CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

The final chapter provides the conclusions that have emerged, as a result of answering the research questions. Recommendations relating to these findings are suggested together with a final comment.

6.1   Findings

The answer to the main research question, which follows, has emerged as a result of the answers to the two research sub-questions below.

6.1.1   Main research question: How does the nature of the field of Music Technology and current South African education policy contribute to the development of a conceptual framework that informs the design of a qualification in Music Technology?

During this study, recurring concepts and issues that relate to the nature of the field of Music Technology and current South African education policy were identified. The concepts and issues were then grouped into themes that related to contextual issues (Chapter 5.1.1) and epistemological issues (Chapter 5.1.2).

Emerging from the nature of the field of Music Technology internationally, key roles and competencies were identified (Chapter 5.1.2.8). These roles and competencies were then applied to the national (South African) context, which is currently in a process of transformation, in order to guide curriculum designers, service providers and standards writers. The national context in turn helps map the career directions and underlying competencies that are necessary for institutions to use in the design of their learning programmes to meet national needs and standards.

The construction and nature of knowledge (epistemological issues) is vital to this process, in that all stakeholders need to make an input. Current South African education policy contributes by putting mechanisms in place, such as the NQF (Chapter 4.1.2) and a guiding education philosophy, such as transformational OBE (Chapter 4.2.3) that helps transform the pedagogy of the field in meeting the needs of the learner, community and society. The

concepts and issues relating to both the field and current education policy formed the conceptual framework (Chapter 5.1). Since qualification design is located within the curriculum development process, the conceptual framework needed to be located within a holistic curriculum development model, which contributed towards the design of a certificate qualification in Music Technology (Chapter 5.3.1).

6.1.2 Sub-question 1: What is the current nature of Music Technology internationally and as an emerging field of study in South Africa?

The construction of knowledge in Music Technology is constantly changing to accommodate new innovations and technologies (Chapter 2.2) in the field. Since the field is dynamic, it broadens the existing boundaries of knowledge production by extending these boundaries in most traditional disciplines, like Music. Music Technology creates potential for the integration of indigenous knowledge (knowledge specific to the South African context, such as traditional African music and local contemporary commercial music), which has been marginalized in current Music Education programmes (Chapter 2.5).

Internationally, Music Technology operates primarily through application, in that problems are not set within a disciplinary framework (Chapter 3.3.2 and 3.7). Technological development, which has given birth to this field of study (Chapter 2.2), locates Music Technology within an interdisciplinary context. By being interdisciplinary in nature, Music Technology blurs the boundaries that existed between the traditional disciplines of Music and Technology. Knowledge production in Music Technology operates, therefore, within this context.

Owing to the vastness of the field of Music Technology (Chapter 2.1.2 and 2.2) the responses by music institutions in South Africa, with regard to their curriculum and the exit level outcomes of their Music Technology programmes, have differed (Chapter 3.4). There exists no national consensus with regard to exit level outcomes of South African Music Technology programmes. Such disparities in learning programme outcomes place institutional needs above national education expectations, and this is contrary to the requirements of national education policy.

Music Technology is a vast field that is dynamic in nature. Internationally as well as in South Africa, the interdisciplinary nature of knowledge production in Music Technology as a field of study extends the boundaries of traditional disciplines.

6.1.3 Sub-question 2: What are the implications of current South African education policy for transformational qualification design?

South African education policy requires qualifications to adopt an outcomes-based approach, that is, qualifications having learning outcomes as the measurable outputs of learning (Chapter 4.2). These learning outcomes should be underpinned by critical outcomes (Chapter 4.2.4) which describe the competencies in terms of knowledge, skills and values which learners will need in order to be lifelong learners (Chapter 4.2.4). Qualification outcomes therefore are the sum total of knowledge, skills and values. The critical outcomes help to shape the construction of a qualification.

The contribution to the full personal development of each learner and the social and economic development of the nation at large (Chapter 4.1) need to be addressed in qualifications through generating outcomes and unit standards that are rooted in the critical outcomes (Chapter 4.2.4). These critical outcomes express the intended results of education and training in a broad and macro sense as they are integrated with personal and national goals and aims. They are generic and cross-curricular and are linked to all areas of education, as well as all spheres of life.

Access to, mobility and progression within education, training and career paths need to be facilitated (Chapter 4.1). Access should be made available through allowing the recognition of prior learning that occurs within the non-formal and informal sectors of society so that learners will be allowed to progress within the education framework (Chapter 5.3.1.6). The measuring of competence against learning outcomes (Chapter 5.4.1), rather than exclusively disciplinary knowledge, allows for mobility and progression within the education system between institutions and changing career paths.

The most significant aspects of the qualification are the purpose, outcomes and assessment criteria. This study focussed on these aspects and illustrates how South African education policy informs the construction of a proposed Certificate in Music Technology.

The purpose of the qualification, according to education policy, should specify the target population by indicating for whom the qualification is intended. It should also describe the performance achievements to be measured, that is, the key competencies and the context in which the qualification can be used (Chapter 5.3.1.3). In the case of Music Technology, the learners that are targeted are provided with a basis for further learning and development in the field. The qualification needs to fulfil an economic need in the form of occupational relevance with a potential for employability, improved productivity and entrepreneurial skills (Chapter 5.3.1.3).

Learners should be assessed against these exit level outcomes, and will be allowed mobility and transferability (Chapter 4.1) of knowledge and skills to other institutions and career paths. In writing exit level outcomes, the broad competencies required in the field need to be identified. These broad competencies need to be combined with the critical outcomes to generate core competencies and applied performance for the level at which the qualification is located (the word "pegged" instead of "located" is used in SAQA literature). Using such an outcomes generation process, eleven exit level outcomes have been identified for the qualification "Certificate in Music Technology" pegged at NQF Level 5 (Chapter 5.3.1.4). In generating the exit level outcomes for the Certificate in Music Technology, the critical outcomes and objectives of the NQF with regard to integration of knowledge, skills and values were used.

The assessment criteria that need to be used in order to evaluate whether the learner achieves the intended outcomes are closely aligned to the learning outcomes. The assessment criteria identify the essential evidence the assessor requires of a learner to prove that an outcome has been achieved. They are used to discriminate competent performance from that which is not yet competent. Education policy requires both the process and the product to be assessed. These assessment criteria need to be transparent, so that learners are also empowered by being able to evaluate their own performances. The transparency of assessment criteria also places a high level of accountability (Chapter 4.1.2) on the part of the providers of education.

In order to enhance the quality of education and training (Chapter 4.1), qualifications need to be measured against similar qualifications internationally (Chapter 5.3.1.9). International comparability with regard to trends and developments within a field ensures that South African qualifications are at the forefront of education.

The task facing South African education is to accomplish redress of the past unfair discrimination in education, training and employment opportunities (Chapter 4.1) without compromising quality (Chapter 5.3.1.12). The issue of redress needs to be built into the purpose of the qualification (Chapter 5.3.1.3), access (Chapter 5.3.1.6), recognition of prior learning (Chapter 5.3.1.11) and the exit level outcomes (Chapter 5.4.1).

Risks to be guarded against when subscribing to education policy include:

- The adoption of a technicist approach to standards generation, which will result in the field of study acquiring a secondary status to policy;
- The vocationalizing of the field where everything is measured in terms of outcomes, resulting in work outputs taking precedence over the theoretical foundation of the field; and
- The emphasis being placed exclusively on the assessment of outcomes that could be measured, where reflexive competencies are undervalued, for example in knowledge based on creativity, as in the case of music composition, MIDI sequencing and graphic notation.

The challenge to educators and standards writers therefore lies in translating the transformational principles into institutional programmatic realities.

6.2   Recommendations

The recommendations of this study are divided into sub-sections. The first two recommendations pertain to the findings in Chapter 6.1 that deal with standards generation (Chapter 6.2.1) and the general writing of learning outcomes (Chapter 6.2.2). The third is a general recommendation, and finally recommendations follow relating to further research.

6.2.1 Standards generation

The immediate priority for standards generators in Music Technology is to construct complete qualifications at the levels of certificates, diplomas and first degrees. In constructing whole qualifications, standards generators need to standardize transformational learning outcomes and assessment criteria that will be underpinned by the objectives of the NQF at each exit level of a certificate, diploma and degree.

The next priority would be to generate elective standards at NQF Level 4 (Grade 12) that are necessary to provide access to the majority of adult learners in industry with formal qualifications. These standards will allow prior learning to be recognized (RPL) and provide a basis for new learners to access Music Technology at NQF Level 5.

Finally, a consensual approach that involves the democratic participation of all stakeholders is vital to the standards generating process. The advantage of such an approach, apart from being legitimate, is that the standards that are generated are relevant to all sectors of the population and will allow for flexibility in the whole qualification. This will enable post-secondary institutions to develop learning programmes that will allow the reality of the context and resources (both physical and human) to be taken into account.

6.2.2 Writing transformational learning outcomes

When writing outcomes, one has to examine the underlying assumptions that SGBs are making about the nature of knowledge. Knowledge as in the case of Music Technology, which has been highlighted in Chapter 5.1.2, is relative, whereas traditional disciplinary knowledge that is still the basis of instruction at most post-secondary institutions is viewed as absolute or fixed. Therefore the challenge in writing learning outcomes lies in shifting the traditional assumption that knowledge is absolute, towards knowledge as being relative and dynamic in context.

Central to the writing of transformational outcomes are the critical outcomes. These critical outcomes underpin the writing of learning outcomes and proposers of unit standards and qualifications will need to show how these are developed within each unit standard/ qualification. The critical outcomes are vital in standards generation in that they provide the

broad, general knowledge, skills, attitudes and values necessary for a learner to cope with lifelong learning.

In standards generation (see Chapter 6.2.1) there must be an integration of theory and practice; whereby a balance between these aspects within the qualification will need to be maintained. Theory that is acquired will need to be applied in relevant contexts. Therefore the assessment criteria that support the learning outcomes should be reflexive and allow learners to evaluate themselves and the work of their peers, apart from being assessed by educators/moderators. This ensures accountability on the part of all educators and learners.

The standards generation process (see Chapter 6.2.1) should be focused on fostering lifelong learning, whereby learners at any stage in their learning career are allowed to pick up learning at the point where they left off. Learning does not stop when one finishes formal education; everyone should keep adding to their skills and knowledge throughout their lifetime. The recognition of prior learning is designed to encourage the formal acknowledgement of learning which took place previously.

The danger that exists with the writing of learning outcomes is that one could easily write job outputs (tasks) instead of learning outcomes. The focus needs to be on the actual learning and not the tasks.

The risk that education in South Africa faces is that education institutions could very easily "dress-up" existing education programmes in SAQA jargon and pass these programmes off as meeting the transformational policies of government. This results from the ambiguities (different perceptions about OBE) that surround policy.

SAQA policy could be simpler; as identified in this study three issues are vital in addressing the new education paradigm, namely the objectives of the NQF, transformational OBE and the critical outcomes.

6.2.3 Further research

Three recommendations for further research are proposed.

- Firstly, the Music Technology qualification designed in Chapter 5.3.1 needs to be

field-tested. This is necessary in order to examine whether the stated purpose, exit level outcomes, assessment criteria and relevant content in the Certificate in Music Technology are achieved through its actual implementation in the institutional context.

- Secondly, the issue of knowledge production in the standards generation process need to be examined for the sake of legitimacy, to establish which voices dominate in the SGB process, and which voices have a valid claim towards knowledge production.

- Finally, the development of a theory for standards generation in the South African context through a qualitative study of the process of standards writing in different fields is needed. This allows for future qualifications to be grounded in education theory and discourse rather than being a technicist response to policy requirements.

6.3   Conclusions

With regard to the main research question and three sub-questions posed at the outset of this study, the following conclusions are drawn:

- Music Technology is a dynamic, interdisciplinary body of knowledge that is socially constructed and market driven. Music Technology is therefore dependent on various contexts (social, economic, cultural, institutional) and conforms to Mode 2 knowledge production (see Chapter 3.2.8), which is largely application-based.

- Current education policy supports technology-based instruction, which positions Music Technology ideally despite the fact that arts-based disciplines in the upper education sector (above Grade 9) are being marginalized. Besides, the nature of Music Technology allows the field of study to spearhead the transformation process in education because it is current, relevant, provides access to all learners interested in this field, is outcomes-driven and is rooted in life roles and lifelong learning.

- This study has proved, in the case of the third research sub-question (see Chapter 6.1.3), that it is possible to let policy issues correspond with an emerging field of study. However, certain compromises need to be made (Chapter 5.1). This study did not simply accept education policy as being merely symbolic

statements, encapsulated in national policy documents (Chapters 1.6.5, 4.1 and 4.2), but strived towards realistic implementation challenges in the mainstream of education. In doing so, this study provides a theory that could be used for qualification design by education practitioners and standards writers, based not only on education policy documentation (Chapter 4.1 and 4.2), but also on critical discourse (Chapters 2, 3, 5.1 and 5.2).

Finally, the challenges facing Music Technology pedagogy would be to:

- Implement this Certificate in Music Technology;
- Design a learning programme based on the exit level outcomes of this qualification; and
- Implement the learning programme taking into account the pedagogical issues at the provider and learner level within the curriculum development process.

On a more general level, prior to meeting the above-mentioned challenges, the institutional and organizational changes that are required include:

- A restructuring of present systems;
- Aligning systems to yield outcomes;
- Focus on quality management and accountability;
- Training and support; capacity building of staff;
- The development of a research culture; and
- Finally, a critical discourse in standards generation.

6.4　Closing comment

As a supporter of education transformation within the South African context, a researcher, a believer in technology-based education and a musician, I would like to state that it is important to remember that technology is not an end in itself; it is a tool through which one can transmit one's ideas, search for information, gain access to the world's information resources, and improve scholarship. Technology itself is not the end. The end lies in good scholarship. In the same way the network itself is not the end, but a network of learners is. Technology should enhance the opportunity for greater scholarship and community.