

Teacher assessment practices in South African schools

The Teacher Assessment Practices study was conducted by the Centre for Education Quality Improvement in collaboration with the National Department of Education as part of a national programme to implement an effective assessment system for improving learning in South African schools. The purpose of the study was to determine how assessment was understood and applied in schools to support the development and implementation of an effective classroom based computerised system. Using both qualitative and quantitative approaches, information was obtained on: (a) teacher beliefs and understanding of assessment; (b) level of preparedness and support in the use of assessment information, (c) the nature of teacher assessment practices, (d) assessment problems confronting teachers, and (e) teacher use of computers. This paper begins with a background to the study followed by a review of classroom assessment practices in South Africa. It then outlines the methodology used followed by a discussion of the findings. The paper concludes by listing key challenges to be addressed for the effective implementation of the computerised assessment system to enhance teacher assessment practices in South African schools.

Teacher assessment practices in South African schools¹

1. INTRODUCTION

The Teacher Assessment Practices project was conducted as part of a national program between the Centre for Education Quality Improvement and the National Department of Education to improve learning in schools by implementing an integrated national assessment system. A key objective is to develop and pilot a computerised classroom assessment system for teachers for use in addressing specific learner strengths and weaknesses.

The purpose of the computerised assessment system, called TARMII² (i.e. Teacher Assessment Resources for Monitoring and Improving Instruction) is to provide teachers with access to high quality assessment items for regular use in assessing their learners (e.g. after every lesson, or weekly) against the Assessment Standards specified in the National Curriculum Statement (DoE, 2002) in order to: (i) obtain information on learner strengths and weaknesses; (ii) identify relevant strategies for addressing specific learner needs; and (iii) record scores so as to monitor learner performance over time. The use of a computerised version of the system is intended to significantly reduce teacher workloads in supporting teachers to conduct their classroom assessments. However, to ensure that the TARMII system is effectively applied and to address the specific needs of teachers, additional information was required on how assessment was understood and applied, and how computers were used to support assessment practices. It is on this aspect that this paper focuses.

2. CLASSROOM ASSESSMENT IN SOUTH AFRICAN SCHOOLS³

One of the key imperatives of the new curriculum in South Africa is the implementation of an effective assessment system for providing relevant and timely information to all roleplayers for use in improving learning in schools. In particular, the development of a national assessment system for meeting the needs of policy makers and teachers was a key priority (DoE, 1998, 2007). However, current assessment systems and/or practices for addressing the learning needs of children have been found to be inadequate (DoE 2000; Kanjee, 2009; Pryor & Lubisi, 2002; Ramsuran, 2006; Sokopo 2004; Vandeyar & Killen, 2007).

With the introduction of the new curriculum and the philosophy of outcomes based education (OBE), a number of assessment related policies and guidelines that placed greater emphasis on classroom assessments were introduced. Specifically, the Assessment Policy in the General Education and Training Band, Grade R to 9 and ABET (Department of Education, 1998), the Interim policy framework for the assessment and promotion of learners in Grade 9 (Department of Education, 2003), the national protocol on assessment for schools in the General and Further Education and Training Band - Grades R to 12 (Department of Education, 2005). Recently the 1998 assessment policy was revised to align it with curriculum changes implemented in the National Curriculum Statements (DoE, 2002). The new policy (Department of Education, 2007) places greater emphasis on classroom assessment by outlining the range of assessment information available to teachers, specifying the frequency and types of assessment information required for reporting on learner performance at the different grade levels and providing templates for recording and reporting the performance of learners, for example, learner profiles. However, while the revised policy makes several major advances in simplifying assessment in South African schools note that

¹ The role of the research team, Matthews Makgamatha, Rosemary Molefe, Bongani Sithole, Nicolaas Claassen and Yusuf Sayed in ensuring that this study was successfully conducted needs to be acknowledged. Special thanks to Cedric Croft for his valuable input and guidance provided throughout this process.

² Final name to be verified after consultation process with teachers is completed.

³ The term classroom assessment and continuous assessment is understood by many as being the same thing and thus is used interchangeably in this paper

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limited learning and teaching resources are available to specifically assist teachers in improving their classroom assessment practices (Kanjee, 2009).

The assessment policies introduced an entire new set of demands that most teachers found difficult to address. Vandeyar and Killen (2007) describe how three grade 4 Mathematics teachers still held very strong teacher-centred conceptions of assessment, and that this was manifested in their classroom practice which conflicted with the outcomes based approach to assessment. The authors conclude that teachers need to be trained in the new pedagogy since teachers “cannot use assessment strategies that they do not understand or for which they lack the skills...” (p.112). Similarly Hariparsad’s (2004) comparative case study of two Grade 8 science teachers showed how the respondents had a surface understanding of the new assessment policies and were unable to reconcile it to their own deep rooted assessment beliefs and capacities. This invariably led them to privilege the traditional examinations and tests in their practice. Sokopo (2004) also notes that teachers essentially believed that classroom assessment was merely for the accumulation of marks, and thus curricular outcomes were reduced to a checklist.

Many challenge teachers have in the effective implementation of assessment policies relates to their enormous workloads for meeting the policy requirements (Ramsuran, 2006; Torrance, 1995). In a report on teacher workload in South Africa, clear evidence is presented on the large volumes of paper work required for the recording of assessment information (ELRC, 2005). Specifically, the report notes that a moderate amount of time was spent on marking and a substantial amount of time was spent on the preparation of portfolios and the inputting of marks, which ranged from 18% to 36% of total teaching time available. However, limited information was reported on how much time was spent by teachers on preparing for assessments, for example, developing test questions. Given that item writing and test development is an extremely time consuming activity, if this is also taken into account, it is conceivable that teachers would spend more time on administrative aspects of assessment and less time on learning and teaching activities. This view is supported by Morrow (2007) who notes that in practice “teachers are driven to such frenzy about ‘assessment’ and ‘portfolios’ that they have little time to ‘teach’” (p. 9).

While the new assessment policies introduced additional demands on teachers, it does provide the potential to develop a more authentic form of assessing learners and to improve learning. In their review of assessment challenges facing teachers, Pryor and Lubisi (2002) note that “the situation in South Africa presents an opportunity to implement CA (continuous assessment) that can be truly formative and can potentially act as a lever to produce more interactive pedagogies” (p. 684). However, the authors also caution that for this to work “appropriate resources that are readily available at classroom level will be needed to support CA, along with suggestions for specific practices that can be used”.

The potential of assessment resources to enhance teacher assessment practices in South African schools is aptly demonstrated in an evaluation of the paper and pencil based Assessment Resource Banks (ARBs) that were implemented to improve the assessment practices of teachers in deep rural and poorly resourced schools (Kanjee, 2009). The author found that the ARBs were easily understood by teachers and district officials and were successfully used by teachers to improve their classroom assessment practices. In addition, the ARBs were also used by a number of teachers for lesson planning, lesson preparation, class and home work exercises, and, for a small percentage of teachers, as exemplars to develop their own assessment items (Kanjee, 2009).

2.1 Use of ICT in schools

ICT/computers provide a possible solution to assist teachers address the challenges faced in effectively using assessment in classroom as well as the high workloads. The UK Department for Education and Skills (2004) found that ICT does help to address workload for some teachers,

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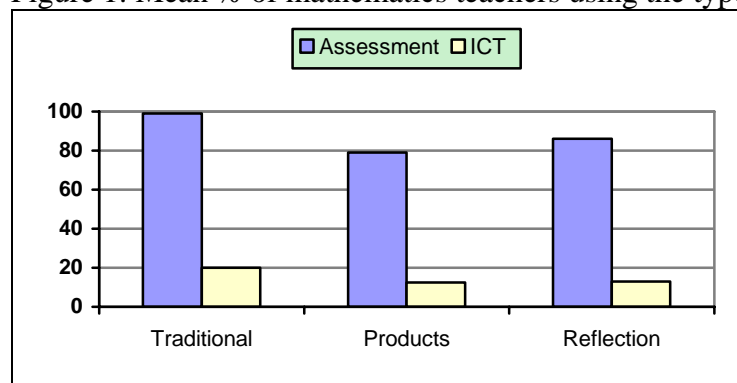
especially those who are confident in using it. The key benefits for teachers highlighted in their report include better management, storage, and maintenance of work. More importantly, however, the report notes that “saved time is typically ‘reinvested’ in other tasks principally related to teaching, such as lesson preparation, which teachers perceive has resulted in higher quality teaching and learning” (p. 6). A large number of teachers interviewed noted that the use of ICT saved approximately 4 hours a week on assessment, recording and reporting pupil progress (Table 1). On the other hand, a similar number of teachers also reported that they lost approximately 4 hours a week using ICT. The primary reasons attributed for this was a lack confidence or lack of ICT skills, an ICT strategy that lacks a focus on addressing workload, ineffective networks at the schools or a lack of appropriate training or technical support. This finding highlights the critical nature of adequate preparation and support in effecting new programs for teachers involving the use of ICTs.

Table 1: Teacher estimates of the amount of time saved/lost through the use of ICT⁴

Task	Average time saved (hours)	No of responses	Average time “lost” (hours)	No of responses
Lesson planning	1.6	47	2.7	26
Lesson resource preparation	1.6	69	3.0	36
Teaching	2.0	26	2.3	20
Assessment of pupil progress	1.1	25	1.8	25
Recording of pupil progress	1.0	33	1.1	29
Reporting of pupil progress	2.0	38	2.1	22

In the Second International Technology in Education Study (SITES) conducted in 2006, information was obtained from school principals and Grade 8 mathematics and science teachers across 400 South African schools with computers on the extent to which ICT was used to support pedagogical practices. Information obtained on mathematics and science teacher’s assessment practices was categorised into: (i) traditional assessments which refer to tests, examinations, written tasks and exercises, (ii) learning products which refer to oral and written presentations and project reports; and (iii) assessment methods that encouraged reflection and collaboration which refer to peer assessment, group work and portfolios. While a high percentage of mathematics teachers, over 80%, reported that they frequently used a range of assessment methods, the use of ICT for assessment was significantly lower with a peak of 20% reported for traditional assessments (Figure 1). For science teachers, similar results were reported. These results clearly indicate that while there is relatively widespread use of ICT in those South African schools with computers, and significant use of a range of assessment practices, there is limited use of ICT for supporting teacher assessment practices. Additional research is needed to understand specific reasons for this.

Figure 1: Mean % of mathematics teachers using the types of assessment and ICT for assessment



⁴ UK Department for Education and Skills (2004)
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3. METHODOLOGY

One of the key challenges for teachers in South Africa is the availability of relevant resources for use in enhancing their assessment practices. Given this limitation, the Department of Education, in collaboration with the Centre for Education Quality Improvement, embarked on a project to develop and pilot a computerised assessment system, known as TARMII, for teacher in primary schools. In order to develop an effective strategy for the successful implementation of the TARMII system and to ensure its sustainable use in schools, additional information on teacher practices was required. Specifically, information on teacher beliefs, practices and use of computers with regard to assessment in the classroom. Thus this study focussed on the following key research questions:

- What are teacher beliefs and understanding of assessment?
- What is the level of teacher preparedness and available support for the use of assessment?
- What is the nature of teacher assessment practices?
- What are the key assessment problems facing teachers? and
- How do teacher use computers to support their learning and teaching activities?

3.1 Sample

The sample for this study comprised of teachers from primary schools in three districts located in three provinces. School were identified in consultation with district officers based on two criteria: (i) the availability of computers at the school, and (ii) representation across the poverty quintile groups. Of the nine school identified, one school withdraw due to the unavailability of teachers. The final sample realised comprised of eight schools with two quintile 1 and 4 school respectively, three quintile 3 schools and one quintile 5 school⁵.

All respondents who participated in this study were primary schools teachers (i.e. Grade 1 to 6). A total of 115 respondents completed the questionnaires, of which 98 (85%) were female and 17 (15%) were male. For the observations and interviews, all teachers were female.

Table 2: Realised sample for teacher questionnaires, interviews and observations

School	Teacher Questionnaires	Teacher Interviews	Classroom Observations	Documents reviews
A	11	4	4	4
B	26	4	4	4
C	12	3	3	3
D	11	4	4	4
E	8	3	3	3
F	20	4	4	4
G	8	4	4	4
H	19	4	4	4
Total	115	30	30	30

3.2 Data collection and analysis

Data on teacher assessment beliefs and practices as well as availability and use of computers was obtained through the use of classroom observations, interviews and questionnaires. In addition, relevant documents from all teachers interviewed were also reviewed, including, lessons plans, tests developed and learner notebooks. The data obtained from the interviews was transcribed and coded, along with the classroom observation data, into a number of categories that reflected teacher assessment beliefs and practices. Analyses of the data comprised of frequency distributions and cross tabulations.

⁵ Quintiles refer to poverty ranking of schools with 1 = poor and 5 = wealthy
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4. RESULTS AND DISCUSSION

In this section, results from the survey and site visits are presented regarding teacher beliefs and understanding of assessment, teacher level of preparedness and available support in the use of assessment, the nature of teacher assessment practices, assessment problems facing teachers, and teacher use of computers.

4.1 Teacher beliefs and understanding of assessment

The overwhelming majority of teachers agreed that assessment information was useful for both teachers and learners (approximately 87%) while 10% were unsure and 3% disagreed. However, only 63% agreed that assessment information was useful for parents while 18% were unsure and 10% disagreed. The majority of teachers also believed that it was crucial or important that assessment criteria be discussed with learners, that the assessment of learner's work must be provided with comments and that learner mistakes must be viewed as learning opportunities (Table 3). However, 67% of teachers also believed that assessment of learner's work must be mainly in the form of marks.

Table 3: Importance of assessment practices as rated by teachers

	Crucial	Important	Limited importance	Not important
Assessment criteria discussed with learners	28	51	18	3
Assessment of learner's work mainly in the form of comments	13	45	32	10
View learner mistakes as learning opportunity	25	59	15	1
Assessment of learner's work mainly in the form of marks	12	55	23	10

Analysis of the interview revealed three main beliefs about assessment. These were:

- Parents needed to be involved despite the frequent difficulties in ensuring that all parents met with teachers (noted by 25 teachers, 83%). This topic also came up when parental involvement in general was being discussed, with 13 respondents (43%) indicating that they or their school initiated meetings with parents. Four respondents also noted that lack of parental involvement was a hindrance;
- The best uses of assessment are to improve learner performance, as expressed by 11 teachers (37%).
- Five teachers (17%) noted that continuous assessment was suitable for both formal and informal assessment.

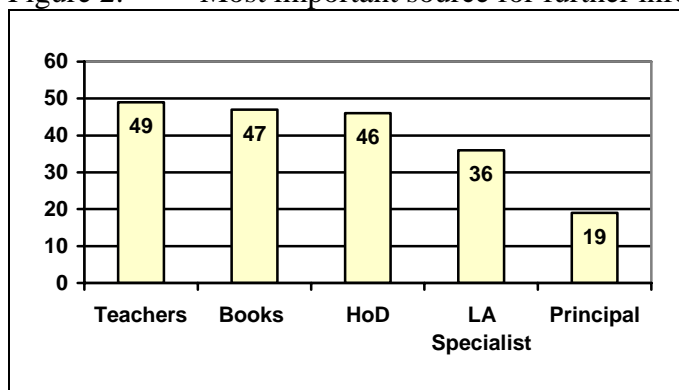
Other beliefs that were expressed by teachers included the importance of finding a balance between classroom assessment and external assessment, that teachers liked the current assessment policy because learners are exposed to different assessment strategies which help strengthen their learning, and the current policy provides a guideline for teachers to work within.

4.2 Teacher level of preparedness and support available in the use of assessment

Teachers were also asked to report on whether they received any training in classroom assessment and how prepared they felt about implementing and using classroom assessment and the nature of support they received in the schools. Approximately 76% of females and male teachers indicated that they received training in continuous assessment (CASS). However, while most male teachers (97%) reported that they were prepared to implement CASS, only 68% of the female teachers reported that they were prepared to implement CASS and 39% reported that they were somewhat prepared.

When asked to report on their most important source of information to further understand issues of assessment (See Figure 2), most teachers listed other teachers, books and other relevant publications and their Head of Department (HoD), while many teachers noted the Learning Area Specialist at the district office and the principal.

Figure 2: Most important source for further information on assessment issues



The results of the interviews also indicated that the HoD was seen as the major support for teachers assessment practices with 27 teachers (90%) reporting about their HoD’s visiting classrooms, making recommendations, and providing feedback on a regular basis, i.e. weekly or at least once a term. Seven respondents (23%) described their principal playing a similar role, but with less frequent visits. In addition, regular Phase meetings as described by 19 respondents (63%) were the second mode of support, followed by regular staff meetings, teamwork among school staff, support from other teachers and assistance from tutor teachers. One respondent noted that assessment is a frequent agenda item for staff meetings.

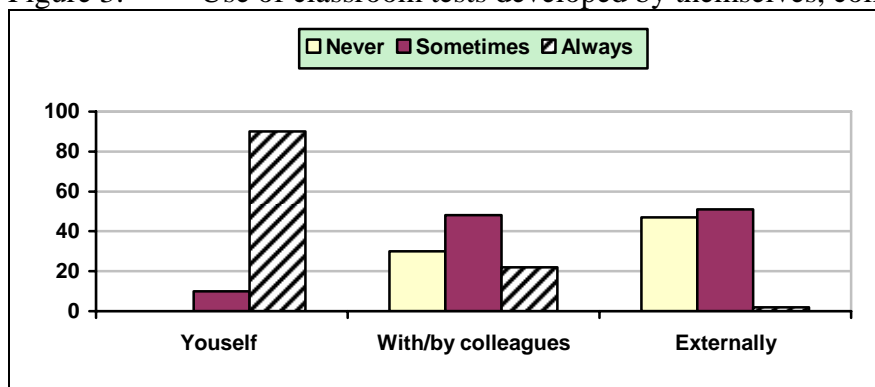
From outside the school the picture of the support offered was quite fragmented. Support from Learning Area Specialists from the district office was mentioned by six respondents (20%), but this was offset by 17 teachers (57%) who indicated that visits from District officials were yearly or irregular or had not taken place this year and that they provided limited or no support. Support from cluster meetings, workshops by NGOs or the DoE and partnerships with other schools were stated by between two (7%) and four (13%) respondents respectively.

4.3 Teacher assessment practices

Teachers were also asked to report on their assessment practices in the classrooms. Specifically, information was sought on their ability to develop tests, the types of test questions used, the different assessment methods applied in the classroom and how results from assessments were used.

The majority of teachers indicated that they always developed their own classroom tests (Figure 3) with only a small percentage noting that they did this in collaboration with their colleagues. Also approximately half of the teachers reported that they also used classroom tests that were developed externally, which for most teachers referred to assessment instruments made available by the Department of Education.

Figure 3: Use of classroom tests developed by themselves, colleague or externally



Typically most teachers used open ended questions in the tests they developed, with a very small percentage indicating that they mainly used multiple choice type questions (Figure 4). In addition, the majority of teachers reported that the cognitive demand of the questions they developed focussed mainly on the application of knowledge, while approximately 60% of the teachers reported that their questions also probed for patterns and relationships as well as explanations and justifications (Figure 5).

Figure 4: Item formats typically used in tests developed by teachers

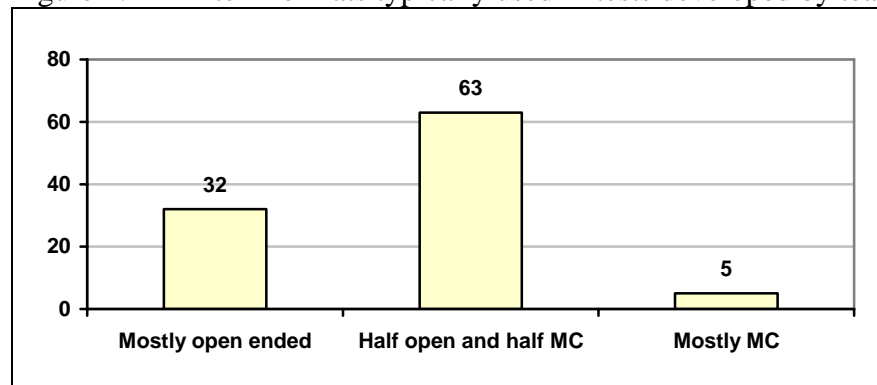
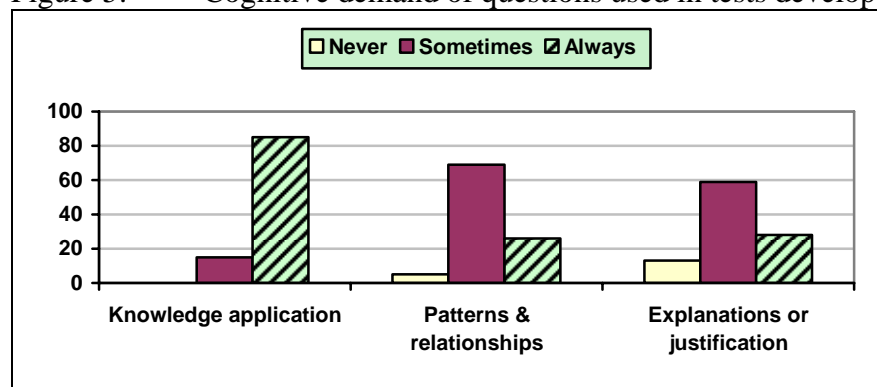


Figure 5: Cognitive demand of questions used in tests developed by teachers



With regard to the frequency and methods of assessments used, teachers reported a range of different methods (Table 4). The majority reported using classwork for assessment purposes on a daily basis (72%), while 21% reported that they used classwork on a weekly basis. Approximately 60% reported using projects, and 25% using assignments, at least once a month. This practice is in keeping with the OBE philosophy that emphasis individual and group work. In addition, 50% of teachers noted that they used homework on a weekly basis. Class tests were only used by 34% of teachers on a weekly basis while 13 and 11 % reporting that they used class tests once or twice a month respectively.

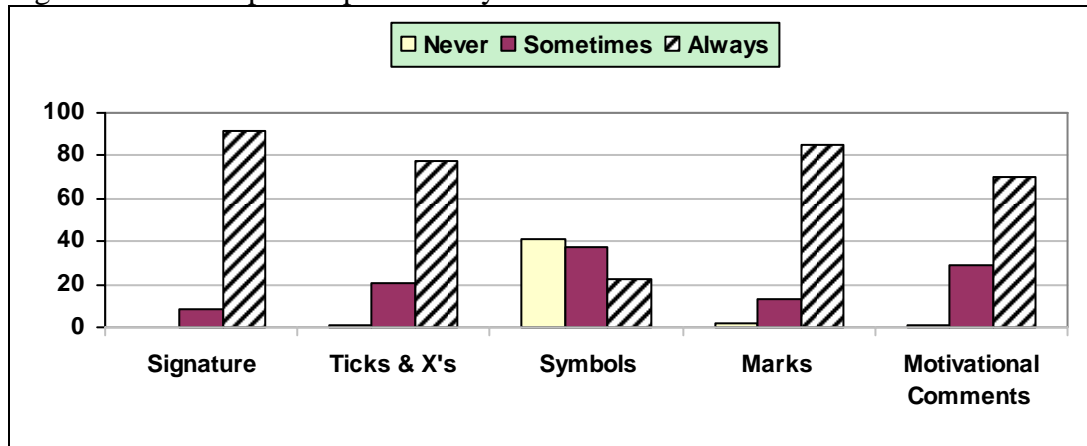
Table 4: Frequency of different assessment methods used in class by teachers (in %)

	Class tests	Classwork	Projects	Homework	Assignments
Once a term	2	1	1	8	13
Once a month	13	0	61	4	25
Twice a month	11	4	4	7	12
Weekly	34	21	7	50	12
Daily	3	72	2	26	6

In terms of the nature of their responses to learner's written work, just over 80% of teachers reported that they always provided a signature, ticks or crosses and/or a numerical mark (Figure 6). Approximately 70% also reported that they provided motivational comments. A review of classwork and homework books as well as the portfolios and learner report cards found that that classwork was being regularly marked and that teacher responses comprised primarily of ticks and crosses to

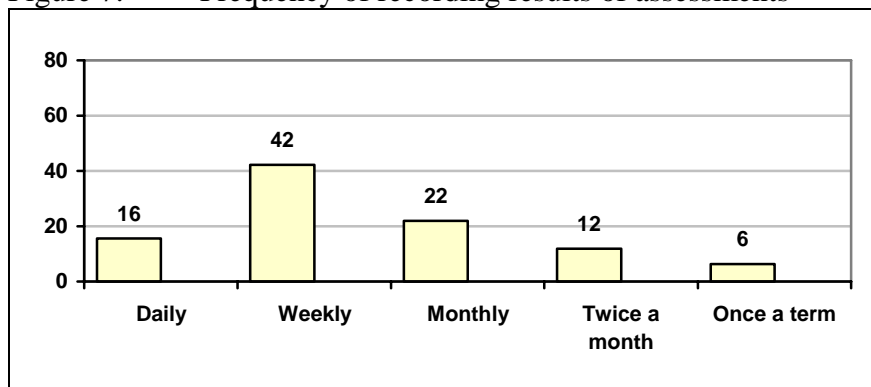
indicate correct or incorrect work. However, all the comment recorded were of “motivational in nature”, both positive and negative. For example, “*great improvement*”, “*well done*”, “*too many mistakes*”, “*don’t copy*”, “*be neat*”. None of the comments in the book reviewed provided learners with additional information on the nature of the errors made and how to correct these. For any significant learning to occur Wiliam and Thompson (2007) note that it is critical that teacher feedback provide information on how to address gaps that learner have in their learning.

Figure 6: Responses provided by teachers to their learner’s written work



Most teachers reported that they recorded results of their assessments on a weekly basis (42%) while 22 and 16% reported monthly and daily recording respectively (Figure 7). A small percentage (6%) noted that they only recorded results once a term. The recording of learner assessment results is a critical activity as it allows teachers to monitor and evaluate progress of their learners. It does seem that this is a standard monthly practice for the majority of teachers. While results from the site visits indicate that teachers do regularly record learner results this practice was not consistent across all the teachers observed and the documents reviewed.

Figure 7: Frequency of recording results of assessments



The most frequent use of results from classroom assessments reported by teachers is to report learner progress to parents, provide feedback to learners, evaluate curriculum coverage, diagnose learning problems and evaluate their teaching methods (Table 5). In addition, just over half of the teachers also noted that they sometimes used assessment results to assign extra homework or to group learners. These results indicate that the teachers surveyed do use the results from assessments to address learning and teaching issues in their classroom. Limited evidence of these practices was obtained during the lesson observations. What was observed, however, was the use of questioning to determine if the lesson was adequately understood.

Table 5: Frequency and use made of results from assessments by teachers in %

	Feedback to learners	Diagnose learning problems	Group learners	Report progress to parents	Assign extra homework	Evaluate curriculum coverage	Evaluate teaching methods
Rarely	4	4	8	0	16	6	4
Sometimes	20	37	52	16	58	21	38
Always	76	59	40	84	26	73	57

Results from the teacher interviews indicate that continuous assessment (CASS) was the single most cited approach to assessment within the classrooms (noted by 21 of the 30 teachers interviewed). It was clear that 18 respondents (60%) supported the broad idea of CASS and practiced it regularly. Six respondents described it as a “daily task”, done every day or as part of “every lesson”. Interestingly, one respondent noted that this approach to assessment is referred to as continuous assessment because it is done everyday. However, four respondents equated the CASS process with recording marks, two had a broader conception, stating that tests, homework, class work and worksheets were all sources for CASS.

Eight respondents (26%) reported on their use of portfolios. Going through the information in the portfolios, it was clear that the portfolios were directed towards the collection of activities comprising formal marks, rather than a diversity of class work that learners may have completed over the course of a school year. Similarly, 90% of teachers surveyed reported that their learner portfolios comprised of weekly, monthly or end of term marks as well as individual and group projects.

The interview data suggests that for this group of South African teachers classroom assessment is seen as a relatively formal process of recording marks for class work, or some other summative indicator of daily or frequent performance in the classroom. The broader meaning of classroom assessment seems not to have been adopted.

4.4 Classroom assessment problems facing teacher

While over 58% of teachers who responded to the survey agreed that classroom assessment was easy to implement and only 9% disagreed (34% were unsure), most teachers also agreed that classroom assessment was too time consuming (45%) while 30% disagreed and 25% noted that they were unsure.

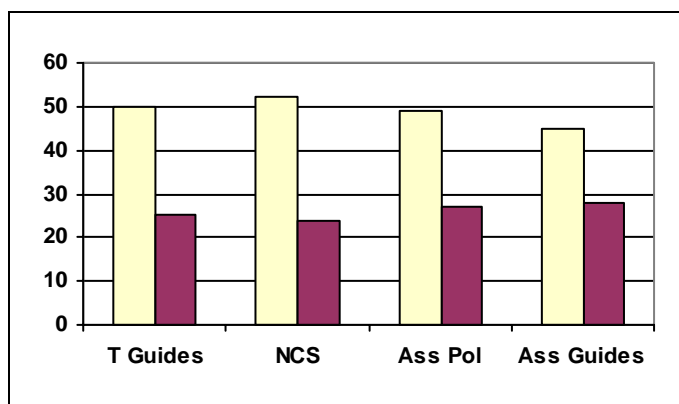
Additional information on key problems facing teachers in the implementation of assessment was obtained from the interviews. The national policy for assessment was seen as unclear or confusing by nine teachers (30%) and involved too much paper work for six (20%). However, these views are balanced out by nine teachers who described the national policy as satisfactory.

Time related issues were another theme raised by a number of teachers. Portfolios and peer assessment were too time consuming for six respondents (20%), while seven respondents noted that all assessment activities takes up too much time. Another perspective on time is found in the comment from 4 teachers (13%) that assessment time detracts from learning time. This issue is aptly noted in the following quote:

“There is a lot of paper work with lots of repetition and teachers are interested in teaching and cannot teach because of lots of recordings. The recordings take a lot of time, which is supposed to be devoted in actual teaching. There are a lot of things that need to be assessed which are not necessary ..” (School 7, Grade 4, Teacher Interview: 08-10-2008)

With regard to access to the official documents required by teachers (i.e. teacher guides, National Curriculum Statement, National Assessment Policy and Assessment Guidelines), less than half of the teachers reported that they had access to these documents with only a quarter indicating that they used these documents (Figure 8).

Figure 7: Teacher access to, and use of, official assessment documents

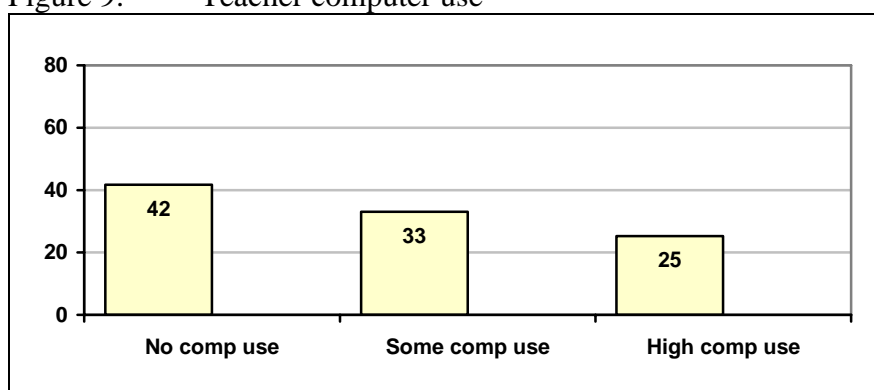


Suggestions for improving assessment noted during the interviews were predominantly directed at the national policy. A clearer, more constant but more flexible policy with less change were suggested by four teachers. Provisions to record more than two tasks per term so that learners may demonstrate their best performance came from two teachers while there was a single suggestion to change the education system back to what it was.

4.5 Teacher use of computers

Given that one of the criteria for the selection of schools for this study was the availability of computers, it is not surprising that 107 of 109 teachers (98%) reported that computers were available at their school (Figure 9). However, the majority of teachers (42%) reported that they did not use computers for any learning and teaching activities, with 33% noting that they only occasionally used computers and 25% reporting that they always used computers. No significant differences were found when disaggregating this data by gender.

Figure 9: Teacher computer use



When probed on the reasons for using computers, the majority of teachers who reported using computers noted they mainly used the computer for writing reports and keeping records (Table 6). Approximately two-thirds reported that they used computers for developing tests, which in practice translates to typing tests on the computer. In addition, over 70% also reported doing school relevant work on computers at home as well as at school, highlighting the importance of the availability of a computer at home.

Table 6: Main purpose for using computers

Use of computers for:	%
Writing reports	83
Keeping records	79
Developing class tests	73
Lesson planning	51
Classroom presentations	32

One area where additional information is required is the specific reasons forwarded by teachers who reported they did not use computers. Given the findings of the DES (2004) survey, this information is critical to ensure that the TARMII system is effectively implemented.

5. CONCLUSION AND WAY FORWARD

The results from this survey provide additional information on teacher assessment beliefs and practices as well as teacher use of computers for learning and teaching activities. These findings provide critical insights on key factors to address when introducing a computerised based assessment system into the classroom.

Given these findings, and the key challenges to be encountered in the introduction of the TARMII system, a number of key factors need to be considered in the development of an effective implementation strategy for the effective piloting of the TARMII system in South African schools. These factors include:

- Extending teacher practice of the use of assessment from merely the recording of marks to the use of assessment for first, identifying learner strengths and weaknesses, and second developing relevant teaching strategies to support the improvement of learning.
- Ensuring that teachers fully understand the purpose of the TARMII system, that the system is fully aligned to the National Curriculum Statements and can be readily integrated into their regular learning and teaching activities,
- Enhancing teacher confidence in the use of computers for improving their assessment practices
- Introducing the system in a manner that is aligned to, or enhances, the support systems and structures that currently exist for teachers for improving learning and teaching practices,
- Highlighting the value of the TARMII system in reducing teacher workloads with regard to: (i) producing high quality curriculum aligned classroom tests on demand, (ii) providing a mechanism for recording learner scores for use in monitoring learner progress over time, (iii) ensuring that the reports produced provide relevant information for teachers to identify learner needs and to obtain ideas on how to address these needs, and (iv) provide teachers with opportunities to review their teaching practices.

The next step is to pilot the TARMII system in the beginning of the 2010 school year. An integral part of the pilot is to evaluate the impact of the system on learner performance, thus the pilot will be conducted as a randomised control trial involving pre- and post-tests. Notwithstanding a number of logistical issues pertaining to the effective use of the system, e.g. availability of printing facilities, availability of paper, it is critical for the research team to ensure that the specific learning needs of teachers are also addressed and to be available to provide any assistance and support that will be required in the piloting of the system. Ultimately, however, the successful implementation of the TARMII system will be measured on its impact on the learning process, in particular, on the learning gains demonstrated by learners, which will only be known the completion of the evaluation of the pilot in early 2011.

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