching experience in the four regions. In addition, the Grade 6 reading and mathematics learners in Windhoek and Keetmanshoop were taught by more experienced teachers, while Rundu and Ondangwa East had the least experienced teachers. The results revealed that Windhoek and Keetmanshoop had elder teachers than those found in Rundu and Ondangwa East.

## **2.4 In-service Courses Attended**

The Ministry of Basic Education, Sport and Culture realised the importance of in-service training courses or short courses as one of the ways to improve the quality of education. Therefore the Ministry felt that quality education can be achieved by providing more in-service training and support to teachers to acquire relevant competencies for effective teaching. (MBESC: EFA: National Plan of Action 2001-2015).

In Namibia, the In-Service courses were organised by Advisory Teachers (Subject Specialist) of a particular subject. One of their responsibilities is to identify the needs of teachers who need pedagogical assistance through short courses or workshops for one or two weeks. Advisory Teachers have to ensure that teachers attend the short courses, on a termly basis. The study conducted by the National Institute for Educational Development (NIED) 2003, on Learner Centred Education in the Namibian context revealed that teachers who had received consistent In-Service training in learner centred approaches were able to work directly from curriculum goals instead of syllabus content when they are asked to plan lessons.

Table 2.4(a) below presents the mean of in-service courses attended by Grade 6 reading teachers by regions as was presented in SACMEQ I project in 1995.

**Table 2.4(a): Means and Sampling Errors for Reading Teacher In-service Courses Attended during Career by Regions (SACMEQ I)**

<b><i>Region</i></b>	<b>In-services courses</b>	
	Mean	SE
Keetmanshoop	4.6	0.74
Ondangwa East	2.8	0.79
Rundu	2.9	0.82
Windhoek	4.0	0.69
<b><i>Namibia</i></b>	3.1	0.34

At the national level the mean was 3.1. The lowest mean was 2.8 for Ondangwa East and the highest mean was 4.6 for Keetmanshoop. The reading teachers in Keetmanshoop (4.6) and Windhoek (4.0) seemed to have attended considerably more In-Service courses than those in Ondangwa East (2.8) and Rundu (2.9).



The data in table 3.4(b) presents the mean and SE for in-service courses and days attended by reading and mathematics teachers for the last three years as was presented in SACMEQ II project. In 2000, the information on number of In-Service courses attended was collected including the days attended but mainly from 1998 to 2000.

**Table 2.4(b): Means and Sampling Errors for Teacher In-service Courses and Days Attended in the Last Three Years by Regions (SACMEQ II)**

<b>Region</b>	<b>Reading teacher</b>				<b>Mathematics teacher</b>			
	<b>In-services</b>				<b>In-services</b>			
	<b>courses</b>		<b>Days</b>		<b>courses</b>		<b>Days</b>	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Keetmanshoop	1.8	0.38	5.8	1.30	1.8	0.35	7.4	1.39
Ondangwa East	3.5	0.47	43.8	17.50	3.8	0.72	38.7	11.00
Rundu	1.4	0.42	18.4	9.45	1.9	0.51	114.6	46.38
Windhoek	3.0	0.39	31.6	12.23	2.4	0.37	31.1	11.36
<b>Namibia</b>	2.7	0.21	34.4	7.48	2.9	0.27	47.4	8.61

At the national level the mean was 2.7 for In-Service courses and 34.4 for the days attended by reading teachers. The overall mean of reading teachers at national level had decreased compared to the mean in 1995 from 3.1 to 2.7. The variation for In-Service courses attended by the reading teachers among regions was not very significant compared to the variation of days attended. The lowest number of In-Service courses attended was in Rundu region (1.4) and for the days were 18.4. The mean for courses attended in Ondangwa East was 3.5 and 43.8 days.

There was a great improvement in Ondangwa East compared to the findings in 1995. The three regions had decreased rapidly instead of increasing. Teachers in Keetmanshoop had (1.8), Rundu (1.4) and Windhoek (3.0). The point to be considered in this case could be that newly qualified reading teachers joined the particular regions. Also it might be that the subject was re-allocated to teachers according to their specialisation. The analysis

found that the reading teachers in Ondangwa East had attended many days for short courses compared to other teachers in the three regions. It was found that teachers in Keetmanshoop had the least days attended 5.8.

For Mathematics teachers, the overall mean at the national level was 2.9 for In-Service courses and 47.4 for the total number of days attended. There was a great variation across regions. The lowest mean was 1.8 for teachers in Keetmanshoop and the highest mean was 3.8 for Ondangwa East. This means that teachers in Ondangwa East had attended many courses than others in the three regions. Teachers in Keetmanshoop (1.8) and Rundu (1.9) had almost the same mean of number of courses attended and it was below to the national level mean 2.9.

The number of days of in-service courses attended for mathematics teachers was 47.4 at national level. There was a great variation across regions. Teachers in Keetmanshoop had very few days attended compared to others, while Rundu (114.6) had the highest mean of days attended. The mean found in Rundu was more than three times compared to the national mean. The variation of days attended for teachers in Rundu was very much significant. This means that there was imbalance among teachers, whereas some teachers did attend more days than others. Generally, the analysis revealed that a major imbalance with respect to the teacher access to attend In-Service courses across regions.

## **2.5 Teachers Job Satisfaction**

The motivation of teachers is critical for any programme designed to improve the quality of education. The SACMEQ countries had considerable interested in this issue especially concerning the factors that contribute most to job satisfaction. It is widely acknowledged that satisfied teachers tend to work harder for the benefit of the children and less likely to leave the teaching profession. There have been some findings that there was some dissatisfaction among teachers in Namibia. This sometimes happened when some newly trained teachers get discouraged from teaching in a particular way by some principals who do not understand the basis on which their junior staff are working. Some complaints from teachers were that “our environment does not create a conducive

atmosphere for effective English learning” (Presidential Commission on Education, Culture and Training: 110, 1999).

The data in table 2.5 (*see appendix 1*) presents the percentage and SE for teacher ratings of reasons for job satisfaction at the national level as presented for SACMEQ I and II. *See appendix 1.*

In 1995, the reading teachers indicated that “opportunities for professional development” (40.3%) was the most important reason to their job satisfaction followed by “seeing pupils learn” 18.5 percent and “quality of school management and administration” (10.7%). There were very few of reading teachers (8.2 percent) who chose level of teacher salary and only 8.1 percent for quality of classroom supplies. It was very interesting to note that travelling distance to and from schools was not rated 0.0% in Namibia, in 1995. This indicated that there were no Grade 6 reading teachers who travelled long distances to and from schools. The percentages for other reasons were from 3.3 to 0.4 percent.

In 2000, the highest percent was 17.3 for the availability of classroom supplies compared to other reasons as indicated by reading teachers. Also the findings revealed that percentages for quality of school management and administration had increased in 2000, from 10.7 to 16.3 percent. The percentage for seeing pupils learn had decreased from 18.5 to 15.8 percent and also for level of teacher salary from 8.2 to 7.7 percent. The rating for other reasons was between percentages of 5.6 to 0.4. This indicated that this reason was less important compared to other reasons.

Mathematics teachers seemed to be more worried about the quality of school management and administration (18.1%) as the most important reason to job satisfaction, followed by the availability of classroom supplies (16.5%) and seeing pupils learn (15.9). There were very few teachers who perceived travel distance to and from schools as important reason – it was only 7.4 percent. The rating for other reasons was between percentages of 5.9 to 0.2 and this means that those were considered as less important reasons compared to others.

The findings for SACMEQ I and II revealed that teachers in Namibia were satisfied of with the level of their salaries because it was regarded as one of the less important

reasons for their job satisfactions by both reading and mathematics teachers. However, some teachers in SACMEQ countries such as Zimbabwe and Mauritius felt that teacher salary was the most important factor to their job satisfaction.

## **2.6 Conclusion**

The analysis of professional characteristics for Grade 6 reading and mathematics teachers in Namibia showed that the levels of qualification of teachers in the system varied widely. There were still 22.8 percent of reading teachers and 26.3 percent of mathematics teachers who had very low academic education qualifications, that is, less than Grade 12. The majority of Grade 6 teachers in Rundu region were under-qualified (reading teachers 38% and mathematics teachers (12.9%) and unqualified (reading teachers 62% and mathematics teachers 84.2%). It was found that Keetmanshoop and Windhoek had many qualified reading and mathematics teachers. This means that many of the Grade 6 reading and mathematics learners in Keetmanshoop and Windhoek were taught by qualified teachers. Meanwhile learners in Rundu and Ondangwa East were taught by teachers who had less than senior secondary education qualifications.

Teachers who had many years of teaching experience were found in Keetmanshoop and Windhoek region and the less experienced teachers were in Rundu and Ondangwa East regions. This could be that those with less experienced teachers were newly qualified teachers and still young.

It was found that Grade 6 teachers in Windhoek had undergone many years of teacher training and had attended many In-Service courses than teachers in Rundu. In 2000, the findings showed that teachers in Rundu and Keetmanshoop attended less In-Service courses compared to teachers in Ondangwa East and Windhoek for both reading and mathematics teachers. After five year period, there was a remarkable improvement for In-Service courses attended in Ondangwa East which had increased from 2.8 to 3.5, while other regions had decreased instead. There is a need to provide In-Service courses to all

teachers since the findings showed clearly that many were still not competent enough to teach through the medium of English. Therefore, it would be advisable if In-Service courses will be designed according to the needs of the teachers. The specific difficult subject areas that teachers experienced had to be identified through school visit by the Inspectors of Education and Advisory Teachers.

A comparison of the most important reasons for job satisfaction of teachers in other SACMEQ countries with Namibia revealed that the high percentage rating was indicated for teacher salary as the most important reason for job satisfactions in Mauritius (39.2), Malawi (35.8), Zimbabwe (32.5), Kenya (24.5) and Zambia (15.3). Meanwhile Namibia had the lowest only (8.8). In 1995, reading teachers in Namibia felt that the opportunity for professional development was 40.3% as the most factors to their job satisfaction but in 2000, it was decreased rapidly to 10.6 percent.

The findings revealed that both reading and mathematics teachers felt that the quality of school management and administration was the most important factor to their job satisfaction in Namibia. The rest of other reasons were regarded as less important.

## *PART III*

### **Relationship between Qualification, Training and Experience of Grade 6 Teachers and Learner achievement in Reading and Mathematics**

The analysis made in part II gave a clear picture of the different levels of education of teachers in the Namibian system. A test in reading literacy according to the syllabi learning objectives was administered to Grade 6 learners.. According to SACMEQ I reading literacy was defined as the ability to understand and use those written language forms the required by society and / or valued by the individual. The above definition was used to accommodate the diversity of traditions and languages represented in the participating SACMEQ countries. The three reading domains tested were the narrative prose, expository prose and documents. The items of the test were allocated according to the three domains. For mathematics items were allocated to the number, measurement, and space-data domains.

The findings showed that the levels of mastery in reading literacy of learners vary across regions. The total test scores in the three separate reading domains were extremely low in the four regions of Katima Mulilo, Rundu, Ondangwa East and Ondangwa West. Generally, much better performances were found in the three regions of Khorixas, Keetmanshoop and Windhoek. There might be many important factors which may contribute on learner achievement.

However, as mentioned earlier in Part I of this paper learner achievement can be influenced by various factors. Many studies have emphasised the quality of the teacher and role of the teacher as being important in improving the quality of education. This raises a great interest and need to analyse teacher professional characteristics in relation to levels of reading and Mathematics competence of Grade 6 learners.

Therefore, there are three research questions that this paper tries to answer:

Does the level of teacher qualification have impact on learner achievement?

Does in-service teacher training have impact on learner achievement?

Does the length of teacher experience have impact on learner achievement?

#### A Note on Interpreting the Mean Scores

As for the SACMEQ I learner reading test, the National Research Coordinators of the second project constructed carefully a common framework or “blueprint” for the Grade 6 learners test in reading and mathematics. Based on the detailed analysis of curricula, syllabi and textbooks used in the SACMEQ II countries, the blueprints were prepared by domain (content) and skills (behaviour expected). The items used in SACMEQ I and II for reading learners test were the same. Because of the common items between the reading tests administered in SACMEQ I and II, it was possible to consider all these items as a pool of items and construct a unique continuum of scores for the fifteen SACMEQ countries with the Rasch procedures. To facilitate relative comparison, the National Research Coordinators of the SACMEQ countries decided to transform the pupil mean score of SACMEQ countries into 500 with a standard deviation of 100.

### **3.1 Learners reading scores**

For the following discussion, it should be noted that learner scores were arranged from the lowest to the highest scores and divided into five hierarchical groups of pupil scores (group 1= lowest group, group 2 = “low” group, group 3= “middle” group, group 4 = high group and group 5 =highest group). Each group contains around 20 percent of learners.

Table 3.1(a) presents the five groups of learner reading scores (see the last column) and their performances in the reading test as have been presented in SACMEQ I.

**Table 3.1(a): Means, Sampling Errors and Percentages for Grade 6 Learners Scores in Reading (SACMEQ I)**

<b>Sub-division</b>	<b>Learner reading score</b>		
	Mean	SE	% pupils
Group 1	394.9	0.85	22.7
Group 2	432.9	0.27	22.0
Group 3	457.2	0.25	17.4
Group 4	490.1	0.64	20.7
Group 5	622.4	10.41	17.2
<b>Namibia</b>	472.9	4.65	100

*Note: Reading teachers and Reading refer to English teachers and English as a subject*

At the national level, the learners mean score in reading was 472.9 and below the SACMEQ mean (500). The least mean score of learners was 394.9 for the lowest group (group 1). With the consideration of Sampling Error (SE) the group 1 learners in Namibia would have the mean score between the mean of 393.2 to 396.6. The highest mean score of learners was 622.4 for group 5 or the best learners. With the consideration of SE 10.41, the spread of group 5 scores was the largest compared to the others (scores varied between the mean of 601.9 to 643.2).



The table 6.1(b) below presents the Grade 6 learner performances in reading and mathematics tests by sub-divisions according to SACMEQ II and the learner frequency of each group.

**Table 3.1(b): Means, Sampling Errors and Percentage for Grade 6 Learners Scores in Reading and Mathematics (SACMEQ II)**

<b>Grade 6 Learner scores</b>						
<b>Sub-division</b>	<b>Reading</b>			<b>Mathematics</b>		
	Mean	SE	% pupils	Mean	SE	% pupils
Group 1	366.8	0.87	21.3	333.7	1.36	20.6
Group 2	404.9	0.25	22.1	392.8	0.33	23.5
Group 3	431.7	0.31	21.3	422.8	0.22	16.5
Group 4	475.1	0.75	19.6	454.9	0.39	20.1
Group 5	612.7	6.21	15.7	557.1	6.87	19.3
<b>Namibia</b>	448.8	3.13	100	430.9	2.94	100

In 2000, the overall mean score of reading learners was 448.8 and SE 3.13. It was noted that the reading learner mean score was low in 2000 (448.8) than in 1995 (472.9) as well as the mean of SACMEQ countries (500). Even the mean for mathematics, the overall learner scores (430.9) was lower than the mean of SACMEQ countries (500). There is a need to understand why learner performance in reading and mathematics were low in 1995 and 2000. One of the key aspects to look at was the relationship between learner achievement and teacher professional characteristics (qualification, training and experience).

## 3.2 Relation between Teachers Qualification and Grade 6 Learner

### Performance

#### 3.2.1 SACMEQ I results

In the following analysis, was on the mean years of schooling of reading teacher by group of learners taught. Table 3.2(a) below presents, the means and SE for years of schooling reading teachers by learner reading score groups as have been presented in SACMEQ I.

**Table 3.2 (a): Means and Sampling Errors for Years of Schooling of Reading Teachers by Learner Reading Score Groups (SACMEQ I)**

<b><i>Learner scores groups</i></b>	<b>Teacher schooling (years)</b>	
	Mean	SE
Group 1	11.9	0.23
Group 2	11.8	0.19
Group 3	12.1	0.19
Group 4	12.2	0.23
Group 5	13.7	0.35
<b><i>Namibia</i></b>	12.3	0.18

At the national level, the mean years of reading teachers schooling was 12.3, which represents the end of senior secondary school in the Namibian formal education context. The range was 11.8 to 13.7 years of schooling. The findings revealed that the two lowest groups 1 and 2 of learners were taught by the teachers who had the lowest mean years of schooling, around 11.8 and 11.9. Meanwhile learners in group 5 were taught by the teachers who had the mean years of schooling 13.7 and this was the highest mean compared to others. The difference of mean years of schooling between teachers taught

group 1 and group 5 was 1.8, almost two years. The result showed that learners in group 1 and 2 were taught by teachers who had less than Grade 12 or senior secondary qualifications. It was noted that the mean for learners in group 3 and 4 were taught by teachers who had almost the same years of schooling qualifications 12.1 and 12.2. This was close to the national mean years (12.3). The best learners in group 5 were taught by teachers who did some further study after completed senior secondary level.

The next table 3.2 (b) presents the mean and SE for years of schooling of reading teachers by learner groups and by regions. The least regional mean years of schooling of reading teachers was found in Rundu (11.1) and Ondangwa East (11.2), meaning that they completed the first year of senior secondary school only, followed by Keetmanshoop (11.8), while the highest mean was 13.8 in Windhoek, those teachers had completed senior secondary and did some further study.

**Table 3.2 (b): Means and Sampling Errors for Years of Schooling of Reading Teachers by Learner Reading Score Groups and Regions (SACMEQ I)**

Pupil scores groups	Schooling of Reading teachers (years)							
	Keetmanshoop		Ondangwa East		Rundu		Windhoek	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Group 1	11.8	0.57	11.2	0.50	10.9	0.28	12.9	0.72
Group 2	11.5	0.85	11.0	0.35	11.2	0.34	13.0	0.77
Group 3	11.4	0.46	11.0	0.37	11.1	0.29	13.3	0.60
Group 4	11.7	0.46	11.0	0.33	11.2	0.35	13.3	0.68
Group 5	12.0	0.6	13.6	1.92	11.5	0.44	14.4	0.60
<b>Region</b>	11.8	0.43	11.2	0.39	11.1	0.29	13.8	0.51

According to the learner groups, the lowest mean of teachers schooling were in Rundu. The difference between the lowest group 1 (10.9) and the highest group 5 (11.5) was half

a year (0.6). In 1995, the findings revealed that all groups of learners in Rundu were taught by teachers who had not completed senior secondary education.

In Ondangwa East, learners in group 1, 2, 3 and 4 were taught by teachers who had quite the same number of years of schooling (11.0 to 11.2). The highest group of learners were taught by teachers who had 13.6 mean years of schooling. This was very high compared to the regional overall mean. In Keetmanshoop, also group 1, 2, 3 and 4 learners were taught almost by teachers who had the same number of years of schooling 11.4 to 11. Meanwhile the highest group 5 were taught by teachers of 12.0 mean years of schooling. This was higher than the mean at the regional overall.

In Windhoek, the range of mean was 12.9 to 14.4. The lowest group of learners were taught by teachers who had 12.9 mean years of schooling, while group 2, 3 and 4 of learners were taught by teachers with quite the same number of years of schooling 13.0 to 13.3. The highest or best learners in Windhoek were taught by teachers who had the highest number of years of schooling 14.4, which means that they had tertiary education qualification. This was very high compared to the mean for regional level.

The findings revealed that the Grade 6 reading learners in Rundu were taught by the teachers who did not complete senior secondary level (Grade 12). In Keetmanshoop and Ondangwa East, learners in Group 5 were taught by reading teachers who had satisfied academic education (more than 12 years schooling) but the other groups of learners were taught by those teachers who did not attain 12 years (end of senior secondary school). In Windhoek, the result showed all the Grade 6 reading teachers had attained better level of academic education. The means that teachers in Windhoek did some study after completed senior secondary level. Generally, the analysis revealed that in most cases the best group of learners in the four regions were taught by teachers who had many years of schooling.

As mentioned earlier on in Part II of this paper, the Namibian education system has teachers who had different level of qualifications. The aim of this part was to analyse the

achievement of learners who were taught by different teachers who had different level of qualifications after five year of period.

Table 3.2 (c) presents the means and SE for learner scores in reading and mathematics by the level of qualifications of grade 6 teachers according to SACMEQ II. It should be noted that the findings of reading learner scores in this table should not be compared with the previous above tables because in this case, it was mainly about teacher qualification obtained but not the number of years of schooling. Also learners were not categorized into groups anymore but according on their scores.

**Table 3.2(c): Means and Sampling Errors for Grade 6 Learner Scores in Reading and Mathematics by Academic Education of Teachers (SACMEQ II)**

<b><i>Academic education of teachers</i></b>	<b>Learner scores</b>			
	<b>Reading</b>		<b>Mathematics</b>	
	Mean	SE	Mean	SE
Primary	427.7	4.84	410.6	4.35
Junior Secondary	438.5	10.69	418.1	9.83
Senior Secondary	437.5	4.43	423.9	3.46
A-level	444.3	7.85	428.0	9.12
Tertiary	524.9	17.43	513.4	19.18
<b><i>Namibia</i></b>	448.8	3.14	430.9	2.94

In 2000, at the national mean score of reading learners was 448.8. Considering the SE of 3.14, the national average reading scores of the population of Grade 6 reading learners in Namibia would have been scores from 442.52 to 455.08 and was below the SACMEQ II mean of 500. The lowest mean of reading learner scores was 427.7 for primary qualification and highest was 524.8 for teachers who had tertiary qualification.

The mean values of learners taught by teachers who had primary, junior secondary, senior secondary and A-level qualifications were very low compared to the national

mean. There was a great gap between the reading score of learners who were taught by teachers who had tertiary qualifications and those who had the lowest qualification (primary). The overall mean score of learners who were taught by teachers who had tertiary qualification were 524.9 and the SE was 17.43. With the consideration of SE, this means that the population of Grade 6 in Namibia were taught by teachers who had the highest qualifications would have the mean scores between the values of 490.04 to 559.76. Generally, the scores of learners who were taught by teachers who had tertiary education qualifications were higher than 500 mean for SACMEQ II.

For mathematics, at the national mean scores of learners was 430.9 with SE of 2.94. The lowest mean score was 410.6 for primary and the highest mean score was 513.4 for tertiary. There was a variation of learner scores by the levels of qualification of teachers across in Namibia. The performance of teachers who had primary qualification was low 410.6 compared to the national level 430.9.

The mean for mathematics learner scores who were taught by teachers who had tertiary qualifications or qualified teachers was 513.4 with SE of 19.18. There was a significant variation among mathematics learner scores in Namibia which showed that the population of Grade 6 learners who were taught by qualified teachers ranged from 475.04 to 551.76. Therefore, the performance of qualified teachers according to the mean of learner scores was found to be extremely higher (513.4) than the national level (430.9).

### 3.2.2 SACMEQ II results

The next tables 3.2(d) and 3.2(e) present the mean and SE for learner scores by levels of qualifications of Grade 6 teachers in reading and mathematics by regions. The variations of mean scores of learners were varied by levels of qualifications as well as within the regions.

**Table 3.2(d): Means and Sampling Errors for Grade 6 Learner Scores in Reading by Academic Education of Teachers and by Regions (SACMEQ II)**

Academic education of teachers		Learner reading scores							
		Keetmanshoop		Ondangwa East		Rundu		Windhoek	
		Mean	SE	Mean	SE	Mean	SE	Mean	SE
Primary		459.9	41.37	432.5	12.19	427.2	11.67	433.9	13.24
Junior Secondary		.	.	408.4	5.75	418.6	8.79	531.0	42.07
Senior Secondary		516.9	17.56	423.4	9.99	434.1	7.64	475.1	24.22
A-level		449.5	19.08	416.2	6.49	448.3	16.52	490.8	22.29
Tertiary		575.1	27.16	418.2	4.50	.	.	584.9	23.98
<b>Region</b>		515.4	14.43	420.6	5.31	431.3	5.01	514.5	12.58

The lowest regional mean scores in reading were found in Ondangwa East (420.6), in Rundu (431.3) and both mean were below the 500 for SACMEQ II. The mean scores in Keetmanshoop (515.4) and Windhoek (514.5) were higher than 500.

**Table 3.2(e): Means and Sampling Errors for Grade 6 Learner Scores in Mathematics by Academic Education of Teachers and by Regions (SACMEQ II)**

Academic education of teachers	Mathematics Learner scores							
	Keetmanshoop		Ondangwa East		Rundu		Windhoek	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Primary	.	.	398.6	3.66	411.6	8.20	.	.
Junior Secondary	.	.	428.7	7.68	424.9	12.27	.	.
Senior Secondary	464.9	44.06	400.1	11.83	434.6	28.35	.	.
A-level	484.7	33.01	416.5	6.01	414.6	9.88	434.3	12.33
Tertiary	515.2	25.64	412.7	3.01	439.7	7.79	510.0	15.27
<b>Region</b>	524.7	21.82	472.7	30.92	441.5	21.25	554.0	23.74

The lowest regional mean scores in mathematics were found in Ondangwa East (472.7), Rundu (441.5) and both mean were below 500 for SACMEQ II. Still for Keetmanshoop (524.7) and Windhoek (554.0) the mean scores in mathematics were higher than 500. However, it was noted that there was a relative high standard errors for all values in these tables. Therefore it was not possible to interpret the mean by level of academic education.

### 3.3 Relation between Teacher Training and Grade 6 Learners Performance

As already discussed in part 2, the findings showed that some teachers in Namibia had never attended any teacher training while others did. Those teachers who had undergone training for three years or more were considered as *qualified teachers* in the Namibian education context. The teacher training can be either pre-service which last for three years or in-service training which last for four years. But teachers who did undergo training for *less* than the above mentioned number of years of teacher training were considered as *unqualified*. The short courses or workshops could be attended and count as



less than one year depending on the duration. This section aimed to analyse the teacher training in relation to the Grade 6 learner achievement.

In table 3.3(a) below, the average years of teacher training in reading and mathematics by learner score groups according to SACMEQ I and II are presented. In 1995, the difference of years for teacher training between the lowest group (1.6) and the highest group (2.8) was 1.2 years of training. The highest group of learners were taught by teachers who had many years of training while the lowest group 1 were taught by those who had less years of teacher training.

**Table 3.3(a): Means and Sampling Errors for Teacher Training of Reading and Mathematics by Learner Score Groups (SACMEQ I and SACMEQ II)**

<b>Learner scores groups</b>	<b>Years of teacher training</b>					
	<b>SACMEQ I</b>		<b>SACMEQ II</b>			
	<b>Reading teacher</b>		<b>Reading teacher</b>		<b>Math teachers</b>	
	Mean	SE	Mean	SE	Mean	SE
Group 1	1.6	0.16	2.5	0.08	2.6	0.07
Group 2	1.7	0.12	2.6	0.07	2.6	0.07
Group 3	1.7	0.12	2.6	0.07	2.5	0.06
Group 4	1.9	0.13	2.7	0.07	2.5	0.06
Group 5	2.8	0.18	3.2	0.11	3.0	0.10
<b>Namibia</b>	1.9	0.11	2.7	0.06	2.6	0.05

The findings showed that much was done for reading teachers when comparing the two SACMEQ studies. There was an improvement on the number of years of teacher training attended by Grade 6 reading teachers between 1995 and 2000. At the national level, the mean of teacher training was 2.7 years. This means that in 2000 the Grade 6 reading teachers had attended two and half years of training. However, there was still a difference between group 1 (2.5 years) and group 5 (3.2 years), a difference of less than 1 year.

For mathematics teachers, at the national level the mean was 2.6, which means that the Grade 6 mathematics teachers had attended two and half years of training. The least mean years of training was 2.5, for those teachers who taught learners in group 3 and 4, while the lowest two groups 1 and 2 were taught by teachers who had attended many years of training. The highest or best group of learners were taught by teachers who had the highest mean years of training attended of 3.0. It was very high compared to the national mean 2.6.

Table 3.3(b) presents the results for teacher training by reading learner score groups and by regions according to SACMEQ I. The lowest regional mean of years for teacher training was 0.8 in Rundu and the highest mean of 2.6 in Windhoek. The mean for Keetmanshoop and Ondangwa East were greater than 2.0 years of training.

**Table 3.3(b): Means and Sampling Errors for Training of Reading Teachers by Reading Learner Score Groups and by Regions (SACMEQ I)**

Learner scores groups	Teacher training (years)							
	Keetmanshoop		Ondangwa East		Rundu		Windhoek	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Group 1	1.5	0.88	1.6	0.41	0.9	0.26	1.2	0.49
Group 2	2.1	0.61	1.6	0.24	0.9	0.24	1.8	0.45
Group 3	2.0	0.45	1.7	0.26	0.7	0.21	1.9	0.40
Group 4	2.0	0.39	1.5	0.30	0.7	0.24	2.4	0.29
Group 5	2.7	0.38	1.3	0.38	0.7	0.23	3.2	0.21
<b>Region</b>	2.2	0.36	1.6	0.26	0.8	0.22	2.6	0.28

In Rundu, all the groups of Grade 6 reading learners were taught by teachers who had almost the same number of years of teacher training, which was less than one year. The mean for all learner scores groups in Rundu were the lowest compared to other mean in

other regions by groups. In Ondangwa East, the regional mean was 1.6, which means that the Grade 6 reading teachers had attended at least one and half year of teacher training. The best group 5 of learners were taught by teachers who had the least mean years of training 1.3. The mean years of teacher training found in Rundu and Ondangwa East was very low compared to other regions. This means that reading teachers in those regions were under-qualified and unqualified. The point to be considered in this situation was that this was one of the problems inherited from the former colonial education system. In addition, Rundu and Ondangwa East were some of the regions that were disadvantaged before independence, 1990.

In Keetmanshoop, the regional mean was 2.2, which means that the reading teachers had attended training for two years. The difference in the number of years between the lowest group (1.5 years) and the highest group (2.7) was almost 1.2 years. There was a tendency found in Keetmanshoop and in Windhoek whereby the highest group of learners were taught by teachers who had attended many years of training. The difference between group 1 (1.2 years) and group 5 (3.2 years) was 2 years of training. The levels of teacher training in Keetmanshoop and Windhoek were very high compared to other regions. It can be explained by historical factors that the reform of Namibian teacher training for pre-service as well as in-service were launched in 1993, then after two years SACMEQ I was conducted. Therefore, teachers in Keetmanshoop and Windhoek had great opportunity before independence as well as to the reform teacher training programme. Many teachers in Keetmanshoop and Windhoek had met the entry requirements (Grade 12) of the reform teacher training programme compared to the colleagues in the other two regions.

The table 3.3(c) presents the mean and SE for teacher training by reading learner score groups by regions according to SACMEQ II. In 2000, the regional mean was higher compared to SACMEQ I findings. There was an increase of almost one year for the three regions (Keetmanshoop, Ondangwa East and Rundu) and half year for Windhoek. The

lowest regional mean for years of reading teacher training still was found in Rundu (2.2) and the highest regional mean was found in Windhoek (3.1) and Keetmanshoop (3.1).

**Table 3.3(c): Means and Sampling Errors for Training of Reading Teachers by Reading Learner Score Groups and by Regions (SACMEQ II)**

Learner scores groups	Training of Reading teacher (years)							
	Keetmanshoop		Ondangwa East		Rundu		Windhoek	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Group 1	3.0	0.35	2.3	0.16	1.9	0.27	2.7	0.18
Group 2	2.9	0.27	2.5	0.13	2.0	0.3	3.0	0.16
Group 3	2.7	0.24	2.6	0.13	2.3	0.25	2.9	0.15
Group 4	3.0	0.19	2.6	0.13	2.5	0.28	3.1	0.12
Group 5	3.0	0.32	3.4	0.35	2.7	0.24	3.3	0.18
<b>Region</b>	3.0	0.21	2.5	0.13	2.2	0.24	3.1	0.12

The findings revealed that though the regional mean in Rundu had increased in 2000 from 0.8 to 2.2 it was still the least compared to other regions. Furthermore, this means that all groups of reading learners were taught by under-qualified and unqualified reading teachers who had less than three years of training. In Ondangwa East, the learners in group 5 were only taught by qualified teachers. In Keetmanshoop and Windhoek, learners in groups 2, 4 and 5 were taught by qualified teachers who had more than three years of training for Windhoek and learners in groups 1, 4 and 5 for Keetmanshoop. The findings showed that reading teachers in Keetmanshoop and Windhoek had almost undergone thorough teacher training.

In 1995, a policy on teacher training was suggested in SACMEQ I report of Namibia policy suggestion 13: *“Design financially sustainable programmes to upgrade the training of primary teachers and to utilize teachers efficiently who have insufficient training. Consider a redeployment of in-service training opportunities to gain greater*

*equity across regions.*” (p.33). There was much improvement in teacher training attended by reading teachers in Namibia compared to the findings in 1995. It was found that almost all reading teachers had opportunity to attend teacher training either through pre-service or in-service training. After five year period, Namibia had managed to produce almost twice group of qualified teachers through the reform of national teacher education. Even though, it was noted that the levels of teacher training attended varied by regions, but still the level of teacher training attended by the unqualified (lowest) teachers in Keetmanshoop and Windhoek region was highest than those in Rundu.

Furthermore, as it was already mentioned in table 3.3(a), that mathematics teachers in Namibia had undergone through teacher training at least for more than two years. The table 3.3(d) below presents the mean and SE for teacher training by mathematics learner score groups by regions according to SACMEQ II.

**Table 3.3(d): Means and Sampling Errors for Training of Mathematics Teachers by Reading Learner Score Groups and by Regions (SACMEQ II)**

<b>Learner scores groups</b>	<b>Training of mathematics teacher (years)</b>							
	<b>Keetmanshoop</b>		<b>Ondangwa East</b>		<b>Rundu</b>		<b>Windhoek</b>	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Group 1	2.7	0.19	2.6	0.13	2.7	0.17	2.9	0.13
Group 2	2.6	0.22	2.5	0.15	2.6	0.16	2.7	0.16
Group 3	2.7	0.2	2.3	0.15	2.6	0.17	2.7	0.19
Group 4	2.8	0.17	2.3	0.14	2.6	0.2	2.7	0.14
Group 5	3.4	0.13	2.9	0.32	2.7	0.16	3.1	0.21
<b>Region</b>	3.0	0.15	2.5	0.13	2.7	0.15	2.9	0.14

The lowest regional mean years of teacher training was 2.5 for Ondangwa East and the highest 3.0 for Keetmanshoop. The findings revealed that learner in group 1, 2, 3 and 4 in Keetmanshoop, Rundu and Windhoek were taught by teachers who had mean years of

training, which ranged between 2.6 to 2.9. The mean for the same groups of learners in Ondangwa East were the lowest between 2.3 to 2.6 compared to the others. Learners in group 5 in Keetmanshoop and Windhoek were taught by qualified teachers while in Ondangwa East and Rundu by unqualified and under-qualified teachers.

However, learners in group 1 were taught by teachers who had many years of teacher training than those taught group 2.

It was noted that the best learners were taught by teachers who had attended many years of teacher training between 2.7 and 3.0 in the four regions. The lowest learners were taught almost by teachers who had the same number of years of training, between 2.6 and 2.7. But still Ondangwa East (2.5) and Rundu region (2.7) had the lowest mean of years of training. In Namibia, there is a programme designed for senior secondary mathematics and science teachers: Mathematics and Science Teacher Extension Programme (MASTEP) and which is supported by the European Development Fund. Basically it was meant to assist the development of mathematics and science teaching for senior secondary mathematics teachers only. However, the findings revealed that the performance of primary teachers were unsatisfactory in Ondangwa East and Rundu regions. Therefore, there is a need to re-consider the inclusion of primary mathematics teachers as well into MASTEP.

### **3.4 Teachers Experience in relation to Grade 6 Learner Performance**

The International Education Achievement (IEA) studies on teaching of reading revealed that high scoring countries were found at all levels of experience. More experienced teachers were associated with higher student achievement levels in many developed countries.

Table 3.4(a) presents mean and SE for teacher experience by learner score groups in reading and mathematics as have been presented in SACMEQ I and II. In 1995, Grade 6 reading learners in Namibia were taught by teachers who had 9.3 years of experience. In

2000, teachers had many years of experience, 10.0 for reading teachers and 11.7 for Mathematics teachers.

**Table 3.4(a): Means and Sampling Errors for Reading and Mathematics Teacher Experience by Learner Score Groups (SACMEQ I and SACMEQ II)**

Learner scores groups	Years of experience					
	SACMEQ I		SACMEQ II			
	Reading teacher		Reading teacher		Math teachers	
	Mean	SE	Mean	SE	Mean	SE
Group 1	7.7	0.52	9.5	0.52	10.8	0.64
Group 2	8.1	0.54	9.3	0.51	10.7	0.57
Group 3	8.9	0.62	9.2	0.47	11.5	0.58
Group 4	9.4	0.61	9.7	0.52	11.9	0.53
Group 5	13.2	1.39	13.4	1.01	13.9	0.72
<b>Namibia</b>	9.3	0.52	10.0	0.42	11.7	0.48

There was significant variation among the different groups of Grade 6 learners taught by teachers who had different years of teaching experience. The findings in 1995 revealed that the mean ranged between 7.7 for group 1 to 13.2 for group 5 reading learners. The lowest group 1 of learners were taught by teachers who had more than seven years experience. Meanwhile the best group 5 learners were taught by teachers who had 13 years of experience. In 2000, the lowest mean was 9.5 for group 1 and highest mean was 13.4 for group 5 learners. The results showed that learners in group 1, 2, 3 and 4 were taught by teachers who had mean years of experience from 9.2 to 9.7.

The best learners in group 5 were taught by teachers who had many years of experience (13.4). It was noted that the years of experience of teachers who taught reading and mathematics learners in group 5 were almost the same. The other groups of mathematics

learners in groups 1-4 were taught by teachers of years of experience around 10.8 to 11.9. It was found that the mean of mathematics learner scores had correlated to the numbers of teaching years of experience. It showed that mathematics teachers had many years of experience compared to the reading teachers. Therefore, this implies that the Grade 6 mathematics learners in Namibia were taught by older teachers than reading teachers.

Table 3.4(b) presents the mean and SE for reading teachers experience by learner score groups and by regions according to SACMEQ I. In the SACMEQ I study, Ondangwa East and Rundu had very low mean of years of experience for reading teachers of less than 8 years. The reading teachers in the above mentioned regions were younger compared to those in Windhoek and Keetmanshoop. In Windhoek, the mean of years of experience was 12.9, while the teachers in Keetmanshoop were more experienced in the teaching force of 16.4 years.

**Table 3.4(b): Means and Sampling Errors for Reading Teacher Experience by Learner Score Groups and by Regions (SACMEQ I)**

Learners scores groups	Experience of Reading teacher (years)							
	Keetmanshoop		Ondangwa East		Rundu		Windhoek	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Group 1	11.5	3.14	6.6	0.78	8.7	1.4	12.0	3.22
Group 2	15.3	2.39	7.7	1.28	8.9	1.5	12.5	2.67
Group 3	16.4	1.98	7.0	1.00	7.8	1.56	12.4	3.04
Group 4	16.9	2.33	7.6	1.23	6.4	1.4	12.9	2.07
Group 5	18.1	2.43	9.5	2.05	6.6	1.88	13.3	2.58
<b>Region</b>	16.4	1.95	7.4	0.86	7.9	1.35	12.9	1.89

In Ondangwa East, the mean was 7.4. There was a significant variation among teachers who had taught different groups of Grade 6 learners. The lowest mean of teaching experience was 6.6 years for group 1 and the highest 9.5 years for group 5. The other groups 2, 3 and 4 of reading learners were taught by teachers who had 7.0 to 7.7 years of



experience. There was a significant variation among teacher experience found in Rundu. The lowest mean in Rundu was 6.4 for group 4 and the highest was 8.9 years for group 2. It was noted that teachers who had less teaching years of experience 6.6 taught the best learners in group 5. Meanwhile teachers with many years of experience between 8.7 and 8.9 taught the lowest learners in groups 1 and 2. The findings revealed that Rundu had younger teachers compared to other regions and their performance was very much satisfactory. Windhoek had the mean years of experience of 12.9 at the region level. The Grade 6 learners in Windhoek were taught by teachers who had the mean between 12.0 for group 1, and 13.3 for group 5 of years of teaching experience. The other groups were taught by teachers who had the mean between 12.4 to 12.9 years of experience.

Keetmanshoop had the highest mean years of teaching experience of 16.4. The Grade 6 reading teachers in that region had more than 10 years teaching experience. The lowest number of teaching years of experience was 11.5 for group 1 and the highest was 18.1 years for group 5. The findings revealed that Keetmanshoop had older teachers than teachers in other three regions.

The following data in table 3.4(c) presents the means and SE for reading teacher experience by learner score groups and by regions according to SACMEQ II findings.

**Table 3.4(c): Means and Sampling Errors for Reading Teacher Experience by Learner Score Groups and by Regions (SACMEQ II)**

Learner scores groups	Experience of Reading teacher (years)							
	Keetmanshoop		Ondangwa East		Rundu		Windhoek	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Group 1	14.9	3.10	7.6	0.85	7.5	1.13	13.9	1.55
Group 2	13.6	2.44	8.1	0.84	6.8	0.84	12.9	1.4
Group 3	14.0	2.33	7.7	0.89	6.8	0.86	13.0	1.41
Group 4	13.8	1.95	7.4	0.92	6.5	0.9	11.7	1.23
Group 5	17.2	2.44	12.9	4.00	6.0	0.86	12.2	1.68

<b>Region</b>	15.5	1.84	8.0	0.79	6.8	0.79	12.5	1.08
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In 2000, at the regional level the lowest mean years of experience was 6.8 for Rundu and the highest was 15.5 for Keetmanshoop. The difference between the regions was more than 9 years of experience for the reading teachers. The variation among Grade 6 teachers in Rundu was very little. The lowest mean was 6.0 years of experience for those teachers who had taught the best learners in group 5, meanwhile the highest mean was 7.5 years for teachers who had taught learners in group 1. The other groups of learners were taught by teachers who had the mean between 6.5 to 6.8 years of experience. There was a tendency whereby learners in group 5 in Rundu and Windhoek were taught by teachers who had less years of teaching experience. Meanwhile those who had many years of experience taught learners who performed very low (group 1).

**Table 3.4(c): Means and Sampling Errors for Reading Teacher Experience by Learner Score Groups and by Regions (SACMEQ II)**

<b>Learner scores groups</b>	<b>Experience of Reading teacher (years)</b>							
	<b>Keetmanshoop</b>		<b>Ondangwa East</b>		<b>Rundu</b>		<b>Windhoek</b>	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Group 1	14.9	3.10	7.6	0.85	7.5	1.13	13.9	1.55
Group 2	13.6	2.44	8.1	0.84	6.8	0.84	12.9	1.4
Group 3	14.0	2.33	7.7	0.89	6.8	0.86	13.0	1.41
Group 4	13.8	1.95	7.4	0.92	6.5	0.9	11.7	1.23
Group 5	17.2	2.44	12.9	4.00	6.0	0.86	12.2	1.68
<b>Region</b>	15.5	1.84	8.0	0.79	6.8	0.79	12.5	1.08

Ondangwa East had an overall mean of 8.0. There was a very significant variation on teacher experience among learner groups. The lowest mean was 7.4 years of experience (group 4), while the highest was 12.9 for group 5. The other groups of Grade 6 reading

learners were taught by teachers who had 7.6 to 8.1 years of teaching experience. The best learners were taught by teachers who had many years of teaching experience.

In Keetmanshoop, the regional mean was 15.5 and very high compared to Rundu and Ondangwa East. The difference was more than 7 years of experience. In Keetmanshoop, the highest mean years of teaching experience was 17.2 for group 5. The other groups of learners were taught by teachers who had mean from 13.6 to 14.9. In Windhoek, the mean years of teaching experience was 12.5, also high but not as found in Keetmanshoop. The variation among groups showed very little significance. The lowest mean was 11.7 and the highest was 13.9 years.

It was noted that reading teachers in Ondangwa East and Rundu had less number of years of teaching experience in 1995 and 2000, while teachers in Keetmanshoop and Windhoek had more than ten years of teaching experience. There was a tendency in Keetmanshoop and Ondangwa East that the best learners in group 5 were taught by teachers who had many years of teaching experience and the lowest groups by less experienced teachers. However, this was not the case in Rundu, where the tendency was that the teachers who had less years of teaching experience had performed very well and those who had taught learners in group 5. Also the lowest groups of learners were taught by experienced teachers who had many years of experience. In Windhoek, the teaching experience seemed to be little significant because the performance of teachers by years of experience was inconsistent.

The data in table 3.4(d) presents the means years and SE for mathematics teachers' experience by learner score groups and by regions according to the SACMEQ II findings. Generally, the results and tendencies were the same as for the reading teachers in SACMEQ I. Teachers in Rundu and Ondangwa East had less years of teaching experience, less than 10 years while in Windhoek and Keetmanshoop had more than 15 years.

**Table 3.4(d): Means and Sampling Errors for Mathematics Teacher Experience by Learner Score Groups and by Regions (SACMEQ II)**

Pupil scores groups	Experience of Mathematics teacher (years)							
	Keetmanshoop		Ondangwa East		Rundu		Windhoek	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Group 1	15.4	2.67	9.8	1.26	9.3	0.99	15.7	1.37
Group 2	16.2	1.55	8.8	0.94	8.5	1.18	16.7	1.49
Group 3	15.2	1.93	9.1	1.05	8.9	0.96	17.2	1.59
Group 4	17.0	1.74	9.2	1.04	9.0	1.27	16.2	1.36
Group 5	13.8	1.95	15.6	3.96	7.4	1.52	14.1	1.04
<b>Region</b>	15.0	1.63	9.7	1.00	8.7	1.01	15.4	1.03

At the regional level the lowest mean number of years of teaching experience was 8.7 for Rundu and the highest was 15.4 years for Windhoek.. Ondangwa East had the mean years of 9.7. The variation was very significant among teachers. The lowest mean was 8.8 for group 2 and the highest was 15.6 years group 5. The other group of learners were taught by teachers who had 9.1 to 9.8 years of experience. For Ondangwa East, there was a gap between teachers who taught learners in group 5 and the others. The learners in group 5 were taught by teachers who had many years of teaching experience.

In Rundu, the lowest mean was 7.4 years for group 5, while teachers who had many years of teaching experience of 9.3 had taught learners who had very low achievement (group 1). The other group of mathematics learners were taught by teachers who had 8.5 to 9.0 years. In Rundu, mathematics teachers who had less years of teaching experience taught the best learners in group5. The same findings were found in Keetmanshoop and Windhoek.

In Keetmanshoop, the mean was 15.0 and very high compared to the national level. The variation was significant among teachers. The lowest mean was 13.8 years for group 5, while the highest was 17.0 for group 4. In Windhoek, the mean years of experience were 15.4 years for the regional level and very high compared to the national level. The variation was of very little significant. The lowest mean was 14.1 years for the teachers who taught the best learners in group 5, while the more experienced teachers taught learners in group 3. The other group of Grade 6 mathematics learners were taught by teachers who had 15.7 to 16.2 years of teaching experience.

The Grade 6 mathematics learners in Keetmanshoop and Windhoek were taught by most experienced teachers who had more than 15 years of teaching experience. Rundu and Ondangwa East had the youngest teachers who had less teaching years of experience.

### **3.5 Analysis of Correlation between Teacher Qualification, Training and Experience and Grade 6 Learner Scores**

This section mainly looked at whether there was a coefficient of correlation between professional characteristics of teachers and learner scores. The data in table 3.5(a) presents the correlation coefficient of Pearson between teacher qualification, training, experience and learner scores according to SACMEQ I.

**Table 3.5(a): Coefficient of Correlation between Teacher Qualification, Training Experience and Reading Learner Scores (SACMEQ I)**

<b>Coefficient of correlation between</b>	<b>Reading Learner scores</b>
Teacher qualification	0.327
Teacher training	0.318
Years of teaching	0.241

The coefficient of correlation between teacher qualification and learner reading scores was 0.327. This implies that correlation was statistically positive. This tells that the level of teacher qualification had a positive influence on learner achievement in reading. The

coefficient of correlation between years of teacher training attended and learner reading scores was 0.318, statistically positive. This means that the more teachers training attended the better learner achievement can be produced.

However, the coefficient of correlation between years of teaching experience and learner reading scores was 0.241. This implies that there was a positive correlation but not as strong as the other two variables. This means that the teaching experience did not have serious influence on learner achievement, for example the situation found in Rundu, and in some cases in Windhoek.

For SACMEQ I, the results showed that there was a relation between Grade 6 learner achievement and teacher qualification as well as teacher training. The higher level of teacher qualification and the many number years of teacher training attended were associated with learner scores in reading.

The table 3.5(b) below presents the coefficient between teacher qualification, training, experience and learner scores according to SACMEQ II. After a five year period, the findings revealed that the coefficient of correlation between professional characteristics of teachers and learner reading and mathematics achievement was found significantly positive but not as strong as it was in 1995.

**Table 3.5(b): Coefficient of Correlation between Teacher Qualification Training, Experience and Learner Scores (SACMEQ II)**

<b>Coefficient of correlation between</b>	<b>Reading learner scores</b>	<b>Maths learner scores</b>
Teacher qualification	0.257	0.251
Teacher training	0.234	0.181
Years of teaching	0.191	0.136

The coefficient of correlation between teacher qualification, training and learner reading scores was 0.257 and 0.234. This implies that there was a correlation but statistically not very significant. The coefficient between teaching experiences and learner scores in

reading, as well as in mathematics, both had very low positive statistical significance. This means that teaching experience did not have serious influence on learner achievement in reading and mathematics. This could be that many young qualified reading teachers had replaced the older teachers to teach at the Grade 6 levels.

In the case of mathematics, the coefficient of correlation between teacher qualification and learner reading scores was 0.251; statistically it was not very significant positive. This means that the teacher qualification had influence on learner achievement. The coefficient between teacher training and teaching experience had very low positive statistical significance.

### **3.5 Conclusion**

This part presents the performance of Grade 6 teachers in the four regions. There were extreme differences in learner achievement by regions as observed through the different variables. Generally, it was noted that in 2000 reading teachers in Ondangwa East who had less qualification had performed much better. Meanwhile in Keetmanshoop, Windhoek and Rundu the performance of learners correlated to the level of teacher qualifications. However, there might be many reasons for the learner performance. There is a need to consider the performance of teachers looking at their hard work, commitment and dedication. Also it could be that those teachers who had low qualifications received moral and pedagogical support from Advisory Teacher or the school.

Another point to consider in this case is about the school management and administration. It might be that there was proper close supervision put in place to monitor the work of teachers. As it was found that some teachers in Namibia were still struggling with English as medium of instruction. Therefore, the policy suggested in SACMEQ I report should be taken into consideration with effect. *Policy suggestion 30: Determine the cause for the low achievements found in especially the Katima Mulilo, Rundu, Ondangwa East and Ondangwa West regions. Design programmes to improve the quality of education in these regions and in schools with low performance in the remaining three regions.*

Furthermore, the findings revealed that teacher training played an essential role in learner achievement in most regions. But a serious concern was raised in Ondangwa East in 1995 whereby teachers who had attended many years of teacher training had low mean scores compared to others. There was improvement in 2000, the years of training of reading teachers correlated to the learner scores in the four regions.

Another finding was that teacher qualification and teacher training had a very positive significant influence on learner achievements. Meanwhile teaching experience had very little positive significant influence on learner achievements. In 2000 the findings revealed that reading as well as mathematics teachers in Windhoek, Keetmanshoop and Rundu who had many years of experience had low learner performance.

In 2000, reading and mathematics teachers in Rundu who taught learners in group 5 had less years of teaching experience compared to the more experienced teachers. As a result, it can be concluded that teaching experience has no statistically significant influence on learner achievement.

## **Part IV**

### **Summary**

The comparative analysis of the four regions: Keetmanshoop, Ondangwa East, Rundu and Windhoek region, in Namibia was presented in two different parts. The analysis gives a clear picture and understanding of the Grade 6 teacher professional profiles and the results they had produced, learner achievement. By looking at the analysis of professional profiles of Grade 6 reading and mathematics teachers in the four regions the study revealed that there were wide variations of levels of qualification across regions.

In 1995, it was found that there was still some Grade 6 reading teachers (13.6%) in Namibia who had primary education only as the highest qualification. Also there were no



Grade 6 reading teachers especially in Rundu who had tertiary qualification. The large proportion of qualified teachers was found in Keetmanshoop and Windhoek. Over the five year period (1995-2000), it would appear that much was done in improving the variation among regions, whereas Ondangwa East and Rundu had at least more qualified reading teachers who had taught Grade 6 learners. But still, there were very few qualified mathematics teachers in Rundu and Ondangwa East, while the other two regions had larger numbers of qualified mathematics teachers.

It was found that many of the reading and mathematics teachers in Rundu and Ondangwa East had not received adequate teacher training compared to teachers in Keetmanshoop and Windhoek. In 1995, the Grade 6 reading teachers in Ondangwa East and Rundu had very few years of teacher training attended while teachers in Keetmanshoop and Windhoek had many years of teacher training. There was an improvement noticed after a five year period but still teachers in Rundu had the lowest level of training and Windhoek still had the highest. It would be better for Advisory Teachers and Inspectors of Education to observe the situation in their respective regions and make use of some recommendation based on teachers' performance to replace unqualified and under-qualified teachers with qualified teachers. There is a programme designed for under-qualified teachers, Instruction Skills Certificate (ISC) programme, which can allow them to meet the entry requirement to BETD In-Service training. Therefore the teachers with very low academic qualifications (less than Grade 12) need to be encouraged to enrol in the programme.

The findings revealed that Namibia has different approaches of recruiting teachers compared to other SACMEQ countries such as Mauritius and Zambia whereby teachers must attend teacher training before commencing their teaching careers. Some teachers in Namibia were recruited without attending any of the two teachers training (BETD pre-service or in- Service training), just after completing senior secondary school Grade 12 then they joined the teaching profession.

Furthermore, the Grade 6 reading and mathematics teachers who had many years of teaching experience were found in Keetmanshoop and Windhoek in 1995 and in 2000. Ondangwa East and Rundu had very few well qualified and experienced teachers. The findings in 2000 showed that mathematics teachers in Ondangwa East and Rundu had many years of teaching experience compared to reading teachers in 1995 and 2000.

Another major finding was on number of in-service courses attended. It was found that in 1995, reading teachers in Keetmanshoop and Windhoek had attended substantially more in-service courses during their careers compared to other teachers in the other two regions. After five a year period, the findings revealed that the number of in-service courses attended decreased in Keetmanshoop, Rundu and Windhoek, while in Ondangwa East they had increased. The least number of in-service courses attended by mathematics teachers was found in Keetmanshoop and Rundu compared to the other two regions.

Another major finding was on the teacher qualification in relation to learner achievement. The results showed that the Grade 6 learners in Rundu were taught by reading teachers who did not attain even senior secondary education. Also the study revealed that the highest (best) group of Grade 6 learners in Keetmanshoop and Ondangwa East were taught by teachers who had completed senior secondary level. Meanwhile all the groups of reading learners in Windhoek region were taught by teachers who had completed senior secondary and had tertiary qualifications. Furthermore, the study revealed that in 2000, there was a tendency for qualified teachers to perform very well, especially in Rundu. The qualified teachers taught the best learners in group 5. The performance of mathematics learners varied according to levels of qualification of their teachers. The lowest group of learners were taught by under-qualified and unqualified teachers, while the best learners in group 5 were taught by qualified teachers in all four regions.

There was another major finding on training level of Grade 6 teachers in relation to learner achievement. The study revealed that in 1995 and 2000, reading and mathematics learners who were taught by teachers who had undergone many years of teacher training did perform very well compared to the lowest group of learners taught by teachers who

had very few years of teacher training. The Grade 6 reading learners in Rundu and Ondangwa East were taught by teachers who had very low level of teacher training compared to other regions. Furthermore, the findings revealed that all the groups of Grade 6 reading learners in Rundu and Ondangwa East were taught by teachers who had almost quite the same levels of teacher training. Meanwhile the different groups of learners in Keetmanshoop and Windhoek were taught by teachers who had different levels of teacher training. Also learners in group 5 were taught by teachers who had very high number of years of teacher training.

The finding on teaching experience in relation to learner achievement varied among regions. The study revealed that the number of years of experience of reading and mathematics teachers in Keetmanshoop, Ondangwa East and Windhoek regions had positive influence on learner achievement. The lowest group of learners in the said regions were taught by teachers who had less years of teaching experience. The highest group of learners were taught by more experienced teachers. However, the case found in Rundu was different, the lowest group of learners were taught by more experienced teachers and the learners in group 4 and 5 were taught by teachers who had very few years of teaching experience.

The study also analysed the coefficient of correlation between teacher qualification, training and experience and learner scores. The findings revealed that in 1995 there was extremely positive significant correlation between teacher qualification and training with learner scores. Teaching experience did not have a very significant positive correlation. In 2000, the coefficient of correlation between teacher qualification and training showed that there was a positive correlation but not very significant as in 1995; meanwhile the correlation between experience and learner scores was found positive but very little significant. For mathematics, the correlation of teacher qualification with learner scores was positive but not very significant. Meanwhile the correlation of teacher training and experience with learner scores was also positive but had very little significance.

However, the analysis of this study revealed that professional characteristics of teachers had influence on learner achievements. Caillods (2004) in the article of Teachers a priority in the newsletter of International Institute for Educational Planning stated that:

Teachers are at the heart of the teaching / learning process. After many years of debate on the relative effect of schools and teachers on learning achievement, as compared to other socio-economics variables, it is now widely acknowledged that schools and, within schools, teachers can make a great difference on student achievement (p.1).

#### **4.1 Recommendations**

1.1. Although there was a general improvement in the qualifications of teachers but still the unit responsible for teacher development (NIED) should re-consider policy no: 13 suggested in Namibia SACMEQ I report because there were still variations among regions. *Policy suggestion 13: Design financially sustainable programmes to upgrade the training of primary teachers and to utilize teachers efficiently who have insufficient training. Consider a redeployment of in-service training opportunities to gain greater equity across regions.*

Thus, teachers should be encouraged to upgrade their qualifications since training programmes were available for all types of teachers with different types of qualification in the system.

1.2. In-service short courses should be designed and conducted based on teacher needs and teachers should be involved in the identification of the specific subject areas in which they need support and assistance from Advisory Teachers.

1.3. The primary mathematics teachers should be considered as well into Mathematics and Science Extension Programme in order to prepare learners for secondary level.

1.4. Regional offices should identify and establish proper mechanisms for an effective supervision of AT to ensure that the assigned responsibilities were carried out accordingly.

1.5. The findings of the SACMEQ I and II studies should be presented to all officials in the Ministry, in order for every individual stakeholder to realise their strength and weakness.

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## APPENDIX

**1. Table 2.6: Percentage and Sampling Errors for Teacher Ratings of Reasons for Job Satisfaction being the “Most Important” (SACMEQ I and SACMEQ II)**

Reason given	SACMEQ I	SACMEQ II
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	<b>Reading teacher</b>		<b>Reading teacher</b>		<b>Mathematics teacher</b>	
	%	SE	%	SE	%	SE
Travel distance to school	0.0	0.0	8.7	1.88	7.4	1.64
Location of school **			0.7	0.37	1.8	0.93
Quality of the school buildings	3.3	1.70	3.8	1.08	3.9	1.26
Availability of teacher housing	1.2	0.90	5.5	1.36	5.9	1.58
Quality of teacher housing	2.9	1.52	1.0	0.46	3.8	1.48
Availability of classroom furniture **			5.6	1.53	4.2	1.21
Quality of classroom furniture	1.3	0.98	1.5	0.83	0.2	0.18
Level of teacher salary	8.2	2.27	7.7	1.65	4.2	1.21
Timely payment of salaries **			1.0	0.59	0.6	0.37
Seeing pupils learn	18.5	2.98	15.8	2.19	15.9	2.08
Availability of classroom supplies **			17.3	2.49	16.5	2.33
Quality of classroom supplies *	8.1	2.50				
Quality of school management & administration	10.7	2.38	16.3	2.48	18.1	2.36
Amicable working relationships	2.5	1.14	2.2	0.98	2.8	1.09
Good relationships with the community	2.5	1.32	1.7	0.69	2.6	1.10
Expanded opportunities for promotion	0.4	0.44	0.4	0.43	1.2	0.65
Opportunities for professional development	40.3	4.00	10.6	1.99	10.8	1.96

\* Only in SACMEQ I

\*\* only in SACMEQ II