

# **Towards a conceptual framework for the design of a qualification in Music Technology at post-secondary institutions in South Africa**

by

**Chatradari Devroop**

A thesis submitted in partial fulfilment of the requirements for the degree

**Doctor of Music**

in the

**Department of Music**

**School for the Arts**

**University of Pretoria**

**Supervisor: Prof C van Niekerk**  
**Co-supervisors: Prof H H van der Mescht**  
**Dr J P Jacobs**

**May 2002**

## ABSTRACT

This study examines the implications of education policy in South Africa on a transformational qualification design for Music Technology as a field of study. The study constructs a conceptual framework that informs the design of a qualification in Music Technology at post-secondary school level, using the knowledge and trends in the field of Music Technology and taking into account the requirements of South African education policy. An exemplar of the qualification, a Certificate in Music Technology at National Qualifications Framework Level 5, as required in the South African education framework, is presented.

The main research question that this study addresses is:

- 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?

This research question is broken down into two specific sub-questions:

- What is the current nature of Music Technology internationally and as an emerging field of study in South Africa?
- What are the implications of current South African education policy for transformational qualification design?

The findings that emerge from the investigation of the research questions are:

- Music Technology is a vast, dynamic and constantly evolving field. Internationally as well as in South Africa, knowledge production in Music Technology is interdisciplinary in nature.
- Literature on Music Technology and technology-based education internationally shows no clear consensus with regard to qualification outcomes in Music Technology.
- The transformational agenda of South African education policy requires qualifications to integrate education and training, address the imbalances of the

past education practices and contribute towards the life performance roles of learners.

- South African education policy provides a qualification framework based on learning outcomes comprising of a combination of theory and practice. This serves the life performance roles of learners that guide the construction of a qualification in Music Technology.

Training in Music Technology internationally produces graduates with diverse specialties. Often these graduates do not meet national employment requirements in areas of music industry and education in countries where such requirements are established. This research addresses the gap that exists in South African education policy with regard to Music Technology as an emerging field of study in South Africa, to guide providers of education and to address national employment requirements.

The research is predominantly a qualitative study that uses literature survey, an overview of international trends in Music Technology, a critical analysis of existing South African programmes, interviews and Internet surveys.

*Keywords:*

Music Technology, Music Technology instruction, qualification design, outcomes-based education, South African education policy, interdisciplinary study, conceptual framework, curriculum development, post-secondary qualification, Certificate in Music Technology.



## DEDICATION

I dedicate this work to my late parents, Devroop and Chaiterwanthee Ramnunan, who instilled in our family the value of education and who under very difficult circumstances made it their life's goal to give me, my brothers and sister a decent education.

*Though we have made great strides  
in reconstructing South Africa's education system,  
a great deal more needs to be done.*

(Mandela 1999: 5)

## ACKNOWLEDGEMENTS

I wish to express my sincerest thanks to the following people for their assistance with this study:

- My brother and former student, Dr K. Devroop (University of North Texas) – for the gathering of sources, monitoring my progress and being very supportive throughout the writing of this study.
- Dr G. M. Steyn – for proof reading, data gathering and processing and for keeping me on track.
- My colleagues, M. Duby and Dr D. Galloway – for valuable discussions, deliberations and keeping me focused at all times.
- The MEUSSA team members – for discussions and heated debates at times.
- Prof C. van Niekerk (University of Pretoria) – for supervision and for putting up with my outbursts and dissatisfactions during the entire research process.
- Prof H. H. van der Mescht (University of Pretoria) – for supervision and guidance.
- Dr J. P. Jacobs (University of Pretoria) – for supervision and recommendations regarding subject specific issues.
- Prof K. Chesky (University of North Texas, Centre for Music and Medicine) – for valuable inputs with regard to the structure of this study.
- Prof H. Frölich (ex-faculty University of North Texas) – for guidance with this project and for making me believe that I can make a difference to music education in South Africa.
- Dr S. Goodall (ex-University of Durban-Westville) – for her expertise, inputs and guidance with this research.
- Prof C. Lucia (University of the Witwatersrand) – for her expertise, suggestions and recommendations as a critical friend with regards to this research.
- My students in Music Technology at the University of Pretoria over the past five years - for making me see the need for this research.
- My post-graduate students P. van Zyl and A. Joubert – for their valuable assistance with data capture, information processing, verification of data and various brainstorming sessions.
- Prof D. S. Mash (Vice President of Technology, Berklee College of Music, Boston) – for continued guidance, support and assistance with the Music Technology related matters.

- Prof J. A. Fern (Indiana University-Purdue University, Indianapolis) – for inspiration and showing me the way to undertake projects in Music Technology curriculum design.
- Prof J. Bräuninger (University of Natal-Durban) – for inputs, evaluations and suggestions with regard to the Music Technology programme at the University of Pretoria.
- Mr M. Titlestad (UNISA) – for editorial correction and input.
- Prof S. Berkhout (University of Pretoria) – for an overview of unit standards-based qualifications.
- Mr V. Naidu (SAQA/GICD) – for guidance in formulating and design of the qualification, constant supervision and monitoring of my progress and SAQA related issues.
- Mr B. Pachai (SAQA) – for resources, guidance and help with SAQA related issues.
- The music library staff at the University of Pretoria and the late Ms R. Botha for their kind assistance.
- Drs A. Brown (Queensland University for Technology, Australia), K. Fields (Tsinghua University, China) and Prof P. Lansky (Princeton University, USA) – for their valuable insight into Music Technology and for responding promptly to my e-mail questions.
- Prof V. Ram and Dr I. Ram – for valuable inputs, suggestions and discussions, and for giving me a sense of direction with this study when I felt completely lost and despondent.
- Mr R. Rose – for editorial comments and suggestions.
- Mrs J. Fourie – for editorial comments and suggestions.
- Ms H. Lilley – for assisting with issues relating to qualification design and the formulation of exit level outcomes and unit standards in line with SAQA requirements.
- My wife, Shamila – for putting up with me neglecting my family when doing this research.
- My son Devesh – for being my inspiration and giving me a reason for aspiring toward creating a better music education for him and future generations of young South Africans.

## CONTENTS

	Page
Abstract	ii
Dedication	iv
Acknowledgements	v
Abbreviations and acronyms	xii
List of Figures	xiv
List of Tables	xv
Notes to the reader	xvi
<b>CHAPTER 1: INTRODUCTION</b>	<b>1-1</b>
1.1 Education legislative context	1-1
1.2 The need for this study	1-1
1.3 Rationale and the main research question	1-3
1.4 Research sub-questions	1-6
1.5 Purpose of this study	1-7
1.6 Research methodology	1-8
1.6.1 Literature review	1-8
1.6.2 Interviews and personal communication	1-9
1.6.3 Internet surveys	1-10
1.6.4 Validity and reliability of data	1-10
1.6.5 Education policies examined	1-11
1.7 Scope and limitations of this study	1-11
1.8 Assumptions	1-13
1.9 Explanation of terms	1-14
1.10 Overview of this study	1-16
<b>CHAPTER 2: PERSPECTIVES ON TECHNOLOGY, MUSIC TECHNOLOGY AND SOUTH AFRICAN MUSIC EDUCATION</b>	<b>2-1</b>
2.1 Technology, music and education	2-1
2.1.1 Technology defined	2-1
2.1.2 A working definition of Music Technology	2-2

2.1.3	The emergence of Music Technology as a field of study	2-6
2.1.4	Music Technology in South Africa	2-8
2.2	Historical development of technology in music	2-10
2.2.1	1877-1905: Early experiments	2-10
2.2.2	1906-1960: Vacuum tube era	2-11
2.2.3	1960-1980: The performance interface	2-14
2.2.4	1980 to the present: The digital domain	2-16
2.3	The sub-domains of Music Technology	2-19
2.3.1	Music processing	2-20
2.3.2	Music creation	2-20
2.4	Music technology as a tool	2-21
2.5	The predicament in South African music education	2-22
2.6	Music Technology within the current education system	2-24
2.7	Summary	2-25
<b>CHAPTER 3: REVIEW OF LITERATURE, AND ANALYSIS OF MUSIC TECHNOLOGY TRENDS</b>		<b>3-1</b>
3.1	Studies outside of music	3-1
3.1.1	Dixon: <i>Developing of a learning programme for the learning area Technology at Colleges of Education</i> (1998)	3-1
3.1.2	Dooley, Metcalf & Martinez: <i>A study of the adoption of computer technology by teachers</i> (1999)	3-3
3.1.3	Barnard: <i>Computers in FE (Further Education biology – a study of how teachers' classroom practice can be affected by different types of software</i> (1999)	3-5
3.1.4	Anand & Zaimi: <i>Computer-managed instruction: Evaluation of alternative methods of technology integration in higher education</i> (2000)	3-5
3.1.5	Reid: <i>Towards effective technology education in New Zealand</i> (2000)	3-6
3.1.6	Van Loggerenberg: <i>Implementing a problem-based learning model in the training of teachers for an outcomes-based technology curriculum</i> (2000)	3-7
3.1.7	Key emerging issues from studies outside of Music Technology	3-8
3.2	Studies in music	3-8
3.2.1	Faulk: <i>A curriculum guide designed to teach a basic knowledge of electronic music to undergraduate music education students</i> (1978)	3-9
3.2.2	Sanders: <i>The effect of computer-based instructional materials in a programme for visual diagnostic skills training of instrumental education students</i> (1980)	3-10
3.2.3	Grijalva: <i>Factors influencing computer use by music educators in California independent elementary and secondary schools</i> (1986)	3-11



3.2.4	<i>Fábregas: Designing and implementing an electronic music program in a community music school in New York City (1992)</i>	3-12
3.2.5	<i>Tredway: A curriculum for the study of audio, video, computer, and electronic music technology for undergraduate music education majors based on a survey among members of the Florida Music Educators Association (1994)</i>	3-13
3.2.6	<i>Jaeschke: Creating music using electronic music technology: curriculum materials and strategies for educators (1996)</i>	3-14
3.2.7	<i>Regenmorter: Integrating technology into the music curriculum of a California community college (1998)</i>	3-16
3.2.8	Key emerging issues from studies in Music Technology	3-17
3.3	Post-secondary trends in Music Technology internationally	3-18
3.3.1	Core components of Music Technology	3-19
3.3.1.1	Electronic Musical Instruments (EMI)	3-19
3.3.1.2	MIDI Sequencing (MS)	3-19
3.3.1.3	Music Notation (MN)	3-20
3.3.1.4	Computer-based Education/Instruction/Training (CBE/I/T)	3-20
3.3.1.5	Multimedia and Digitized Media (MDM)	3-20
3.3.1.6	Internet and Telecommunications (IT)	3-20
3.3.1.7	Computers, Information Systems and Lab Management (CISLM)	3-20
3.3.1.8	Computer Music (CM)	3-21
3.3.1.9	Audio Technology (AT)	3-21
3.3.1.10	Research in Music Technology (R)	3-22
3.3.2	Cross-curricula interaction	3-26
3.3.3	Music career paths and Music Technology components	3-29
3.4	Analysis of South African Music Technology trends	3-34
3.5	Identification of South African needs in Music Technology	3-42
3.6	Comparison of international and South African Music Technology core component trends	3-43
3.7	Summary	3-44
 <b>CHAPTER 4: AN OVERVIEW OF THE SOUTH AFRICAN EDUCATION STRUCTURE, OUTCOMES-BASED EDUCATION AND CURRICULUM AND THEIR IMPLICATIONS FOR QUALIFICATION DESIGN</b>		<b>4-1</b>
4.1	The South African education structure	4-1
4.1.1	Transformation	4-2
4.1.2	Composition of the National Qualifications Framework (NQF)	4-2
4.1.3	Learning outcomes	4-8
4.1.4	Qualification design	4-12
4.1.4.1	The qualification	4-12
4.1.4.2	The credit system	4-14
4.1.4.3	Unit standards	4-16
4.1.4.4	Range statements	4-17

4.1.4.5	Composition of a qualification	4-18
4.1.5	Guiding principles in qualification design	4-18
4.2	Outcomes-based education (OBE) and critical outcomes	4-19
4.2.1	Traditional OBE	4-20
4.2.2	Transitional OBE	4-20
4.2.3	Transformational OBE	4-21
4.2.4	Critical outcomes	4-22
4.3	Definition of curriculum	4-25
4.4	Curriculum development process	4-27
4.5	Summary	4-29
 <b>CHAPTER 5: A CONCEPTUAL FRAMEWORK AND DESIGN OF A QUALIFICATION IN MUSIC TECHNOLOGY</b>		 <b>5-1</b>
5.1	A conceptual framework	5-2
5.1.1	Contextual issues	5-3
5.1.1.1	International context	5-3
5.1.1.2	National context	5-4
5.1.1.3	Institutional context	5-5
5.1.2	Epistemological issues	5-7
5.1.2.1	How is knowledge produced?	5-7
5.1.2.2	Who produces knowledge?	5-7
5.1.2.3	What knowledge is selected for the qualification in Music Technology?	5-8
5.1.2.4	The impact of OBE on the pedagogy of Music Technology	5-8
5.1.2.5	The integration of theory and practice	5-9
5.1.2.6	Applied competence	5-9
5.1.2.7	Integration between foundational, practical and reflexive competencies	5-9
5.1.2.8	Identifying key roles and competencies	5-10
5.1.2.8.1	Computer Musician	5-11
5.1.2.8.2	Audio Technologist	5-11
5.1.2.8.3	Technician	5-12
5.1.2.8.4	Sound Designer	5-12
5.1.2.8.5	Composer	5-12
5.1.2.8.6	Performer	5-12
5.1.2.8.7	Music Educator	5-12
5.1.2.8.8	Music Consultant	5-12
5.1.2.8.9	Researcher	5-13
5.1.2.8.10	Multimedia Developer	5-13
5.1.2.8.11	Music Software Developer	5-13
5.1.2.8.12	Summary of a Music Technologist's role	5-13
5.1.2.9	Determining the level descriptors	5-14
5.1.3	The role of the critical cross-field outcomes on qualification design	5-16
5.2	Curriculum development model	5-17

5.3	Qualification design process	5-20
5.3.1	Constructing the proposed Certificate in Music Technology	5-20
5.3.1.1	Title of qualification	5-23
5.3.1.2	Rationale	5-23
5.3.1.3	Purpose of the qualification	5-23
5.3.1.4	Level	5-24
5.3.1.5	Credits	5-24
5.3.1.6	Access to the qualification	5-24
5.3.1.7	Organizing Field and Sub-Field for the qualification	5-24
5.3.1.8	Learning assumed to be in place	5-25
5.3.1.9	International comparability	5-25
5.3.1.10	Integrated assessment	5-25
5.3.1.11	Recognition of prior learning (RPL)	5-26
5.3.1.12	Moderation	5-26
5.4	Outcomes	5-26
5.4.1	Exit level outcomes and assessment criteria	5-26
5.4.2	Critical cross-field outcomes	5-29
5.5	Summary	5-31
<b>CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS</b>		<b>6-1</b>
6.1	Findings	6-1
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?	6-1
6.1.2	Sub-question 1: What is the nature of Music Technology internationally and as an emerging field of study in South Africa?	6-2
6.1.3	Sub-question 2: What are the implications of current South African education policy for transformational qualification design?	6-3
6.2	Recommendations	6-5
6.2.1	Standards generation	6-6
6.2.2	Writing transformational learning outcomes	6-6
6.2.3	Further research	6-7
6.3	Conclusions	6-8
6.4	Closing comment	6-9
<b>Appendix A: Questionnaire: Music Technology</b>		<b>A-1</b>
<b>Appendix B: Follow-up questionnaire</b>		<b>A-4</b>
<b>Appendix C: The South African Music Industry directory: Category list</b>		<b>A-6</b>
<b>Appendix D: List of concepts emerging from this study</b>		<b>A-8</b>
<b>REFERENCE LIST</b>		<b>R-1</b>

## ABBREVIATIONS AND ACRONYMS

<b>ABSA</b>	Amalgamated Banks of South Africa
<b>AC</b>	Assessment Criteria
<b>ANC</b>	African National Congress
<b>AT</b>	Audio Technology
<b>ATKV</b>	Afrikaanse Taal- en Kultuurvereniging
<b>C2005</b>	Curriculum 2005
<b>CBE/I/T</b>	Computer-based Education/Instruction/Training
<b>CCO(s)</b>	Critical Cross-field Outcomes
<b>CD(R)(RW)(ROM)</b>	Compact Disk (Recordable)(Rewritable)(Read Only Memory)
<b>CISLM</b>	Computers, Information Systems and Laboratory Management
<b>CM</b>	Computer Music
<b>CMI</b>	Computer Music Instrument
<b>COTEP</b>	Committee on Teacher Education Policy
<b>DAT</b>	Digital Audio Tape
<b>DCC</b>	Digital Compact Cassette
<b>DoE</b>	Department of Education
<b>DVD</b>	Digital Versatile Disk
<b>ELO(s)</b>	Exit Level Outcomes
<b>EMI(s)</b>	Electronic Musical Instrument(s)
<b>ETQA(s)</b>	Education and Training Quality Assurer(s)
<b>FET(B/C)</b>	Further Education and Training (Band/Certificate)
<b>FM</b>	Frequency Modulation
<b>GET(B/C)</b>	General Education and Training (Band/Certificate)
<b>HET(B/C)</b>	Higher Education and Training (Band/Certificate)
<b>HSRC</b>	Human Sciences Research Council
<b>IRC</b>	Internet Relay Chat
<b>IRCAM</b>	<i>Institut de Recherche et Coordination Acoustique/Musique</i> (Institute for Research and Coordination of Acoustics and Music) (Paris, France)
<b>ISME</b>	International Society of Music Educators
<b>IT</b>	Internet and Telecommunications
<b>IUPUI</b>	Indiana University-Purdue University, Indianapolis, Indiana, USA

<b>MAC</b>	Apple Macintosh Computer
<b>MDM</b>	Multimedia and Digitized Media
<b>MENC</b>	Music Educators National Conference (USA)
<b>MEUSSA</b>	Music Education Unit Standards for Southern Africa
<b>MIDI</b>	Musical Instrument Digital Interface
<b>MIT</b>	Massachusetts Institute of Technology (USA)
<b>MMCP</b>	Manhattanville Music Curriculum Project
<b>MN</b>	Music Notation
<b>MP3/MPEG 3</b>	Motion Picture Expert Group, Layer 3
<b>MS</b>	MIDI Sequencing
<b>NGO(s)</b>	Non-Governmental Organization(s)
<b>NQF</b>	National Qualifications Framework
<b>NSB</b>	National Standards Body
<b>OBE(T)</b>	Outcomes-based Education (and Training)
<b>ORTSTEP</b>	ORT-Science and Technology Education Project
<b>PBL</b>	Problem-based learning
<b>PC</b>	Personal computer
<b>PROTEC</b>	Programme for Technological Careers
<b>R</b>	Research in Music Technology
<b>RCA</b>	Radio Corporation of America
<b>RPL</b>	Recognition of Prior Learning
<b>RS(s)</b>	Range Statements
<b>SA</b>	South Africa
<b>SANLAM</b>	Suid-Afrikaanse Lewensassuransiematskappy
<b>SAQA</b>	South African Qualifications Authority
<b>SASOL</b>	Suid-Afrikaanse Steenkool-, Olie- en Gaskorporasie
<b>SGB</b>	Standards Generating Body
<b>SO(s)</b>	Specific outcomes
<b>UK</b>	United Kingdom
<b>UP</b>	University of Pretoria
<b>USA</b>	United States of America
<b>UNISA</b>	University of South Africa
<b>WWW</b>	World Wide Web

## LIST OF FIGURES

	Page
Figure 1.1 Structure of this study	1-17
Figure 3.1 Weighting of Music Technology core components internationally	3-25
Figure 3.2 Cross-curricula interaction of Music Technology and eight other areas	3-26
Figure 3.3 Institutions offering Music Technology core components in South Africa	3-38
Figure 3.4 Comparison of international and South African core component trends	3-43
Figure 4.1 The anchoring of the worlds of curriculum, professional practice and work to the qualification design process	4-13
Figure 4.2 Draft qualification structure for Music Technology	4-16
Figure 4.3 The relationship between qualifications, unit standards and outcomes	4-17
Figure 4.4 Fundamental life performance roles	4-24
Figure 4.5 Curriculum development process	4-28
Figure 5.1 Illustration of the conceptual framework highlighting the concepts and issues that will inform qualification design in Music Technology	5-2
Figure 5.2 Primary career specializations for the Music Technologist	5-11
Figure 5.3 A proposed curriculum development model	5-18
Figure 5.4 Construction of the Certificate in Music Technology	5-20

## LIST OF TABLES

	Page
Table 3.1 International areas of focus regarding Music Technology core components	3-23
Table 3.2 Relationship between cross-curricula areas and Music Technology components	3-27
Table 3.3 Music career paths and their relationship to Music Technology core components	3-29
Table 3.4 Questionnaire results pertaining to Music Technology programmes offered in South Africa in 2001	3-36
Table 3.5 Student population distribution in Music Technology studies in South Africa in 2001	3-37
Table 3.6 Analysis of questionnaire results according to national education requirements	3-40
Table 4.1 Structure of the NQF	4-6
Table 4.2 NSB Organizing Fields and Sub-Fields	4-7
Table 4.3 Comparison of the old and new education systems in South Africa	4-9
Table 4.4 Scope of learning according to the NQF	4-10
Table 4.5 Credit allocation as per whole qualification	4-15
Table 4.6 Composition of a qualification	4-18
Table 4.7 Guiding principles in qualification design	4-19
Table 5.1 Revised level descriptors for the NQF Levels 4 to 6	5-15
Table 5.2 Qualification construction for the Certificate in Music Technology	5-22
Table 5.3 Exit level outcomes and assessment criteria for the Certificate in Music Technology	5-27

## NOTES TO THE READER

1. The abbreviations CBE, CBI, CBT will be collectively referred to as CBE unless otherwise stipulated.
2. David Elliot's (1995: 12-13) four basic meanings regarding music education, "education in music", "education about music", "education for music", and "education by means of music", will underpin the use of the term "music education" in this study.
3. The term "Music Technology" refers to the course/subject/field of study, as opposed to the term "music technology", which refers to the technology/activity in music. Likewise the use of the upper case "M" in Music refers to the discipline whereas lower case "m" for music implies the generic use of the term.
4. The use of the upper case in "Field" refers to the Organizing Field classification of the National Standards Body 02.
5. To prevent confusion between the National Standards Body's "Field" (Organizing Field) and Music Technology as "field" (which is actually an area within the music sub-field), I shall refer to Music Technology as "a field of study".
6. The use of the term "component" in this study refers to a designated area of study within Music Technology that I have classified on the basis of its content. Such components will be indicated by the use of the upper case, for example Music Notation.
7. The areas of Sound Engineering, Audio Engineering and aspects relating to sound recording, manipulation and/or audio recording, will collectively be referred to as Audio Technology.
8. Several authors use the term "definition" loosely. When referring to definitions other than mine, for the sake of correct citation I adopted these authors' loose usage of the term as suggested in their literature.
9. In cases where part of a quotation has been used, I chose to indicate the omitted part(s) by means of three dots (...), preceding or following the quotation, depending on the part of the quotation being cited.
10. The use of the terms "historically advantaged" or "historically disadvantaged" within the South African context has political connotations. "Historically advantaged" refers to those sectors of the South African population that were granted a privileged status by virtue of their race (White in this case, or of European descent) with regard to social status, funding and education by the apartheid government prior to the 1994



democratic elections in South Africa. “Historically disadvantaged” refers to sectors of the population (Black, Indian and Coloured citizens) that were deprived of the earlier mentioned privileges. Therefore a “historically advantaged” institution would refer to a “white” institution.

11. It has been the request of the respondents to the Questionnaires (Appendix A and B) to remain anonymous. Their confidentiality will therefore be maintained throughout this study.
12. The term “post-secondary” is used in this study to include all education institutions that offer qualifications beyond NQF Level 4, which include colleges, private providers of education, technikons and universities.
13. The institutions included in the survey in Chapter 3.3 were chosen arbitrarily, based on the notion that they offered some or other programme in Music Technology. Their research expertise, depth of their programme, historical advantage in terms of how early in the 20<sup>th</sup> century their programme came into existence or inter-departmental research correlation were not factors. Therefore the data presented in this section does not lend itself towards generalizations as the only truth.
14. In government documents there are sometimes grammatical and/or spelling mistakes. Instead of repeatedly identifying these mistakes, [*sic*] will only be used once after citation of these documents.
15. For the sake of consistency with South African Qualifications Authority literature, the terms “Organizing Field” and “NQF Level” or “Level” (when referring specifically to the level descriptor pegging), will be used with the upper case.