

"Blending with purpose": a multimodal model for Music Education

S Cruywagen
13255010

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Promoter: Prof HM Potgieter
Co-promoter: Dr L van der Merwe

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It all starts here [™]



Preface

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*“Die Here sorg vir my soos ‘n herder wat skape oppas;
ek het niks meer nodig nie” (Psalm 23:1, Die Boodskap).*

Abstract

The use of communication and information technologies has enriched teaching and learning experiences. To enhance the teaching and learning experience in Music Education (ME), the need for the incorporation of online technologies has led to the investigation of the *Blending with Purpose Multimodal Model* of Picciano. The research approach that guided the understanding of the main research question is a qualitative, single case study in an interpretive/constructivist paradigm. Picciano recommends that teachers and instructional designers use multiple approaches to meet the needs of a wide spectrum of students. The purpose of this case study is to understand teaching and learning in tertiary ME through multimodal learning (also referred to as blended learning) for B. Mus. and BA Mus. undergraduate students at the University of Pretoria (UP), South Africa.

South Africa is a multi-cultural country and students from different cultural backgrounds are represented in the ME modules. ME is an elective or fundamental module for full-time undergraduate students who enrol in B. Mus. or BA Mus. courses. The student groups focused on in this thesis are in their first, second or third year of study. These students have different personality types and learning styles and multimodal pedagogical objectives and activities can accommodate this diversity.

A literature study was carried out in order to describe the current trends related to multimodal learning and restructuring a music education curriculum in higher education. The goals and objectives of the ME curriculum meet the needs of the music students by the use of:

- delivery of content linguistically, through the learning management system (clickUP), paper and media;
- social and emotional support in a face-to-face mode;
- student cooperation by means of dialectic or questioning activities (e.g. class discussions and using the online discussion boards);
- synthesising, evaluating, and assessing learning as objectives (papers, essays, tests, student presentations, PowerPoint presentations, etc.);

- content sharing through student collaboration (group problem-solving: group projects and wikis); and
- reflection as pedagogical strategy.

Data was gathered by conducting open-ended interviews with students. Teaching and learning activities of the ME module at UP were observed to document the integration of the multimodal model of Picciano and students' online participation documents were collected. The data was organised and categorised with ATLAS.ti 7.1.6 in order to execute a case analysis. Three main themes emerged: The wide spectrum of students, the ME curriculum and Picciano's *Blending with Purpose Multimodal Model*. From the findings I have created a teaching and learning model – "The diversity of considerations when planning the ME curriculum at UP". Even though the findings are specific to the ME modules at UP, diverse possibilities exist for the application of the created multimodal model in national and international higher music education.

Key words:

Multimodal learning (blended learning); face-to-face and online activities, music education course goals and objectives; tertiary music education (subject Music Education) and the Net Generation.

NWU Ethics approval no.: NWU-00173-13-A7

Abstrak

Die gebruik van kommunikasie- en inligtingstechnologie het onderrig- en leerervaring verryk. Ten einde die onderrig- en leerervaring in Musiekopvoeding te verbeter, het die behoefte aan die inkorporering van aanlyn-tegnologie tot die ondersoek van die *Blending with Purpose Multimodal Model* van Picciano gelei. Die navorsingsbenadering wat die verstaan van die hoofnavorsingsvraag gerig het, is 'n kwalitatiewe enkelgevallestudie binne 'n interpretatiewe/konstruktivistiese paradigma. Picciano beveel aan dat onderwysers en instruksionele ontwerpers meervoudige benaderings gebruik om die behoeftes van 'n wye spektrum studente te akkommodeer. Die doel van hierdie gevallestudie is om onderrig en leer in tersiêre Musiekopvoeding d.m.v. multimodale leer (ook bekend as vervlegte leer) aan BMus. En BA Mus. voorgraadse studente aan die Universiteit van Pretoria (UP), Suid-Afrika te begryp.

Suid-Afrika is 'n multikulturele land en studente uit verskillende kulturele agtergronde word in die Musiekopvoedingmodules verteenwoordig. Musiekopvoeding is 'n keuse- of fundamentele module vir voltydse voorgraadse studente wat vir die BMus.- of BA Mus.-kursusse inskryf. Die studentegroepe waarop in hierdie proefskrif gefokus word, is in hul eerste, tweede en derde studiejaar. Hierdie studente het verskillende persoonlikheidsienskappe en leerstyle en multimodale opvoedkundige doelwitte en aktiwiteite kan hierdie verskeidenheid akkommodeer.

'n Literatuurstudie is onderneem om heersende tendense in multimodale leer en die herkurrikulering van musiekopvoeding in hoëronderrig te beskryf. Die doelstellings en doelwitte van die Musiekopvoedingkurrikulum voldoen aan die behoeftes van musiekstudente deur die gebruik van:

- mondelinge oordrag van inhoud, deur die leerbestuurstelsel (clickUP), papiergedrewe en ander media;
- sosiale en emosionele ondersteuning in kontakmodus;
- studentesamewerking d.m.v. dialektiek (bv. klasbesprekings en die gebruik van die aanlynbesprekingsbord);
- die sintese, evaluering en assessering van leer as uitkoms (lesings, opstelle, toetse, studenteaanbiedings, PowerPoint aanbiedings, ens.);

- die verdeling van inhoud d.m.v. studentesamewerking (probleemoplossing in groepe: groepprojekte en wikis); en
- refleksie as instruksionele strategie.

Die data is d.m.v. ongestruktureerde onderhoude met die studente ingesamel. Onderrig- en leeraktiwiteite in die Musiekopvoedingmodule is waargeneem ten einde die integrasie met Picciano se multimodale model te dokumenteer en die studente se aanlyndokumente is ingesamel. Die data is m.b.v. ATLAS.ti 7.1.6 georganiseer en gekategoriseer om 'n gevallestudieanalyse te doen. Drie hoof temas is identifiseer: Die wye spektrum studente, die Musiekopvoedingkurrikulum en Picciano se *Blending with Purpose Multimodal Model*. Uit die bevindinge het ek 'n onderrig- en leermodel ontwerp – “The diversity of considerations when planning the ME curriculum at UP”. Alhoewel die bevindinge spesifiek op die Musiekopvoedingmodules aan UP betrekking het, bestaan daar verskeie moontlikhede om die ontwerpte multimodale model in internasionale hoërmusiekopvoeding toe te pas.

Sleutelbegrippe:

Multimodale leer (vervlegte leer); een-tot-een en aanlynaktiwiteite, musiekopvoeding-kursusdoelstellings en — doelwitte; tersiêre musiekopvoeding (vak Musiekopvoeding) en die Netgenerasie.

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*Figures designed by myself

**Figures adapted and redesigned by myself

***Figures copied from original source

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CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This case study explores a multimodal model for undergraduate music education in the Department of Music at the University of Pretoria. Prior to this research Music Education (ME)¹ at the University of Pretoria (UP) focused on face-to-face (contact) learning. Multimedia presentations on PowerPoint were and are still used as teaching media to move away from traditional or talk-and-chalk lectures to a more visually stimulating approach. UP has made several commitments (Pretoria, 2015) to support the value students may gain from learning through online activities and music educators at UP are challenged to design online environments that develop cognitive skills through technology-enhanced pedagogical approaches. The *Blending with Purpose Multimodal Model* of Picciano (2009) (Figure 1) recommends that teachers and instructional designers should use multiple approaches to meet the needs of a wide spectrum of students. This model has been used to redesign a music education curriculum that includes face-to-face and online technologies. To support e-learning technically the learning management system² Blackboard Learn™ was introduced and is now in use known as clickUP.

Digital media has initiated innovation in learning technologies and e-learning has expanded teaching and learning experiences (Liaw *et al.*, 2007:1066; Maier *et al.*, 1997:10; Paechter & Maier, 2010:292). In the 21st century higher education (HE)³ offers students a combination of technology, pedagogy and classroom design in a technology-rich environment (Long, 2005:60). The combination of assessment tasks, class discussions and collaborative discourses result in better learning. Paechter and Maier (2010:292-297) recruited a large and comprehensive sample of students from Austrian universities. The results of this research indicate that students prefer online systems because of their potential to provide a clear and coherent structure to the learning material, as

¹ *Music Education* (capitalised) refers to the subject that encompasses the following modules MPE170, MPE270 and MPE370. The concept *music education* is used to refer to the general field of music education.

² Literature also refers to course management system (CMS) (Picciano, 2009:6)

³ For this research the term "education" refers to teaching and learning.

well as to support self-regulated learning ⁴ and distributing information effectively. Face-to-face interaction is favoured where learning achievements are concerned, where communication among learners, cooperative learning situations and interaction with the instructor matter (Paechter & Maier, 2010:292-297).

Draper (2008:137) points out that a technological change is also reflected in the way that people listen to music, practise and learn music, as well as in the way that musicians collaborate (Salavuo, 2008:121). One of the main challenges for music education institutions is to create support structures that recognise the existence of non-institutional and BL environments.⁵ Institutional music education should take advantage of the constructive characteristics of these environments (Hargreaves *et al.*, 2003:157-158; Salavuo, 2006:253-271).

Innovations and challenges in music education curricula have forced teachers to reconsider music content and redesign schedules. Music educators should decide on which technologies to use, new ways to deliver teaching and learning and rethink assessment strategies (NAfME., 1998:2). Music educators should also search for better ways to engage students in music learning through critical discourse and reflection. These methods will increase the students' sense of presence and participation, as well as the quality of their critical and creative thinking in the classroom (Beyer, 1998:262; Fogarty & McTighe, 1993:162; Geertsen, 2003:3; Stoney & Oliver, 1999).⁶

Because of the high priority placed on students acquiring music teaching and learning skills, the focus should be placed on student learning and development, instructional strategies and effective techniques that help students. In order to achieve this goal, multiple approaches including face-to-

⁴ Self-regulated learning refers to a teaching learning environment where students have choices concerning the where, when and instruction of learning processes (Paechter & Maier, 2010:292-297).

⁵ Hybrid learning is an alternative term for BL and multimodal learning (Graham & Dziuban, 2008:270; Picciano, 2009:5). UP has approved a hybrid teaching and learning model for the University in 2015 (Pretoria, 2015) "Blended learning is a hybrid of classroom and online learning that includes some of the conveniences of online courses without the complete loss of face-to-face contact" (Rovai & Jordan, 2004:1).

⁶ Not all e-books downloaded from Amazon to the kindle™ application on my iPad have page numbers. Some e-books have only location numbers. In these cases I refer to chapters or sections in the text (University, 2012:18). Electronic articles sometimes do not have page numbers and are therefore cited without.

face methods and online technologies (i.e. audio, graphics, instant messaging, social networking, video clips and YouTube, podcasts, mobile learning) that address the learning needs of ME students should be used (Rennie & Morrison, 2013:Chapter 4). Multiple modalities encourage increased effectiveness, convenience and efficiency. In these learning experiences students are not only most comfortable but are also challenged to learn in other ways as well (Picciano, 2009:4; Vaughan, 2010:61).

Every learning environment differs according to respective teaching philosophies, disciplines, teaching situations, who the students are and the available resources. Picciano (2009:11) proposes a *Blending with Purpose Multimodal Conceptual Model* (Figure 1) for designing and developing blended learning (BL) courses and programmes. The most significant distinctive of this model is the notion that academic course goals and objectives determine which pedagogical approaches and technology will be used, and not vice versa. This multimodal model encompasses provided content, social/emotional support, dialectic/questioning activities, reflection as pedagogical strategy, student collaboration to generate content that can be shared, and synthesising, evaluating, and assessing learning as objectives. These objectives/activities and the approaches for achieving them are presented but other objectives can be added where appropriate.

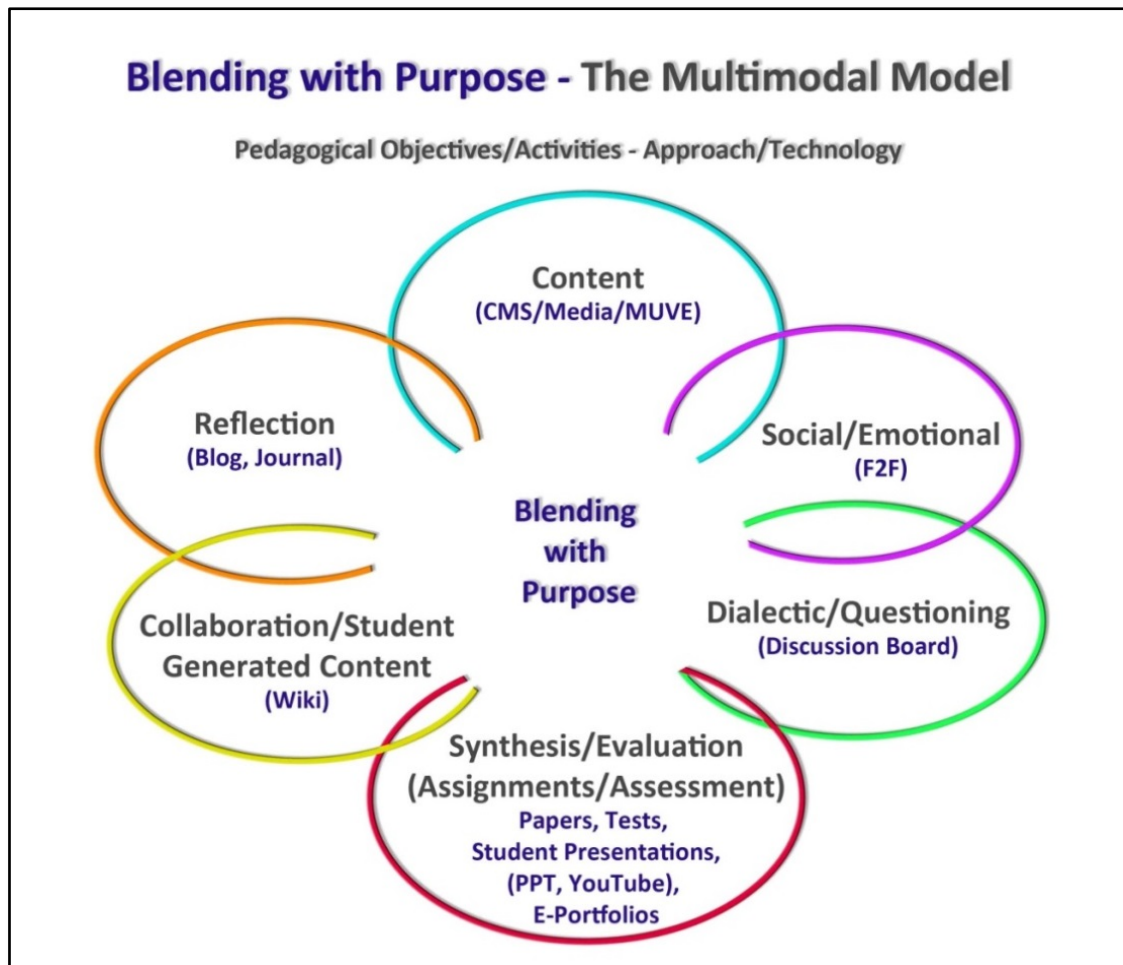


Figure 1: Blending with Purpose Multimodal Model — Picciano (2009:11)

1.2 Purpose statement

The purpose of this case study is to understand teaching and learning in tertiary Music Education through multimodal learning (also referred to as BL) for BMus. and BA Mus. undergraduate students at UP.

1.3 Research question

How can the *Blending with Purpose Multimodal Model* be understood to facilitate teaching and learning in Music Education at UP?

Sub-questions:

- What is the nature of blending with purpose, as described in literature?
- How can Music Education at UP be explained?
- How can the *Blending with Purpose Multimodal Model* be applied to the teaching and learning of Music Education at UP?

- What is the usefulness of the *Blending with Purpose Multimodal Model* in relation to Music Education at UP?

1.4 Research method

“Having an interest in knowing more about one’s practice, and indeed in *improving* one’s practice, leads to asking researchable questions, some of which are best approached through a qualitative research design” (Merriam, 2016:1). This study is about understanding teaching and learning in undergraduate music education for BMus. and BA Mus. undergraduate students at UP through the *Blending with Purpose* model by Picciano. undergraduate students at UP. A social constructivist worldview is used to describe and understand and interpret multimodal learning in ME.

A deductive, theory-first approach (Figure 2) developed an existing theory, *Blending with Purpose Multimodal Model* (Picciano, 2009) in a new context (teaching and learning in ME at UP).

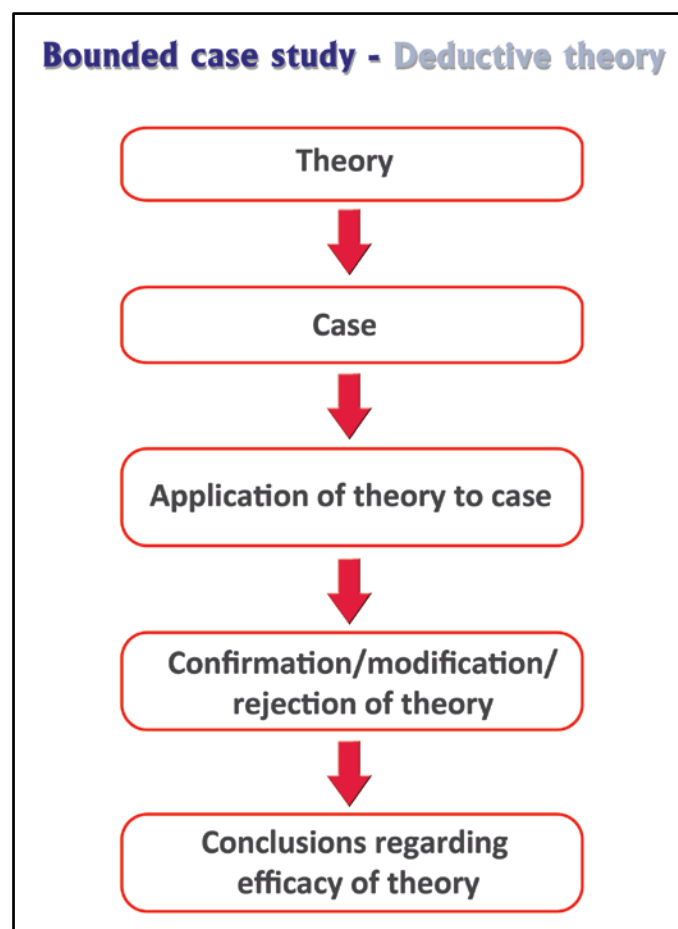


Figure 2: A sequential model of a theory-based case study (Rule & John, 2011:96,97)

Figure 3 illustrates how the existing theory of Picciano (2009) *Blending with Purpose Multimodal Model*, is applied in a new context (teaching and learning in ME at UP).

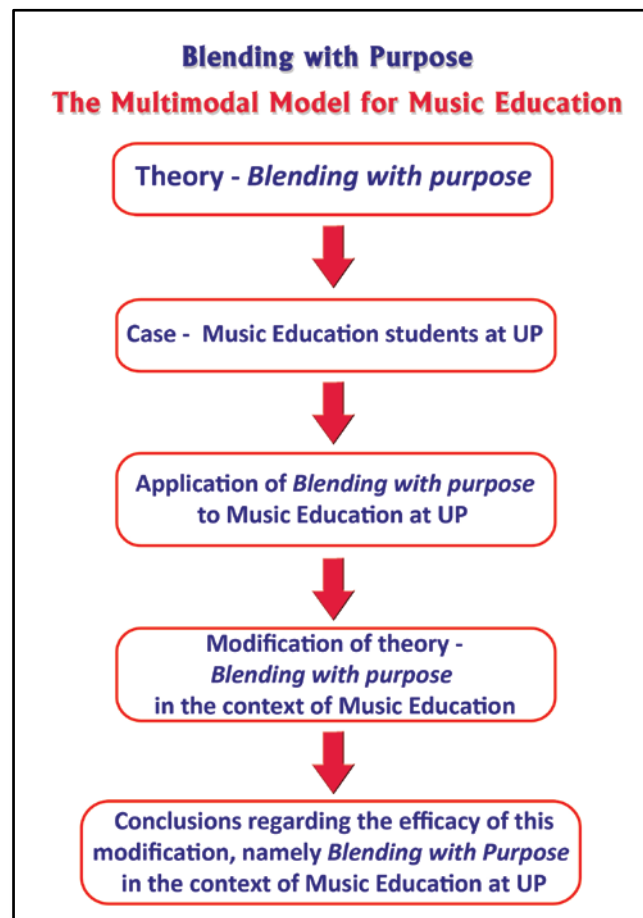


Figure 3: A sequential model of a theory-based case study in a new context (adapted from Rule and John's (2011:97)

1.4.1 Role of the researcher

I am a lecturer at the University of Pretoria (responsible for teaching ME) and the primary instrument for data collection and analysis. To understand the case I communicated with participants, explained and summarised the communication material and explored “unusual or unanticipated responses” (Merriam, 2016:16). Shortcomings and tendencies that might have an impact on the study were identified and monitored and I established how they might shape the collection and interpretation of data. As participant observer, I participated as ME lecturer and simultaneously observed how learners actively engage in utilising online technology in class. I can provide knowledge of specific incidents and behaviours (Merriam, 2016:139).

As a qualitative researcher I engaged in a succession of interconnected activities that included collection of suitable information to answer the developing research questions. Multiple phases of collecting data were used. Data was collected through observation, interviews, documents and audio-visual materials.

1.4.2 Data collection

According to Creswell (2013:Chapter 7) the series of activities in the process of collecting data are the following:⁷

- Locating a site/individual
- Gaining access and making rapport
- Purposeful sampling
- Forms of data
- Recording information
- Resolving field issues
- Storing data

1.4.2.1 Locating a site/individual

The site where the research was conducted was the University of Pretoria (UP). The programme most suitable for this research was ME at the Department of Music at UP. Unstructured interviews were conducted at this site during which individuals were asked open-ended questions and groups of undergraduate students were observed. The group participants were full-time undergraduate ME students at UP. They were enrolled for BMus. and BA Mus. in the ME course as first-, second- and third-year students. In this bounded system⁸ the focus of the study is on the case itself and is termed an intrinsic, single site case study (Creswell, 2013:Chapter 4).

1.4.2.2 Gaining access and making rapport

Permission was obtained to perform qualitative research, involving individuals and groups at the research site for this study. In the role of participant as observer, gaining access to the site (UP) did not present a problem. Inviting students to participate in this study was facilitated by the existing relationship

⁷Series of activities are directly quoted from Creswell (2013:Chapter 7).

⁸A case within a bounded system is bounded by time and place (Creswell, 2013:Chapter 4).

of trust. Qualitative interviewing highlights the importance of reflecting on the relationship that prevails between the interviewer and the interviewee (Creswell, 2013:Chapter 7).

1.4.2.3 Purposeful sampling

Yin (2009:Chapter 4) points out that multiple sources of evidence are likely to produce more convincing and accurate findings. Creswell (2013:Chapter 7) states that three considerations must be observed during the purposeful sampling approach in qualitative research: the selection of participants in the sample that fully describe perspectives and understanding about the cases; types of sampling strategy and the sample size; and extensive detail about each site or groups studied.

1.4.2.4 Forms of data

I conducted open-ended interviews that focused on the case study, while direct observation covered events in real time and participant observation covered the content of the case (Yin, 2009:Chapter 4). Data was also collected through documents and audio-visual material.

1.4.2.5 Recording information

An interview protocol enabled me to take notes on the responses of the interviewee during the interviews. Open-ended face-to-face interviews were conducted, video recorded and transcripts were made. Observations were video recorded and transcribed to protect the anonymity of participants. I developed a case study database. The integrated data set included observations, interviews, documents and audio-visual materials. This approach increased the “*reliability* of the entire case study” (Yin, 2009:Chapter 4).

1.4.2.6 Resolving field issues

The challenges in the observation process were to take reliable field notes and to detect the ideal moments to move from non-participant to participant. Observations helped me to narrow the broad picture over time. As interviewer I reflected on the relationship that existed between the students and me as the researcher.

1.4.2.7 Storing data

I created backup sets of all digital data that included video recordings, a database, and a rich visual representation of the research process. The identity of the participants has been protected.

To conduct a systematic literature study, international journal databases in EBSCOhost, such as Academic Search Premier, Arts abstracts, ERIC, MasterFILE Premier and RILM were utilised. Other databases that were searched include JSTOR, Proquest, Sage, SpringerLink, MEDLINE and the South African journal databases in Sabinet: SACat and SA ePublications; national and international databases for theses and dissertations: Nexus (SA), EBSCOhost (international) and search engines such as Google Scholar. The strength of an inquiry lies not only in the use of a variety of data collection methods and sources, but also in the use of different approaches to work with the data and to build the interpretive text (Henning *et al.*, 2004:103).

1.4.3 Data analysis

The process of analysis is much more than analysing text and image data. It also involves organising the data, an initial read through, coding and categorising themes, signifying the data and establish an interpretation (Creswell, 2013:Chapter 7). I had to develop my own analytical strategies. These strategies helped to process the evidence fairly and to produce compelling analytical conclusions, and ruled out alternative interpretations (Yin, 2009:Chapter 5). The preferred strategy was to rely on the theoretical propositions that led to this case study.

The computer-assisted tool ATLAS.ti 7.1.6 (Henning *et al.*, 2004:136; Saldaña, 2013:Chapter 1) helped me to code and categorise the descriptive text, collected from open-ended interviews, class observations and course documents (Henning *et al.*, 2004:137). A set of themes emerged from the analysis after rich discoveries had been made with coding methods that explored the case (Saldaña, 2013:Chapter 1).

1.5 Ethics

The results of qualitative research are valuable when it is done in an ethically, publically responsible way. If only a part of the research project is questionable or steered in an unethical manner, the integrity of the whole research is in doubt (Resnik, 2011).

Relations and the power balance between researchers and participants are embedded in qualitative research. Participants must be willing to contribute and share their experiences. (Orb *et al.*, 2000:93). I applied the appropriate ethical principles to protect the identity of participants in this research study.

NWU gave ethical consent to proceed with this research – ethics number NWU-00173-13-A7. The same procedure was followed with UP and the Registrar formally gave approval for the study to be conducted at UP (Addendum A.2). The outcomes will be communicated to the different gatekeepers, with a view to informing them about the value to be gained from its findings. Ethical consent-to-participate forms were presented to each participant (§ Addendum A.1).

1.6 Chapter division

The introduction and background to this case study are discussed in Chapter 1. The literature review in Chapter 2 explains multimodal teaching and learning in ME. This chapter discusses the multimodal model of Picciano, as well as other scholars' understanding of blended learning. It also explores the multiple approaches driven by curriculum design and pedagogical approaches to music education, especially within a blended teaching and learning environment.

Chapter 3 includes examples of multimodal teaching and learning activities to enable the reader to follow the discussion with supportive information. The process of preparing and constructing ME at UP course materials and online activities are discussed. Examples of assignments using a variety of online tools are presented and the ME module specifications are interpreted by explaining the articulation of the ME module with other modules in the music programme. The purpose statements and structures of the ME modules are also explained.

In Chapter 4 this qualitative research design, approach and research methods are explained in the light of a philosophical worldview. The multiple methods of data-collection strategies and complex reasoning to expose the emergent design are considered. The way that the data are represented to generate an interpretation is discussed. Chapter 5 presents the data analysis (pragmatic model) and introduces the emergent themes.

Chapter 6 shows how the comprehensive literature study has complemented the research experiences and new literature in order to strengthen this study. The thematic discussion, conclusion and suggested opportunities for further research are also presented in Chapter 6.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The design and ultimate use of a multimodal⁹ model in ME is the focus of this research. Multimodality focuses on the representation and learning potential of teaching resources and the ways in which both educators and students utilise these through the ways in which they interact in the class environment.

The body of literature (Cronin *et al.*, 2008:38) for this research is compiled from relevant academic research articles and books that focus on the study area (Figure 4).

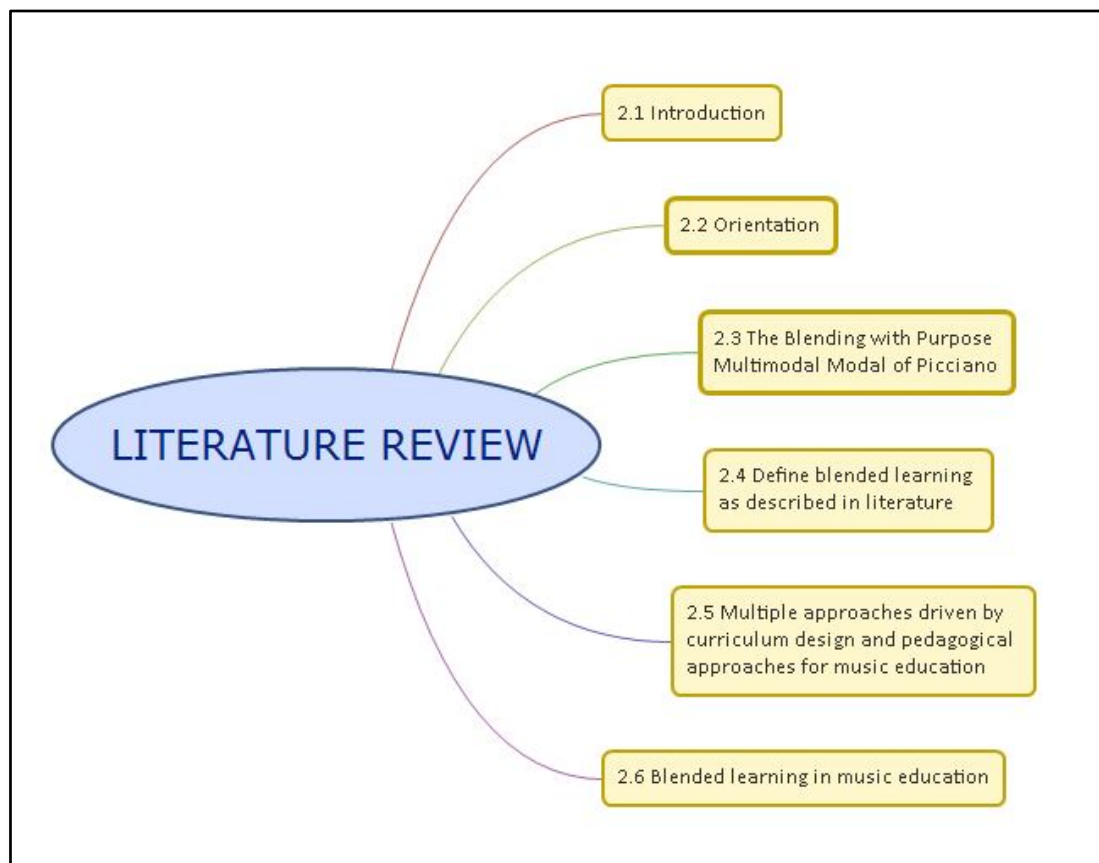


Figure 4: Outline of Chapter 2

I investigated the multimodal model for application to curriculum design and pedagogical approaches in music education. Picciano's model (Figure 1) perceives BL in the broadest sense as a diversity of technology and (or) media

⁹ In this research multimodality refers to the learning potential (Jewitt, 2008:242) of online technology modes used in face-to-face and online teaching and learning environments.

integrated with conventional, face-to-face classroom activities (Figure 5) (Picciano, 2006:96). In this discussion I emphasise the importance of incorporating web-based technology in teaching and learning in music education. I also define BL as described in literature and link this discussion to pedagogical approaches appropriate to music education and discuss the wide spectrum of students and why their diversity confirms the necessity of incorporating multimodal activities in teaching and learning in music education.

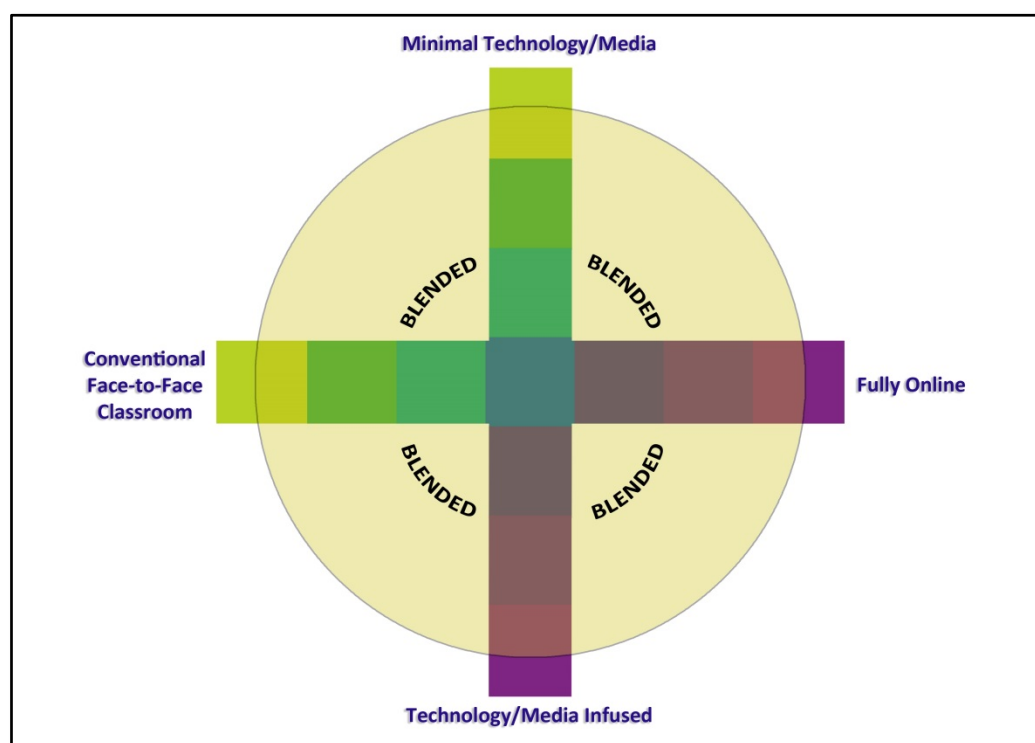


Figure 5: Broad conceptualisation of blended learning — adapted from (Picciano, 2009:7)

I also discuss research literature that focuses on online technology used in current music curricula, music education projects and the professional development of music educators.

2.2 Orientation

The value of music to enrich life experiences and relationships is reflected in human history and across cultures (Blacking, 1969:34; Campbell, 2008:17; Stålhammer, 2003:67). Current music educators are challenged by various new philosophies and methodologies (Barell, 2010:174-199; Dunbar-Hall, 2011:14; Elliott, 1995; Westerlund, 2003:45-62; Wiggins, 2015:1-74). The arrival of the Internet and World Wide Web in 1991, together with 21st century innovative

online technologies, transformed traditional face-to-face instruction. Online education has become more and more accessible and allows new pedagogical models to develop (Harasim, 2000:42).

Picciano (2014) discusses the background of online learning and divides its development into 4 Waves that started with the 1st Wave in the early 1990s, with the establishment of the Internet and distance education programs. Slow-speed, dial-up modem lines resulted in text-based online learning courses that relied comprehensively on asynchronous¹⁰ learning. During the 2nd Wave (early 2000s) enhanced connectivity opened the opportunity to incorporate multimedia in online learning development and brought about a change in the direction of teaching and learning instruction for 21st century education “ in response to the growing and changing needs and requirements of society” (Crawford, 2013:717). Many higher education institutions (HEIs) enriched their online and BL activities. The 3rd Wave (from 2008-2013) was characterised by online courses described as Massive Open Online Courses (MOOCs) that improved student access to HE. The increase of e-learning products has also improved the cost-effectiveness of education (Biasutti, 2011:1865). After the initial success of MOOCs the lower academic performance of students was criticised and in 2014 the 4th Wave arrived wherein the teaching and learning environments combine typical face-to-face classes with new facilities and approaches.

Face-to-face instruction is still an important component in the music education learning environment (Jorgenson, 2008:334; Ng, 2007:339; Wiggins, 2015:15). Internet information and communication technologies (ICTs) affect the manner in which learning experiences are conveyed and provide flexibility in the choice of teaching tools in HE delivery (Crawford, 2009b:471-488; Ebner *et al.*, 2008:199-207; Garrison & Kanuka, 2004:95–105; Picciano, 2009:4-14). ICTs have fundamentally transformed the professional world (Haddon, 2004:1-192). Since undergraduate education prepares music students for their professional life, a blend of online and face-to-face instruction, which is characteristic of the 4th Wave, has changed teaching and learning in music.

¹⁰Asynchronous learning assists in student-centred online information sharing that is not bounded by time and place. Synchronous e-learning involves real-time online studies through chat and video conferencing (See Asynchronous E-Learning Vs. Synchronous E-Learning "mindflash," 2015).

Individuals are becoming lifelong learners who are prepared for 21st century challenges. BL provides higher-order levels of learning (Akyol & Garrison, 2011:233-250), develops reflective and critical thinking, encourages taking responsibility for constructing own meaning and understanding, which in turn constructs thought processes and improves metacognitive understanding (Garrison & Kanuka, 2004:99).

A variety of computer-based technologies such as synchronous and asynchronous e-learning methods (Hrastinski, 2008:51-55), computer-mediated learning tools (Folio & Kreinberg, 2009/2010:164-175), and various software platforms can be integrated in music learning environments to facilitate teaching and learning (Bates & Khasawneh, 2007:175–191; De Wever *et al.*, 2011:201–206). E-learning expert Elliott Masie (2003:3) is of the opinion that the *e* in *e-learning* is disappearing in favour of just *learning* (Picciano, 2009:5). Pedagogy drives technology in an all-inclusive and refined BL environment that depends on “multiple digital resources developed by individual faculty and teachers as well as those provided by well-financed MOOC companies” (Picciano, 2014). The radical changes in teaching and learning have not changed most undergraduate music education environments. They still continue to rely on teacher-student interaction in face-to-face traditional classrooms (Kimpton, 2005:12; Pearlman, 2006).

2.3 The Blending with Purpose Multimodal Model of Picciano

For the purpose of this thesis the Picciano (2009) *Blending with Purpose Multimodal Model* (BPMM) was applied to music education (§ 1.1).¹¹ Picciano designed a multimodal model for BL to accommodate teaching and learning. The rationale for utilising the model is “the concept that academic program and course goals and objectives drive the pedagogical approaches and technologies used” (Picciano, 2009:4) (§ 2.4). Multiple approaches accommodate the diverse generations who use the technology in the music education classroom (lecturers and students). Cognitive science suggests that students learn in various ways that include age, personality types, motivations of learning, and the tempo of instruction (Picciano, 2009:11).

¹¹§ is a typographical character used mainly to refer to a particular section of a document (https://en.wikipedia.org/wiki/Section_sign)

2.3.1 Wide spectrum of students

Today's students grew up using cellular phones, mp3 players, computers, videogames, etc. (Bennett *et al.*, 2008:776) and represent the first generation to grow up with information technologies (Salajan *et al.*, 2010:1393–1403). Prensky (2001:1-6) maintains that the most suitable epithet for today's students is *digital natives*. He introduced the “digital natives versus digital immigrants” thesis that theorises the different conducts of using technology between younger and older generations (Picciano, 2009:5; Skiba & Barton, 2006). Older generations “who were not born into the digital world but have, at some later point in their lives, become fascinated by and adopted many or most aspects of the new technology are, digital immigrants” (Prensky, 2001:3). The manner in which digital natives and digital immigrants use digital technologies in educational environments is described as a “clash of generations” (Salajan *et al.*, 2010). However, educating students is the primary goal of HE. Departments need to understand the changes technology has brought to this generation of students and to their learning environments (Oblinger & Oblinger, 2005).

Jukes and Dosaj's (2003)¹² table (directly quoted) outlines the fundamental differences between digital native learners and their digital immigrant teachers (*Table 1*).

Table 1: Differences between digital native learners and digital immigrants

Neo-Millennial learners (Digital Natives)	Educators (Digital Immigrants)
Prefer to receive information promptly from multiple multimedia sources.	Prefer slow and controlled release of information from limited sources.
Prefer parallel processing and multi-tasking.	Prefer singular processing and single or limited tasking.
Processing order: Picture, video and sound, text.	Processing order: Text, picture, video and sound
Prefer random access to interactive media.	Prefer linear, logical sequential access.

¹²<http://edorigami.wikispaces.com/Understanding+Digital+Children+-+Ian+Jukes>
http://etec.ctlt.ubc.ca/510wiki/Digital_Natives_and_Immigrants

Prefer to interact/network simultaneously with many others.	Prefer to interact/network simultaneously with a few.
Comfortable in virtual and real spaces.	Comfortable in real spaces.
Prefer interactive/network approach to work.	Prefer students to work independently.
“Just in time” learners.	“Just in case” learners.
Prefer instant access, rewards and gratification.	Prefer delayed/deferred access, rewards and gratification.
Prefer learning to be relevant, instantly useful and fun.	Learning is to teach the curriculum and to set standardised tests.

Howe and Strauss (2000:41) refer to digital natives as *Millennials* and Oblinger and Oblinger (2005) use the term *Net Generation* (Table 2).

Table 2: Generations of the 20th century

Howe and Strauss (Howe & Strauss, 2000:41)		Oblinger and Oblinger (Oblinger & Oblinger, 2005)	
Generations	Birth years	Generations	Birth years
G.I.	(1901-1924)	Matures	(1900-1946)
Silent	(1925-1942)		
Boom	(1943-1960)	Baby Boomers	(1946-1964)
Generation X	(1961-1981)	Generation X	(1965-1982)
Millennials	(1982-present)	Net Generation/Millennials	(1982-1991)

(The classification of people is connected to the time period in which individuals were born).

Lecturers at HEIs predominantly present Matures or Boomers and most educators have to adapt their teaching styles to accommodate the new generation of learners. The younger generation is more enlightened and eager to use web technology but research conducted by Waycott *et al.* (2010:1202–1211) expose possible misconceptions of students' eagerness to use technology to support their learning. In their study Margaryan *et al.* (2011:429–440) found

that it is not a given fact that the current generation of students are all experienced in using digital technologies and therefore expect sophisticated practices in educational environments. Their findings show that, “regardless of age and subject discipline, students’ attitudes to learning appear to be influenced by the teaching approaches used by lecturers” (Margaryan *et al.*, 2011:438). Salajan *et al.* (2010:1393–1403) provide evidence that minimal age-related differences are the cause of how digital natives and digital immigrants apply digital technologies. On the other hand, these differences are not related to all the various existing technologies (Salajan *et al.*, 2010:1402). Their research was conducted in Australia, South Africa, the United Kingdom, the United States of America and Canada.

Several authors (Brown, 2000:11-20; Frand, 2000:14-25; Howe & Strauss, 2000:41; Merritt, 2002; Oblinger & Oblinger, 2005; Salajan *et al.*, 2010:1393–1403; Tapscott, 1998) have researched the characteristics of the Net Generation and support the values and behaviours of an information-age mind-set described by Frand (2000:14-25). The Net Generation is characterised by the following attributes (Frand, 2000:14-25):

- computers are not perceived as technology;
- the Internet is regarded as better than television;
- experiences of “unreal” realities;
- a mind-set that ‘does’ rather than ‘knows’;
- choosing ‘trial and error’ experimentation over logic;
- multitasking as a way of life;
- typing instead of handwriting;
- staying connected to the Internet;
- immediate gratification of information needs.

Tapscott (1998) argues that media usage and the digital revolution have changed learning from broadcast media to interactive learning¹³ (Tapscott, 1998). Howe and Strauss (2000:41) describe further characteristics such as the Net Generations’ interest in new technologies, the necessity for working in

¹³Broadcast learning is characterised by teacher-centred instruction, one ‘size’ of instruction ‘fits all’, the school is seen as a place of suffering and learning is a school-only experience. Interactive learning is characterised by customised, lifelong learning, learner-centred activities where the teacher has the role of facilitator and learning is based on construction and discovery by means of multimedia learning (Tapscott, 1998).

groups, the importance of extra-curricular activities, and their motivation to get higher grades. For Millennials being intellectual is fashionable. They are an ethnically and racially diverse group of students and their relationship with their parents is close (Skiba & Barton, 2006).

Skiba and Barton (2006) observe that the Net Generation or Millennials, who are now entering colleges and universities, differ in learning styles from older generations and have new learning expectations and opportunities (also mentioned by Picciano (2009:9)). The way in which students learn or process information reflects their *learning styles* (Busato *et al.*, 1999:1057-1068; Felder & Spurlin, 2005:103-112). Vermunt (1996) identified four different learning styles (*Table 3*) for digital learners: “an undirected style, a reproduction-directed, an application-directed and a meaning-directed style” (Busato *et al.*, 2000:1059).

Table 3: Learning styles — adapted from Busato et al. (2000) and Vermunt (1996).

Learning style	Students' cognitive processing characteristics
Undirected	• Student has problems to process the material for study; • experience difficulties with the amount of study material; • experience difficulties with discriminating what is most important in study material; • have difficulty to apply the subject matter because of no relation between study material and phenomena in daily life.
Reproduction-directed	• Spend a lot of time selecting which study material is important according to them; • memorising and rehearsal of study material is the most important activity; • study for examinations in order to pass successfully.
Application-directed	• Usefulness of learning for personal goals; • apply what they learn to actual, real-world settings.
Meaning-directed	• Students have fundamental interest in the subject; • wish to find out the exact meaning portrayed in the study material; • build a critical and total picture of the subject matter to develop an own view.

Picciano (2009:4) mentions that student learning can also be influenced by an individual's personality. The way in which HE students relate to the information they learn and the quality of their thoughts is critical to learning and could possibly determine their academic success (Komarraju *et al.*, 2011:472). Jung (1923), the Swiss psychiatrist and psychologist, theorised that individual personality types have an impact on several fundamental human behaviours, including learning. Jung's theory focuses on four basic psychological dimensions (Figure 6).

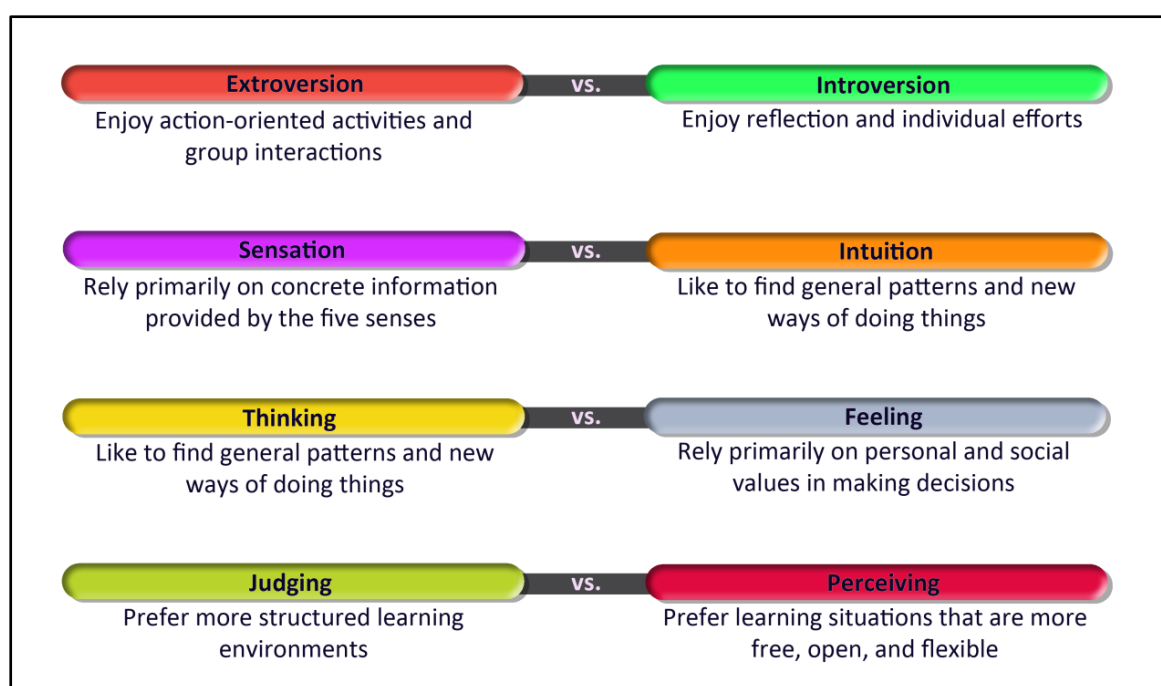


Figure 6: Jung's theory – four scales representing four pairs of preferences (Jessee *et al.*, 2006:645; Picciano, 2009:9; Zhang & Sternberg, 2005:6) Descriptions from Miller's (1987:251-268) model of cognitive processes and styles

The various combinations result in sixteen possible learning types. A type is a combination of the four preferences (e.g. INFP: Introvert-Intuitive-Feeling-Perceiving or ENFP: Extravert-Intuitive-Feeling-Perceiving). The Myers-Briggs Type Indicator (MBTI) is one of the most popular instruments for assessing these preferences (Vincent & Ross, 2001:4). MBTI determines a person's chosen ways to be present in the world and make decisions based on perception and judgement (Capraro & Capraro, 2002:594; Jessee *et al.*, 2006:645). Kemp (1996:1-255) indicates that musicians have unique personality traits that differentiate them from the non-musicians and from one another. He identifies dominant trait profiles for musicians such as introversion

(p. 40), sense of independence (p. 66), pathemia (p. 79, 82),¹⁴ intelligence (p. 82), personal control (p. 67) and anxiety (p. 91). Wubbenhorst (1994:64) mentions that Kemp also found levels of introversion in composers, which is linked to their creativity and found higher levels of extroversion in music teachers. MacLellan (2011:86-87) cites researchers like Gibbons (1990:45) who determined that musicians approach life based on their “inner ideals and personal values”.

Vincent and Ross (2001:1) explain that personality types and learning style descriptions and multiple intelligences theories are useful in constructing curricula. The multiple intelligence theory was introduced by Gardner in 1983 (Vincent & Ross, 2001:2). Gardner (2011:xv) proposes three distinct uses of the term *intelligence*:¹⁵

- A property of all human beings.
- A dimension in which human beings differ.
- The way in which one carries out a task in virtue of one's goals.

He identifies nine basic intelligences for learners' processing of the world (Campbell, 2008:120; Picciano, 2009:10) (Figure 7).

¹⁴An obsolete term for speech loss attributed to emotional stress
<http://medical-dictionary.thefreedictionary.com/pathemic+aphasia>

¹⁵Directly quoted from Gardner (2011:xv)

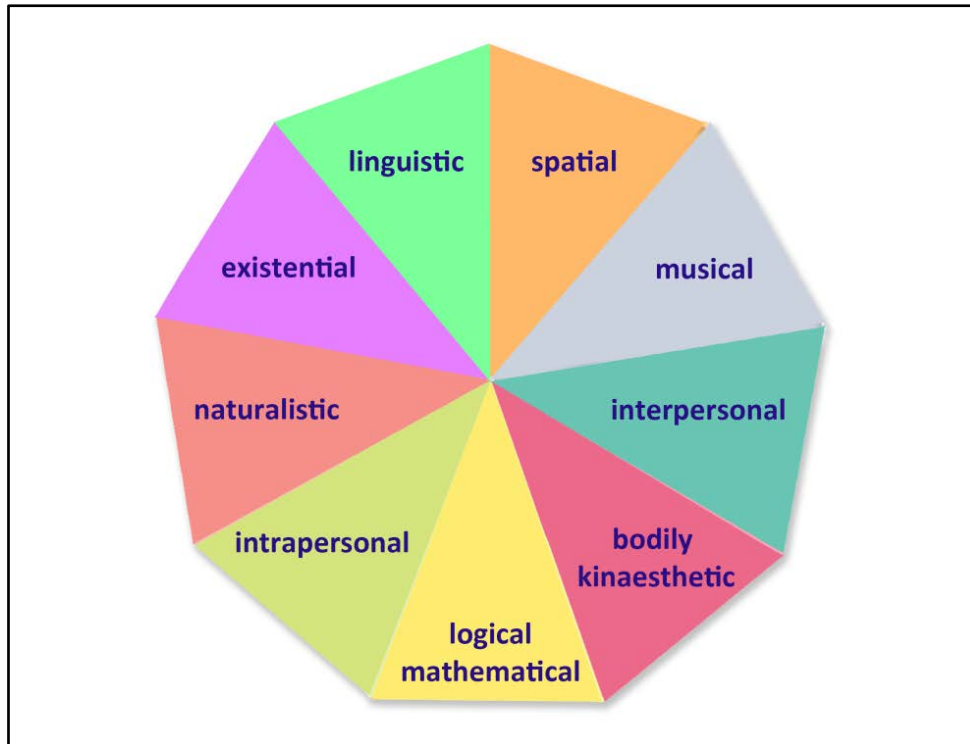


Figure 7: Howard Gardner's Theory of Multiple Intelligences (Picciano, 2009:10)

The implications of this theory are significant for educational thinking. For educators who accept that intelligence and teaching and learning function from verbal and mathematical thinking (Kassel, 1998:32; Wiggins, 2015:244) only, Gardner recommends instruction through multiple modalities. He opens a new way for educators to perceive arts education. Reimer's (2003:63-64) analysis of musical intelligences is a strong argument for the necessity of music in teaching environments. He complements Gardner's theory of multiple intelligences by adding "particular musical intelligences — feeling, creating, meaning, context and musical roles" (Reimer, 2007:11). He also describes the role of each musical intelligence in conducting human thought and action (Mark, 2003:64).

2.3.2 The Blending with Purpose Multimodal Model

The *Blending with Purpose Multimodal Model* embodies six elementary pedagogical aims (Figure 1) or activities and suggested approaches. Picciano (2009:4-14)¹⁶ advises that instructors need to take care which objectives to focus on and to understand the application of the technologies and methods that will work the best for their students. Instructors can also add objectives

¹⁶Picciano does not discuss the multimodal model (2009) in the books he edited (2007; 2013).

where appropriate. He recommends “seamless” integration that benefits different generations, different personality types and different learning styles. The *Blending with Purpose Multimodal Model* uses multiple modalities to challenge students to experience learning in an innovative way that is comfortable to all (Picciano, 2009:13):

Critical to this model is the concept that academic program and course goals and objectives drive the pedagogical approaches and technology used, and not the other way around. Faculty and instructional designers should consider examining their entire academic program to determine which components of the model best fit which courses to cohesively serve overall programmatic goals and objectives (Picciano, 2009:13).

Picciano (2009) suggests that the *Blending with Purpose Multimodal Model* (Figure 1) has the potential to support students and instructors to make the most of teaching and learning using multiple technologies. The model also provides the opportunity for tending to students’ social needs (Laumakis *et al.*, 2009:76).

2.3.2.1 Content

Picciano (2009:12) describes content as one of the primary drivers of instruction. Content can be provided and offered in many ways, such as text documents, wikis, URLs to link to a website on the Internet and Mashups (video, image, and audio links from the web).

2.3.2.2 Social and emotional support

Garrison *et al.* (2000:87) mention that oral communication is a rich social and emotional communication method. Education cannot be defined as merely learning content or skills (Picciano, 2009:12). Undergraduate students definitely need both social and emotional support. Boyce-Tillman (2014:16) describes a version of a human being who has domains within the self. She explains that the domain of *emotional and feelingful* includes the historical identity of humans, how people behave in natural circumstances and how we place our identity in interpersonal and intrapersonal spaces. She also mentions the collective situatedness of being human where one meets a variety of personalities in a variety of environments. Elliott and Silverman (2014:57-72)

ask the question, “What does it mean to know and understand our students?” Not only do we as music educators have to teach our students musical abilities but we also have to enable them to achieve personal skills and growth that focus on meaning and self-recognition to define their well-being in becoming a ‘whole’ person. As adolescents, music students also experience many social and emotional changes. They explore and develop their personal identity, which in time will determine how they deal with relationships throughout their lives. Music students, however, also need to cope with balancing social time with music activities, practising in isolation, the fears of performing and are critical of themselves (Sternbach, 2008:42-48). Educators cannot remove these personal issues for them. But it will be helpful to try and understand by creating a positive classroom environment, cultivate a climate of mutual respect and be supportive in planning for their future (LaRusso *et al.*, 2008:386-398).

2.3.2.3 Dialectics or questioning

Roig and Rosales (2012:137-149) emphasise that in online teaching and learning processes human communication is indispensable. To create the necessary communication activities dialectics or questioning helps to refine students’ knowledge (Picciano, 2009:12). Online asynchronous discussion boards (also referred to as online forums or discussion forums) allow students and instructors to communicate with one another at anytime and anywhere (Nandi, 2012:6; Picciano, 2009:12). The discussion board focuses attention and dialogue on a specific topic linked to an assignment. Students respond to the questions of the instructor or peers, provide their own viewpoints, evaluate and answer to the ideas of others. These activities allow learners to “think critically, discuss the topic intimately and learn from others” (Nandi *et al.*, 2009:667). The discussion board provides a permanent record of work done (Garrison & Kanuka, 2004:99), is always available online to view and to monitor the progress (develops by using threads). Picciano (2009:12) and Robinson (2011:14) believe that discussion boards can be used by any students and not only, as Oblinger and Oblinger (2005) note, by those who are skilled in using technology.

Because of the *anytime anywhere* concept students can spend more time to take part in online discussions. The outcome is discussions that are more

thoughtful, coherent, and supported by researched sources (Meyer, 2003:61). Student participation increases and self-conscious students have the freedom to engage and feel less inhibited than in face-to-face communication. Students are positive about the inclusion of online discussion boards as a learning activity (Dengler, 2008:481,493).

2.3.2.4 Reflection

To extend and deepen reflection the teacher can include pedagogical activities that focus on what students are learning and where they can share their reflection with their teachers and fellow students (Picciano, 2009:12). Moon (2001:1) explains that in the learning process we reflect on the details of complicated things for the purpose of reaching a goal. She identifies (2001:4) the theoretical approach adopted by Dewey as being remarkable in the way that it takes a holistic view of reflection. Dewey (1933:9), regards reflection as a specialised form of thinking:

Active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and further conclusions to which it leads ... it includes a conscious and voluntary effort to establish belief upon a firm basis of evidence and rationality.

Reflective thinking encourages higher order thinking and is a method of enhancing optimal learning (Ash & Clayton, 2004:137; Granville & Dison, 2005:99-100). Students engage in meta-cognition activities and “move beyond thinking about the actual object of the learning and ask questions in order to deepen understanding” (Granville & Dison, 2005:101).

Reeves *et al.* (2002:566) reports that the use of reflective journals (online diaries) encourage reflective learning. Picciano (2009:12) identifies blogging as a tool for group exercises or for individual journaling for students to reflect on their learning and other facets of course activities. Blogs are web-based, asynchronous journals created by one or more authors about a particular topic that appears online in reverse chronological order (Boulos *et al.*, 2006; Folio & Kreinberg, 2009/2010:166). Blog entries can be written by one or more students and commented on by a group of contributors. Students engage in

knowledge sharing, reflection and debate and can include a search facility, add research material and images (Boulos *et al.*, 2006).

2.3.2.5 Collaborative learning

Picciano (2009:12) points out that many academic programmes focus on collaborative learning as a method for group problem-solving. As a collaboration tool, wikis have become popular in group projects and writing assignments.

Leuf and Cunningham (2001)¹⁷ introduced the concept of wikis in 1994/5 (Augar *et al.*, 2004:95; Ebner *et al.*, 2008:200) as a collaborative tool developed for use in an online environment (De Wever *et al.*, 2011:201–206; Folio & Kreinberg, 2009/2010:164-175; Meishar-Tal & Gorsky, 2010:25–35; Naismith *et al.*, 2011:228–242; Parker & Chao, 2007:57-72; Ramanau & Geng, 2009:2620–2626; Young & Pérez, 2012:3-17). The term was derived from the word *wikiwiki* (a Hawaiian word meaning *quick*). The underlying philosophy of wiki has its origins in Wikipedia (Young & Pérez, 2012:3). Wikis are fully editable websites and any wiki user is able to generate content to contribute, comment, edit, revise, extend or link existing documents on a wiki site. Wikis can be used to facilitate computer supported collaborative learning (Augar *et al.*, 2004:95-104; De Wever *et al.*, 2011:201–206; Ebner *et al.*, 2008:199-207), share knowledge in a learning group and facilitate multimodal research processes (Young & Pérez, 2012:3). Reliable assessment of wikis can be done by peers (De Wever *et al.*, 2011:205). The aim of wikis is to construct knowledge in a social space and to reach an agreement among the authors. Because of this arrangement, wikis tend to be impartial, which differentiates them from blogs (Kolbitsch & Maurer, 2006:188).

Other web-based collaboration learning tools are discussion boards (discussed in 2.5.2.3) and asynchronous journals (Folio & Kreinberg, 2009/2010:166) called blogs. Blogs stimulate interactivity and student engagement in the course and can be used for students to reflect on their learning (Picciano, 2009:12; Skiba & Barton, 2006).

¹⁷The Wiki Way: Quick collaboration on the web.
<http://www.citeulike.org/group/1136/article/114322>

2.3.2.6 Synthesising, evaluating and assessing learning

Bransford *et al.* (2000:1-319) indicate the necessity of assessment-centred teaching and learning processes to enhance effective learning. Educators need to construct a learning environment that provides learning activities suitable to achieve desired learning outcomes to support improved learning (Biggs, 2003; Gikandi *et al.*, 2011:2334). Learners construct their own learning through appropriate learning activities. Biggs (2003) mentions that a constructive alignment forms between “all components in the teaching system: the curriculum and its planned outcomes, the teaching methods used and the assessment tasks”. The focus is on the learning activities referred to in the anticipated learning outcomes. Through this alignment the learner cannot but learn appropriately (Figure 8).

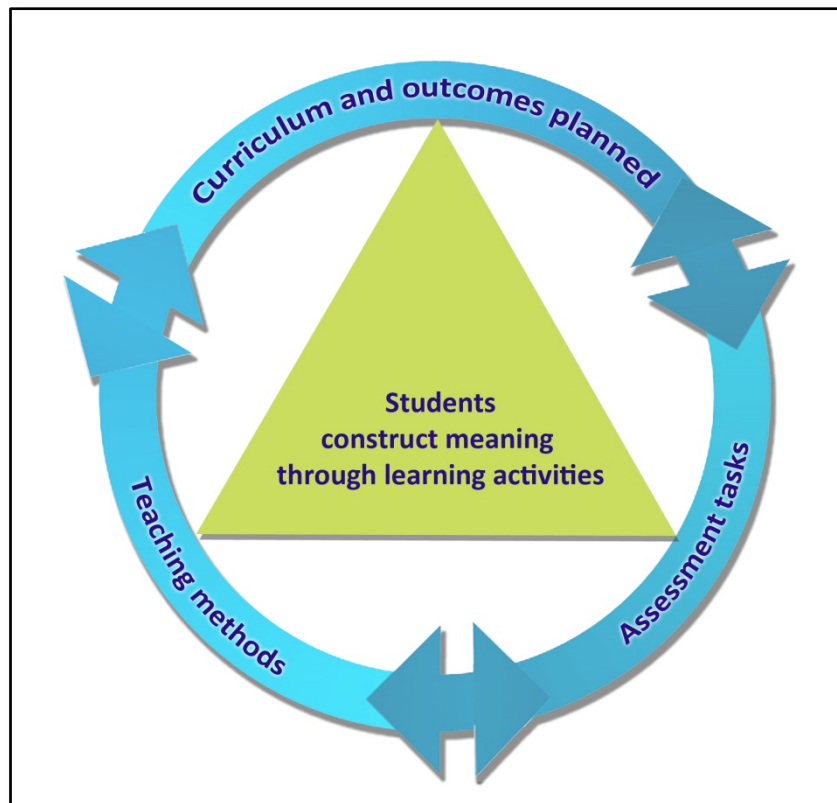


Figure 8: Model for constructive alignment (adapted from Biggs, 2003:2)

Both online and face-to-face learning experiences support each other in achieving the desired learning outcomes (Ginns & Ellis, 2007:53-64). Methods used for assessing student learning are academic essays, tests, assignments, projects, portfolios and class discussions. These methods are increasingly being

implemented electronically and contribute to richer learning experiences (Derntl & Motschnig-Pitrik, 2005:112). Essays, tests and assignments are submitted online. Research and group assignments are created in wikis, discussion boards and blogs. Assessment in groups needs to be planned well. If learning occurs in social contexts, the individual has to learn from the quality of the learning community (Franklin & Van Harmelen, 2007:22). Oral classroom presentations are submitted on YouTube™ videos or podcasts. Wikis and portfolios are created with electronic multimedia tools and the presentation of images, video, and audio are common practices. Online class discussions are for ever on record. Students can reread the content time and again to examine how students' contributions have progressed (Picciano, 2009:13). Course management systems and other online tools provide a variety of methods for support. The execution of formative assessment by the individual, peers and the teacher with online tools improves learner engagement with valuable learning experiences and includes them in the development of a learning community (Gikandi *et al.*, 2011:2333-2351).

2.4. Defining blended learning as described in literature

Graham B. Spanier, President of Pennsylvania State University, refers to the convergence of online and face-to-face instruction, as “the single greatest unrecognized trend in higher education today” (Young, 2002:2). Garrison and Kanuka (2004:95) define BL as the “thoughtful integration of classroom face-to-face learning experiences with online learning experiences”. The Sloan Consortium, now known as the Online Learning Consortium, is dedicated to go forward in quality online learning and is responsible for professional development, instruction, top practice publications and guidance to educators, online learning professionals and organisations around the world (OnlineLearningConsortium). Initiated by the Alfred P. Sloan Foundation, at an invitation-only workshop in 2005, the following definition of BL was accepted by the participants (Laster *et al.*, 2005):¹⁸

- Courses that integrate online with traditional face-to-face class activities in a planned, pedagogically valuable manner; and

¹⁸This definition is directly quoted from Picciano (2009:8).

- where a portion (institutionally defined) of face-to-face time is replaced by online activity (Picciano, 2009:8).

According to Picciano (2009), this definition is a recommendation and not a restrictive statement. The definition was developed as a guideline to improve BL courses, but can also be applied to entire academic programmes (Picciano, 2009:8). Allen *et al.* (2007) also confirm that HEIs have been investing in both online and blended courses and programmes but that the implementation of blended delivery still has much room for growth. To enrich the application of BL researchers (Hitchcock, 2009; Le Rossignol, 2014:1-16) propose that specific application combinations mark BL:

- integration of any online and traditional (face-to-face) learning (Graham, 2005);
- pedagogical approaches — grounded on learner-centeredness (not reliant on learning technologies), e.g. constructivism (Scott, 2011:191-198; Wiggins, 2015:1-41), problem-based learning (Barell, 2010; Savery & Duffy, 1995; Wiggins, 2009), connectivism¹⁹ (Le Rossignol, 2014:4);
- different focal points for learning: skills-driven, attitude-driven and competency-driven learning (Valiathan, 2002);
- connections between instructional technologies (media) with different methods of face-to-face learning (Graham, 2005);
- different web-based technologies in an e-learning environment.

Figure 9 is my interpretation of application combinations that are characteristic of BL.

¹⁹ Connectivism is not discussed in this research because it is not suitable for ME at UP. "Connectivism is the integration of principles explored by chaos, network and complexity and self-organisation theories. Learning is a process that occurs within nebulous environments of shifting core elements — not entirely under the control of the individual. Learning (defined as actionable knowledge) can reside outside of ourselves (within an organisation or a database), is focused on connecting specialised information sets, and the connections that enable us to learn more are more important than our current state of knowing" (Siemens, 2005:4).

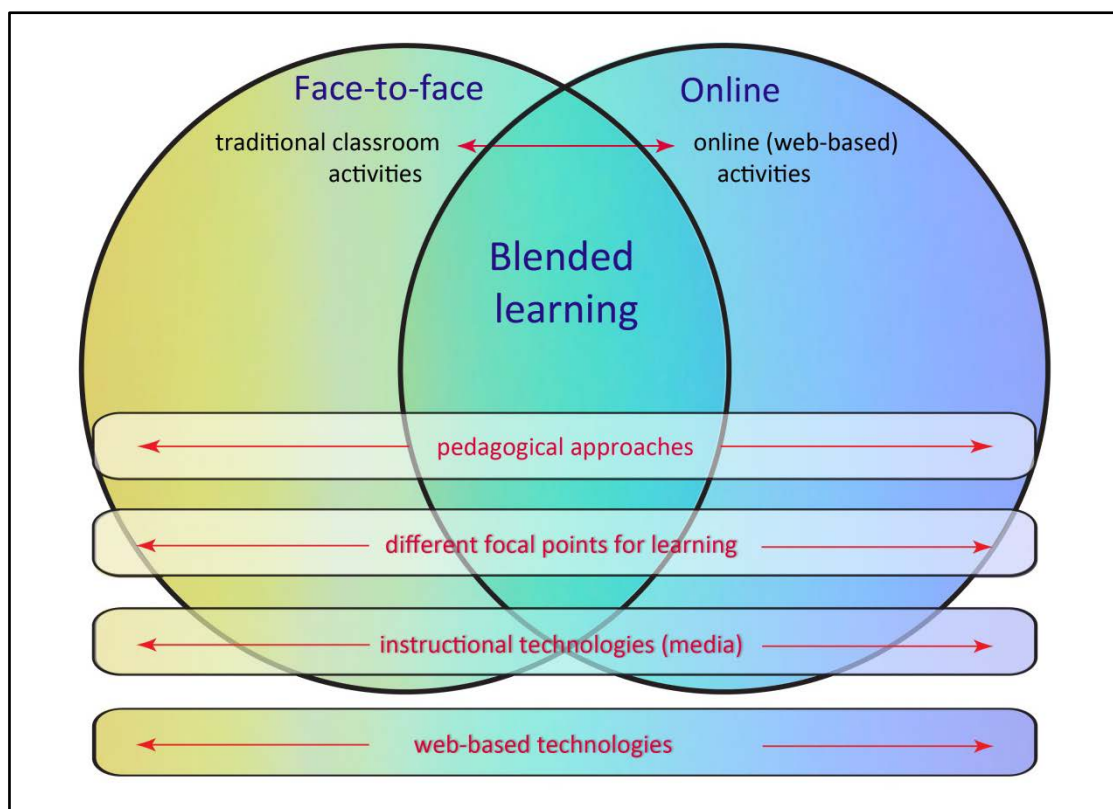


Figure 9: My interpretation of applications combinations that mark blended learning

Picciano (2014) review research that focuses on online and BL approaches. This review is an effort to comment on some of the major developments and issues associated with BL and a discussion of some of its vital advances. It seems that HE communities cannot agree on a general BL definition because BL has different meanings to different people. The results of the research available of all the possible approaches to BL may also apply to local situations only. “This makes studies across institutions very difficult and prone to misinformation” (Picciano, 2014). Tertiary institutions also have a diversity of cultures that influence the development of online learning and BL. In some programmes and modules, modalities are divergent with overlapping approaches but in some, the chosen activities blur the blend of modalities and the definition of BL becomes a conceptualisation of a variety of technologies/media integrated with traditional, face-to-face classroom activities. As a broad definition (Picciano, 2014) proposes a conceptualisation to assist as a guideline that can be applied to specific courses or modules but also to an academic programme as a whole. This “two-dimensional” blended model (Graham, 2013) represents face-to-face contrasted with online environments on the horizontal axis. The vertical axis

represents environments that have minimal to infused elements of technology (Figure 10).

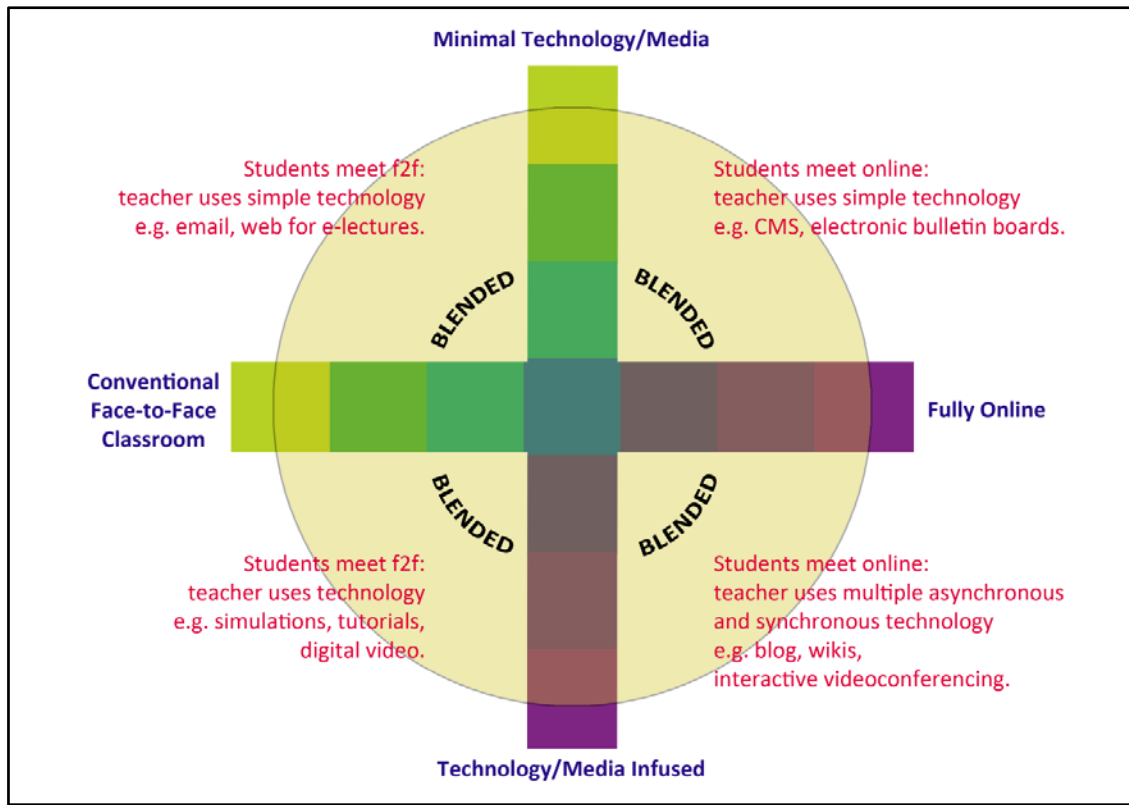


Figure 10: Broad Conceptualisation of Blended Learning — adapted from Picciano (2014)

Graham (2013:333) mentions that because of the fact that the “landscape of BL is still evolving rapidly,” the definition of BL varies significantly across institutional contexts. He asks the following questions related to definitions of BL:

1. What is being blended?
2. Is less seat time required?
3. How much online learning is required?
4. Should quality factors be part of the definition?

Instructional designers and programme advisors at the University of Pretoria (UP) use BL as an approach to multimodal delivery. BL at UP is therefore not just a term to represent a blend of face-to-face lectures and learning management system delivery of content and activities (Nagel & Kotze, 2011:153). UP encourages the use of blended delivery modes for individual

courses and assists lecturers through intensive training (Lotriet *et al.*, 2008:3472).

The effective integration of face-to-face and web-based technology learning activities without “just adding on” (Garrison & Kanuka, 2004:97) or carelessly including technology just for the sake of renewal to the existing classroom approach (Lotriet *et al.*, 2008:3472) is the real challenge of BL. The motivation for BL redesign is the objective to engage students in critical discourse and reflection (Vaughan, 2010:61) but the asynchronous online communication milieu has focused attention on a possible disconnected environment (Garrison, 2007:61). Garrison *et al.* (Garrison *et al.*, 2000:87-105) confirm the opposite because in fact, this BL community does collaborate in “free and open dialogue, critical debate, negotiation and agreement — the hallmark of higher education” (Garrison & Kanuka, 2004:97-98). According to Garrison and Kanuka (2004:97) BL a community of inquiry (CoI) consists of “three elements: social, cognitive and teaching presence” (Figure 11).

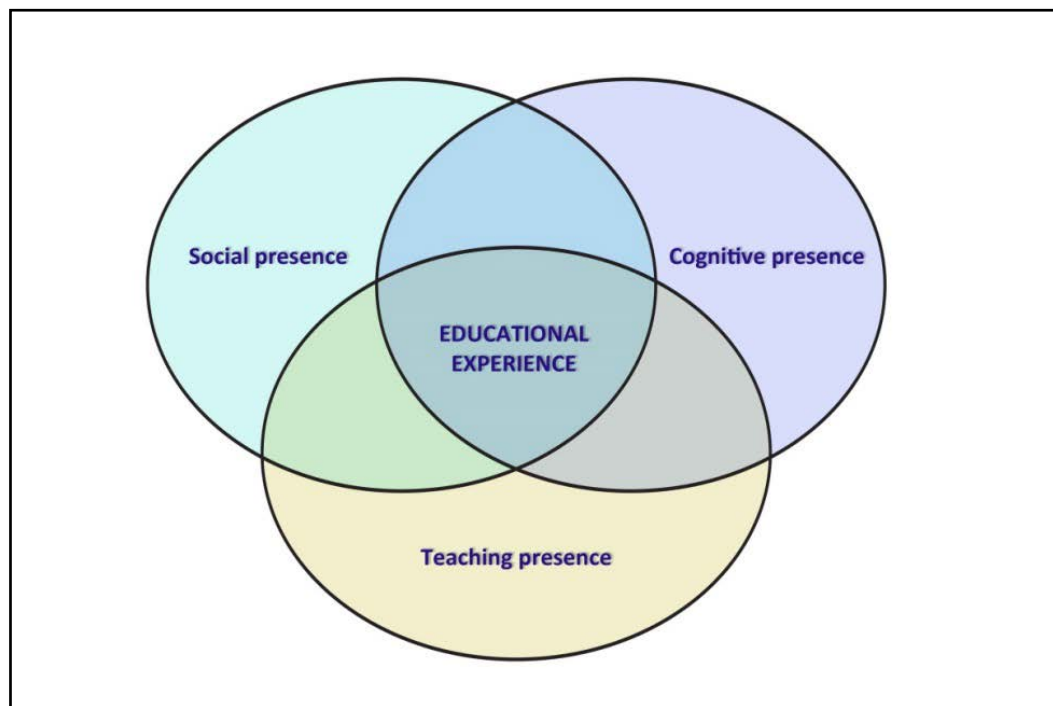


Figure 11: The Community of Inquiry Framework — adapted from Garrison (2007:62), Garrison *et al.* (2000:88) and Garrison and Kanuka (2004:94)

From these three elements a complete framework as an online learning research tool was established to provide key understandings and

methodological solutions for studying online learning (Garrison, 2007:61-72; Nagel & Kotze, 2011:155; Swan & Ice, 2010:5).

The value and magnitude of the interaction and the sense of cooperation in a CoI are determined by the effective integration of Internet communication technology with the educational learning experience. Vaughan (2010:60-65) uses the Garrison *et al.* (2000:87-105) CoI framework to guide the inquiry process in an Inquiry Through BL program (ITBL). The model is grounded in a cooperative constructivist viewpoint on education (Figure 12).

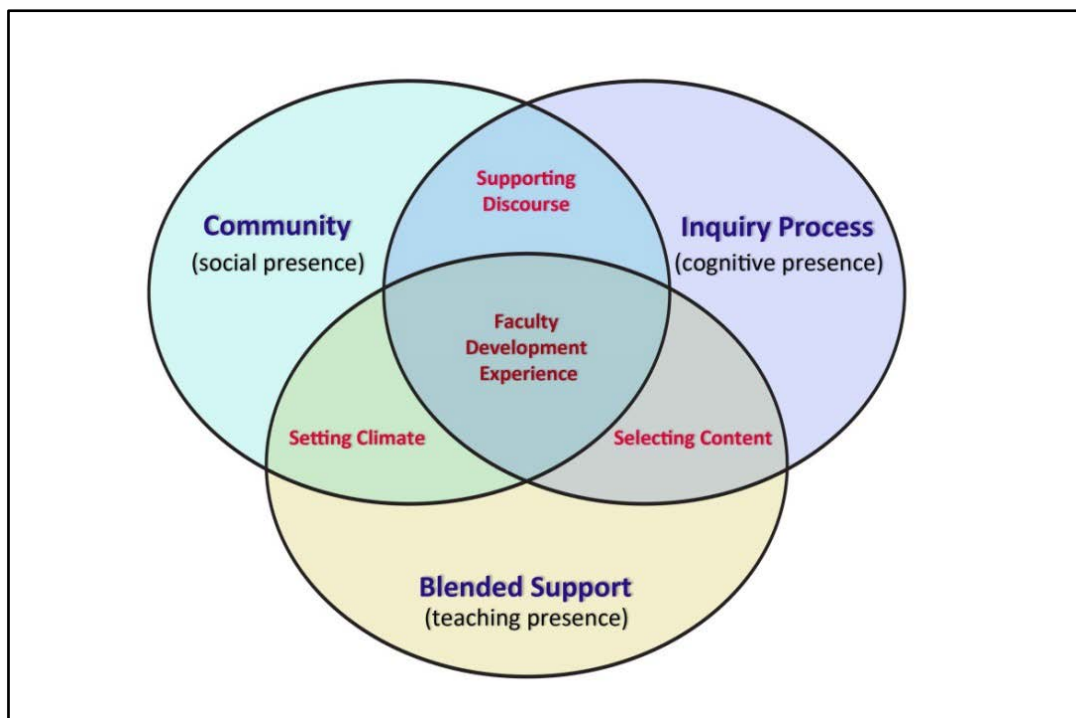


Figure 12: Blended faculty of community of inquiry.
The social, cognitive and teaching presences (Vaughan, 2010:61)

The goal of the ITBL program is primarily to redesign undergraduate courses for BL as part of a blended community of inquiry. Vaughan (2010:65) argues that “without the systematic and sustained support of a professional development community”, instructors who are not part of a CoI can overlook the transformative potential of BL.

2.5 Multiple approaches driven by curriculum design and pedagogical approaches to music education

Academic programmes of the here and now need collaboration with “academics, educators, business groups, and policymakers who are finding common ground in a movement to bring ‘21st century skills’ to the classroom” (Walser, 2008:1). For this reason today’s graduates need to be allowed to demonstrate skills like adaptability, accountability, teamwork, authority, self-direction, creativity, critical thinking, inquiry skills and problem-solving with the inclusion of 21st century ICT, literacy skills and global awareness (Barell, 2010:176; Carpenter & Pease, 2012:36-41; Pearlman, 2006; Walser, 2008). Looking at these requirements for professional environments it seems that music education in South Africa needs new methods of professional musical preparation to foster an innovative generation of music educators.

It is unfortunate that numerous undergraduate music programmes still practise the traditional approach to curricular design (Kimpton, 2005:11; Morford, 2007:80). Undergraduate music programmes are structured with courses where the student’s skills interact with music. Modules include music history, theory and analysis, composition and musical performance (Harper-Scott & Samson, 2009:97-218; Morford, 2007:75-83) and in music education it is compulsory to “complete courses that address particular methods of instruction” (Morford, 2007:80). “By only focusing on methods that develop technical skills, performance techniques, and musical skills, music teacher education programs promote intellectual passivity” (McClellan, 2011:36). When a music programme is divided into modules where the content of music history, theory and performance have nothing to do with what they learn in the music education course there will be no musical connection for students to become music educators. Music lecturers need to understand and value their peers’ contributions in practice, interact with music education lecturers, collaborate and have discourse about what and how they teach (Wiggins, 2007:36-42). Reimer (2007:1) stipulates that “we are forced, as a result, to consider, once more, the issue of comprehensiveness in education, its meaning and its promise.” Students need to interact with the environment (Savery & Duffy, 1995:31) to construct new understanding in a holistic context. Wiggins (2015:19) argues that it seems logical to expect from students that they will

learn effectively in environments that reflect “life learning” opportunities where learners engage in real-life, “holistic problem-solving experiences”.

To accommodate BL in a curriculum the instructor needs to rethink and redesign the teaching and learning relationship in an integrated fashion (Garrison & Kanuka, 2004:99). The primary objective for implementing BL in the ME modules at UP is to improve pedagogy by “incorporating pedagogically sound student engagement and collaborative learning activities” (Bergtrom, 2009:16) into both the face-to-face and online sessions of the module.

The focus of the improved pedagogy is on learning and learner-centred strategies. Students must take more responsibility for their own learning (Carpenter & Pease, 2012:37) and grow as learners and individuals by means of participating in a “productive *music learning community*” (Wiggins, 2015:24). As active participants in their own learning students will seek deeper understanding and meaning about content (Biggs, 1991:27-39; Crosling *et al.*, 2009:13; Wiggins, 2015:2), engage more in active communication, learn more academic and life skills that will benefit them beyond the classroom. Lockett (2001a:49-61) proposes four ways of knowing and learning in HE curricula²⁰ (§ 6.2.2) that should motivate students to engage with and commit to studies focused on their future careers (Lockett, 2001b:26-35).

2.5.1 Curriculum design for undergraduate music education students

The curriculum “forms a platform for the implementation of approaches and strategies that engage students in their university experience” (Crosling *et al.*, 2009:12). Within the chosen discipline the curriculum supports the development of personal attributes and social skills to help graduates to find work and be successful in their chosen occupations:

Schools and colleges of education, and those who work with them, possess the power to change lives, neighborhoods, communities, cities, and even nations. Music teacher educators do so when they educate future music teachers who, in turn, educate future citizens (McClellan, 2011:35).

²⁰“The four ways of knowing and learning proposed by Lockett (2001a:49) are: .1. Traditional cognitive learning of propositional knowledge; 2. Learning by doing for the application of disciplinary knowledge; 3. Learning experientially; and 4. Developing epistemic cognition to think reflexively and contextually about learning”

The focus of curriculum planning is not only on development and implementation but also on the impact it has on student learning (Hanley & Montgomery, 2002:135). The research of Ballantyne (2007:182) indicates that pre-service music teacher education courses have to prepare upcoming educators for the realities of the working environment. Ballantyne (2007:182) argues that the outcome of ineffective teacher education in preparing music teachers can lead to students turning back to how they were taught at school. Concern for preparing future music educators, shaping professional identity in undergraduate music students and how well education can meet future workforce and community needs are the focus of many research projects (Kimpton, 2005:8-21; McClellan, 2011:35-49; Parkes & Jones, 2012).

Opportunities for students to have pedagogical content knowledge (Shulman, 1986:9) are provided by undergraduate curricula and can be applied to the ME environment. This describes the intertwined and interacting domains of understanding the subject matter and understanding how learning takes place in the subject matter. To know and understand music (knowledge, skills, attitudes and values of music) shows the ability to execute authentic musical processes (Webster, 2007b:1293–1296; Wiggins, 2009:69). As teachers-in-training, students must also acquire pedagogical understanding or skill in the subject matter (Shulman, 1986:8).

This emphasis generates a constructivist learning environment where discussion initiates active learning and collaboration (Rovai, 2004:90). Constructivist approaches and a community of learners who creates and establishes meaning are essential parts of HE (Swan *et al.*, 2009:43-57). Jones (2006:184) argues that BL which includes face-to-face elements, is time and place limiting. She questions whether the various possible blends of learning can all meet the same learning outcomes. If BL in music education focuses on the use of technology and not on incorporating above-mentioned learning theories and pedagogies, e-learning in music education will be unsuccessful and the use of web technology will not retain music students' interests.

2.5.2 Pedagogical approaches to music education

“Education, in its broadest sense, is the means of the social continuity of life” (Dewey, 2001:6). Research argues (§ 2.5) that 21st century work environment skills in collaboration with the practice of 21st century ICTs are the skills our current students need to propagate beyond the classroom. To accomplish these skills the use of instructional methods like inquiry, observation, reflection, experimentation, conversations with peers and experts, exploring literature, summarising, justification of opinion, etc. (Duffy & Cunningham, 1996:5) seem to be the apparent solution. Duffy and Cunningham (1996:5) add that these methods assist in the constructive process of learning viewed as “activity in context”. The focus is on the active process of constructing instead of acquiring knowledge, and teaching that supports construction rather than communicating knowledge (Duffy & Cunningham, 1996:2). The focus on learner-centred and peer-based activities (Nandi *et al.*, 2009:666) and the way in which students approach their learning, closely relate to the quality of their learning (Bliuc *et al.*, 2010:514). According to Biggs (1991:29) an “approach to learning” is the combination of approaches created by the students to solve problems defined by their motives. Biggs (1987:1-145) identifies three different approaches to learning. The surface approach is based on the purpose of gaining an external outcome, e.g. the students see university as a means towards obtaining a desirable job. The deep approach is based on the students’ interest in the substance of the task. Students become personally involved in the task and pursue incorporation of components with other tasks. Learning based on the achieving approach focuses on the ego boost derived from visibly achieving high grades. These students plan ahead, are disciplined and allocate time to tasks in relation to the weight of marks allocated to the assignment (Biggs, 1991:29).

Music learning and teaching is changing as these constructivist principles permeate practice (Scott, 2007:35). The nature of musical learning and teaching seeks to understand and challenge the learner’s musical thinking, and musically constructed activities based on that thinking (Wiggins, 2015:24). Wiggins adds that collaboration on a social level is a necessary component of the learning process. Vygotsky (1896-1934) (Wiggins, 2015:14-17) suggested ideas and theories of social constructivism in the 1930s. Vygotsky argues that, as individuals who solve problems on their own, students can achieve higher

grades by collaborating with the competence, capabilities and knowledge of other individuals and experts (Wiggins, 2015:14-15). Constructivism is grounded on the work of Bruner (1996:1-224) and Feuerstein (1990:68-134) (Hanley & Montgomery, 2002:130; Scott, 2007:35) and can be recognised in the following principles (Walker & Lambert, 1995:17-19):²¹

- Knowledge and beliefs are formed within the learner.
- Learners personally infuse experiences with meaning.
- Learning activities should cause learners to gain access to their experiences, knowledge and beliefs.
- Learning is a social activity that is enhanced by shared inquiry.
- Reflection and metacognition are essential aspects of constructing knowledge and meaning.
- Learners play an essential role in assessing their own learning.
- The outcomes of the learning process are varied and often unpredictable.

Relevant social constructivist beliefs and their implication for teaching are described by Wiggins (2004:83-84) as follow. Learning occurs when people construct their own understanding from learning opportunities. Individuals construct their own understanding through ways in which they personally perceive the world and through own collection of experiences and interactions. People construct their own understanding when they are given new information in a holistic perspective. Learning and teaching are “social-cultural processes” (Wiggins, 2015:25). The consequence of experiences and interactions with others is learning. Through scaffolding, those more knowledgeable share understanding with the less knowledgeable and teaching and learning occur. Learning experiences in school should be real-life experiences. Real-life experiences support both the teacher and peers and enable the individual to succeed. The goals of real-life experiences enable learners to have sufficient grounding in the processes and result in achieving these goals. The best teaching and learning experiences enable learners to take part in solving authentic problems which are rooted in authentic contexts.²² Problems need to be designed to enable learners to pursue solutions to new problems with multiple explanations. Students should reflect and value the solutions for their

²¹Principles and descriptors are quoted directly from Walker and Lambert (1995:16-19)

²²Also mentioned by (Spronken-Smith *et al.*, 2007:7).

exclusivity and creativity. (Morford, 2007:76; Wiggins, 2004:83,84; Wiggins, 2015:25).

Music education students and educators are part of a social constructivist learning community (Wiggins, 2015:24). The three elements of the BL communities of inquiry (Garrison & Kanuka, 2004:98), social, cognitive and teaching presence can actually be realised in the music education classroom where educator and student “engage in musical cognitive apprenticeship (apprenticeship in musical thinking, and acting musically based on that thinking)” (Wiggins, 2015:24).

Constructivist learning environments involve learners in individual and/or collaborative knowledge building and problem-solving outcomes (Jonassen, 1999:215-239; Savery & Duffy, 1995:31-38). Another pedagogical approach to learning that originated in constructivism is inquiry-based learning (IBL). IBL is an inductive approach to teaching and learning that indicates engagement with complex real-world problems. Inductive methods of teaching have a student-centred approach, require active learning and develop self-directed learning skills (Spronken-Smith, 2007:2; Vajoczki *et al.*, 2011:2).

After teaching IBL for over twenty years (Spronken-Smith, 2007:2) McMaster University in Canada realised that, in self-directed learning, students take more responsibility for:²³

- determining what they need to learn;
- identifying resources and how best to learn from them;
- using resources and reporting their learning;
- assessing their progress in learning (University, 2007).

A group of McMaster educators (Justice *et al.*, 2002:6) involved in IBL developed a model for the inquiry process (Figure 13):

²³ The core ingredients of an IBL approach are directly quoted from Spronken-Smith (2007:3)

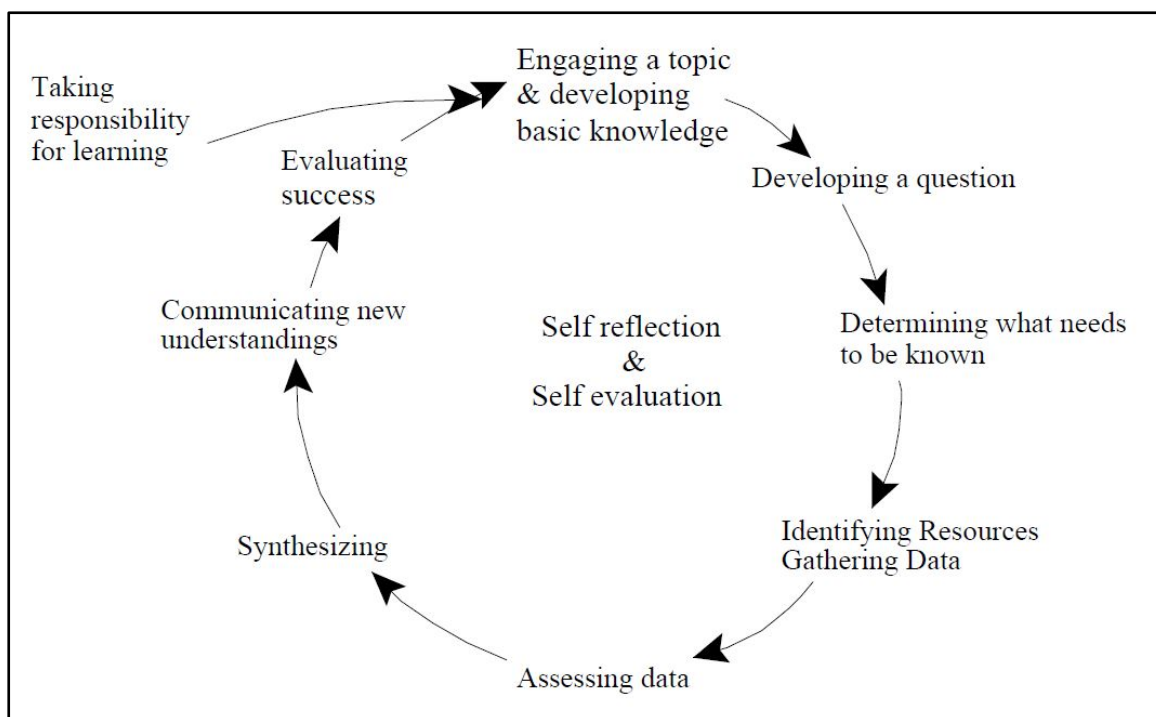


Figure 13: The inquiry process (Justice et al., 2002:6)

The above model by Justice *et al.* (2002:6) illustrates the origin of the relationship between the collections of objectives and skills. The process is circular which indicates the progression of the ongoing inquiry process. The students take active responsibility for learning and enter every stage of the cycle with an understanding of the collaborative possibilities of constructing knowledge. To determine the success at every stage the students reflect on and evaluate their work, which is part of the inquiry process. The educator's role in the inquiry process is to encourage students to understand concepts, to develop suggested theories, to understand their identity in the construction of knowledge and to learn from others (Justice *et al.*, 2002:6-9).

Another inductive method of teaching is problem-based learning (PBL) that can be traced back to IBL. The main principle of PBL is based on exploiting learning with conducting purposeful investigation, thinking critically, finding explanations, reflecting and drawing conclusions to attain a meaningful solution. Consequently PBL is the art of realistic, authentic problem-solving (Barell, 2010:174-199; Unver & Arabacioglu, 2011:303-310). Spronken-Smith *et al.* (2007:3) explain the relationship between IBL and problem-based

learning (PBL) by using the following figure to indicate the relations between IBL, PBL and active learning (Figure 14):

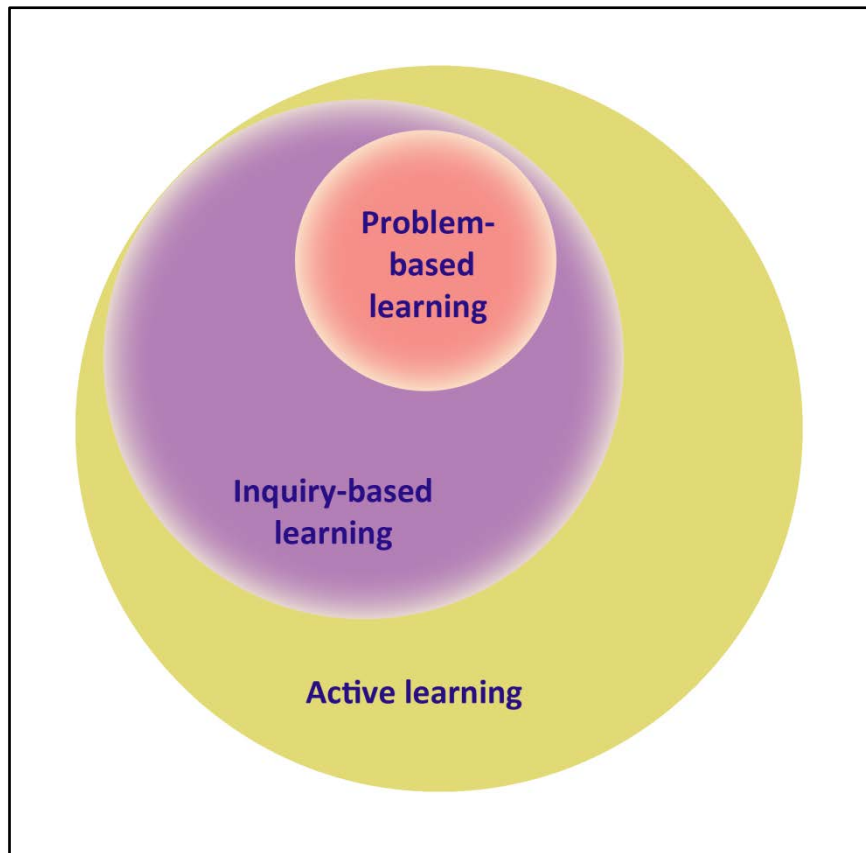


Figure 14: The relations between inquiry-based learning, problem-based learning and active learning (Spronken-Smith et al., 2007:3)

2.5.3 Computer-mediated technologies for music education (online and face-to-face)

For nearly two decades — as technologies evolved — there has been support for the use of technology in the development of music students' skills, in music teaching and learning and in preparing music students for a world of music experiences (Webster, 2007a:1311–1328). Knowledge, skills, attitudes, and values of music education are considered when technology is used in teaching and learning music (Webster, 2007b:1293–1296). However, the music classroom will always be about face-to-face interaction with both the instructor and students to learn music through sociocultural, constructive processes (Wiggins, 2015:48-61). Reeves *et al.* (2002:562) mention that the effects of the constructivist philosophy and new advances in technology have an impact on educational theory, research and development. ICTs facilitate student

interactions in a constructivist perspective (Biasutti, 2011:1865). Hung (2010:285,286) explains that technologies used by constructivists are *individual generic purpose tools* (e.g. multimedia authoring tools: PowerPoint, spreadsheets: Excel, word processors: Word, simulations, hypertext and hypermedia, and organisational tools that can maintain guided inquiry and can be used constructively). *Collaborative generic environments* use social constructive tools (e.g. e-mails, bulletin boards, knowledge co-construction or exchange forums, computer-mediated collaborative problem-solving environments) (Hung, 2010:286).

A variety of ICTs enhance PBL but the combination of technology and learning approach is a challenge. PBL and interactive media both require different learning and teaching experiences for educators and students, but together they are a strong blend of learning approaches that complement one another (Donnelly, 2010:9). The conceptual foundations of PBL research are reinforced with effective methods of inquiry (Barell, 2010:195).

Hung (2010:281-287) strongly advises that educators take accountability to plan their learning and teaching sessions with the most relevant instructional approaches and technologies available. *Table 4* provides computer-mediated tools and instructional technologies suitable for music education and that support the construction of musical knowledge.

Table 4: Analysis of Web 2.0 learning technologies. Adapted from Bower (2015:2) and Franklin and Van Harmelen (2007:1-27)

Technologies	Example
Synchronous collaboration tools Web conferencing	Skype, Adobe connect
Social networking tools People network together	SMS, Facebook, WhatsApp
Assessment tools	Turnitin, mobile tests, rubrics, multiple choice test items, quizzes, online crossword puzzles, online games
Web creation tools Individual and multi-page websites	Google web designer, wiki

Multimodal production tools Sequenced multimodal content	Prezi, PowerPoint
Media sharing tools Video, podcasts, images	YouTube, iTunes, Instagram
Creating and editing tools Audio creation and editing Video creation and editing	GarageBand Windows Movie Maker
Social software tools	Wikis, blogs
Text-based tools Synchronous text discussion	Twitter, discussion boards, journals
Knowledge organisation and sharing tools Sharing documents, images, audio files and videos via the web	Dropbox

Social and cultural dimensions also have an influence on the use of technology for teaching and learning (Nagel & Kotze, 2011:153). Post-graduate students (especially post-graduate students from other African countries living in remote areas) do not have adequate Internet access, and lecturers are encouraged to use other technologies and delivery modes in alternative ways (e.g. narrated PowerPoint presentations, mobile technology, podcasts, email, and CDs or DVDs).

2.6 Blended learning in music education

Research shows that music education curricula recognise the potential benefits of technology in music teaching and learning (Crawford, 2009b:471-488; Ho, 2004:57-67; Savage, 2007:471-488; Sherbon & Kish, 2005:36-41; Southcott & Crawford, 2011:122-136; Waldron, 2012:91–105). The indispensable success and growth of ICT in society has resulted in innovative educational approaches where ICT is regarded as a priority for education. Unfortunately in some music educational environments ICT is still perceived “as offering a different set of tools to support music education, much as a new set of percussion instruments might do” (Southcott & Crawford, 2011:124). Crawford (2013:730) reports that this perception of some music educators reduces ICTs to computer-aided instruction tools to assist with, e.g. aural training, the acquirement of notational

skills, teaching keyboard, elementary practices for music sequencing and score writing (Savage, 2007:65-77). "In this 'web 2.0' phenomenon, social networks continue to define the information society and, in turn, redefine music career opportunities quite differently from traditional preconceptions" (Draper, 2008:137).

Specialist research and the availability of hardware and software for music teaching and learning have resulted in authentic real-life music research that explains developments and uses of online teaching and learning blended with face-to-face instruction.

The following research literature focuses on the use of technologies in music education and can be divided into different focus areas:

- Music curriculum development (Carney, 2010:1-167).
- Music curriculum development in schools (Crawford, 2009a:147-167; Crawford, 2009b:471-488).
- Online music education projects (Crawford, 2013:717-734; Hebert, 2008:93-103; Webster, 2007a:1313-1316).
- BL as music instruction (Adileh, 2012:71-79; Bond, 2002:1-93; Draper, 2008:137-152).
- Professional development (Bauer & Moehle, 2008:71-84; Davis, 2010:1-6).
- Music student experiences (Biasutti, 2011:1865–1875; Hebert, 2008:93-103).
- Separate activities/tools in BL (Carvalho *et al.*, 2009:417-426; Cooper *et al.*, 2009:85-97; De León & Castro, 2014:2049 – 2058; Draper & Hitchcock, 2008; Hitchcock, 2009:1,2,5).

2.6.1 Music curriculum development

Carney (2010:1-167) explains through the use of an integrative research methodology how to define, design and implement a music theory curriculum that includes online instruction for teaching private piano students in the later primary grades. The curriculum outlines and guides instructional designers and music educators regarding the process of best implementation of face-to-face

tutoring, teamwork among students, teachers and parents and interaction with a web-based program.

2.6.2 Music curriculum development in schools

Crawford (2009a:147-167) explores the utilisation of technology in the Australian secondary school music curriculum since the late 1960s. The study focuses on an overview of the history of music technology in Australia and provides some background for its present status in Victoria, a state in Southeast Australia that contains the large city Melbourne. Crawford (2009b:471-488) also explored the availability and use of ICT for music education purposes, and music technology resources and facilities in Victorian government secondary schools. Essential factors that add to the successful use of ICT in music classes are reliable resources and appropriate support for music teachers, technical assistance and professional development of music educators.

2.6.3 Online music education projects

Webster (2007a:1313-1316) offers a summary of literature and reviews of research and music technology focused on teaching strategies, composition, performance assistive technology and music therapy. He includes summaries of empirical work (both qualitative and quantitative) regarding the music experiences of listening, performing, composition and distance learning. Webster (2007a:1325) argues that there is no major evidence that teachers apply hardware and software for music teaching and learning effectively.

Crawford (2013:717-734) explores the Project Music X teaching and learning outcomes. This project is an online music education endeavour that was designed to address the inadequacy in the provision of music education programs in regional and remote schools in Australia. Project Music X uses a range of web 2.0 technologies that support the way young people think. The project allows students in remote and rural areas to engage with excellent music education and performance in meaningful and contemporary music activities and experiences that are generally unavailable to them (Crawford, 2013:730). Real-life musical activities enable students with skills in using technology to collaborate with professional composers, develop music

compositions and participate in instrumental workshops. Students collaborate with professional musicians, their peers, teachers and workshop artists. Project Music X indicates that positive learning and teaching outcomes can occur when new technologies are included in an authentic way (Crawford, 2013:732).

Hebert (2008:93-103) discusses the potential of online technologies to empower music students to collaborate and make direct contact with well-known musicians and music scholars worldwide. These online technologies enable music students to view live performances, music rehearsals, expert teaching, research in progress and daily musical life in all parts of the world (Hebert, 2008:102).

2.6.4 Blended learning as instruction

A study with student-participants taking a music course as a university elective was conducted by Adileh at the Al-Quds University in Jerusalem (2012:71-79). Different cognitive styles supported teaching and learning and students were exposed to aural and visual teaching methods. The teaching material for the music course included the periods of development of music through history, especially in Western art music, as well as popular music and jazz. Music listening and appreciation concentrated on the orchestra and its instruments, learning about musical forms, and the fundamentals of musical pieces. Musical performance and expression as well as musical notation were discussed. Their listening activities were focused on melody, rhythm and form. Watching films and television programmes (and listening to radio programmes) related to music were added learning experiences. The students were divided into two groups: the experimental group was taught in the blended mode of instruction and the control group was taught using face-to-face instruction alone. Classroom meetings for the blended group lasted one and half hour each. Online instruction was directed through a website that was developed specifically for this course to imitate a scaled down version of a learning management system. Screen captures, assessment simulations and tutorials represented multimedia-rich online learning materials. Student-teacher communication was achieved through questions, e-mail, and web announcements. Students' collaborative learning experiences were enhanced by means of group cooperation, classroom discussions, and the use of e-mail. Final

course marks and evaluation of attitudes toward music learning indicated that the blended group was more successful than the group taught by means of traditional face-to-face instruction.

Bond (2002:1-93) explored teaching instrumental music to students through the Internet. Success was achieved by creating an acceptable learning environment (including audio, video, guided practise and additional resources). The skills and technology used were within reach of the average music educator but the study indicates that the practical distance education had negative effects on the quality of the students' performance. The level of engagement between teacher and student and the development and improvement of skills and knowledge were also undesirable (Bond, 2002:5).

Another Australian research project in music technology was conducted at the Queensland Conservatorium Griffith University (Draper, 2008:137-152). A realistic learning environment was created in Music Technology at their Conservatorium. Independent musical and technological skills were stimulated through learning processes and creative projects by integrating social networking as a tool. With problem-based learning in assessment of projects, face-to-face meetings where problem-solving outcomes are reviewed, self-managed access to institutional resources and a web-based discussion board, this project is a model of work-integrated learning.

2.6.5 Professional development

Professional growth and development are important for the music educators who participate in online discussion forums provided by MENC (The National Association for Music Education — (Bauer & Moehle, 2008:71-84). Curricular and co-curricular issues in the workplace and in their lives as music educators are discussed in a collaborative setting. The forums that are used are mostly discussion forums that focus on band, orchestra and choir activities and general music. Topics that lead to frequent discussions are planning and preparation (facilitating repertoire among teachers), teaching and learning environment (managing the learning environment). Co-curricular issues such as upholding positive relationships with administrators, colleagues and others in the broader school community appear to be a problem to deal with (Bauer & Moehle, 2008:80).

Davis (2010:1-6) volunteered to start a column where he discusses virtual schooling in music teacher education. In this article the term *e-learning* is associated with both distance education and the application of information and communication technologies in face-to-face classrooms; the term *virtual* includes any form of digital technology, together with online learning management systems accessed via the public Internet and video conferencing on narrowcast bridged services (Davis, 2010:3).

2.6.6 Student experiences

Biasutti (2011:1865–1875) provides the perspectives of students who were part of an online collaborative experience through a distance learning module on music education. The students agreed that working in small groups improved communication and developed their social and teamwork skills. Their attitude towards collaboration improved and they learnt to understand their own and other people's limits, which increased the sense of responsibility and respect for other group members. Cognitive processes such as examining and incorporating various points of view added value to activities and the different level of individual participation in the small groups promoted motivation and continuous engagement within the group.

Hebert (2008:93-103) argues that the potential of using online technologies is to empower music students

to make direct contact with the greatest of musicians and scholars in the world today, enabling them to view live performances, music rehearsals, expert teaching, research in progress, and daily musical life in all parts of the world. It is this possibility for immediate global communication and intercultural dialogue that seems to bring the greatest of new promises to our field, but in the end it is up to the teachers to determine how best to use these new tools (Hebert, 2008:102).

2.6.7 Separate activities/tools in BL

Carvalho *et al.* (2009:417-426) agree that introducing podcasts (audio or video files) in HE courses are very positive experiences. Podcasts are used for sharing information; giving feedback or comments on student assignments and providing guidelines for practical work. Lecturers recognise the prospects of

implementing this educational resource, but producing podcasts and their successful use as educational tool are difficult and time-consuming.

The lecturers at the University of Minho, Portugal, recognise the potential of this pedagogical resource and have introduced, used and modified podcasts regardless of the shortcomings identified. They are determined to enlarge the learning experience through pedagogical innovation. Cooper *et al.* (2009:85-97) describe a research project where undergraduate students enrolled in a Popular Music degree program used iPods (mobile technology) and podcasting as a delivery and assessment method. Mobile technology is readily available, flexible and contributes to active learning experiences that can enhance learner engagement with music education. The results of their research project show that iPods and podcasting cannot replace traditional lectures, but are an effective cognitive tool to support student learning. Benefits comprise the motivation of learners, support for student collaboration contributing to “time-shifted learning engagement” (choosing when, where and how they listen and re-listen to materials) and personalisation of learning (Cooper *et al.*, 2009:85,95). This research indicates that podcasts can be used as cognitive delivery tool in a BL approach.

De León and Castro (2014:2049 – 2058) examined a career guidance project developed in a music conservatoire in Madrid (Spain). The project, *Music in the Professional World*, was developed as a directive to improve education in music conservatoires. This BL course offers multifaceted music education providing students with knowledge and skills related to music in practice, career management and strategic thinking. Learning activities include utilising the online course web page to explore resources and searching for relevant information on the World Wide Web. Students learn about different music-related institutions through virtual field trips. Face-to-face contact sessions, as well as online communication with different music professionals are established. To enhance higher order thinking and to encourage critical thinking skills, students write in a personal online journal and collaborate in discussion forums (De León & Castro, 2014:2052).

Draper and Hitchcock (2008) examined a music technology project featuring collaboration in constructing knowledge through a web-based discussion board

that has proven to be an asset with equal value to Australian conservatoire music technology students and staff. The successful “blending of online and face-to-face activity provides a hidden curriculum in which students communicate, reflect and collaborate to build and sustain an authentic participatory learning culture” (Draper & Hitchcock, 2008).

Hitchcock (2009:1-6) focuses on some of the outcomes of the above-mentioned five year study in this music technology learning community. This pedagogically embedded online whole-of-program community (students, academics, alumni and industry professionals) used a web-based discussion board as an intellectual space for learning. This discussion board was not tied to any university-based learning management systems, structure or courses (Hitchcock, 2009:2). The online activity blended naturally with the face-to-face community activities and assisted the “vertical integration” of students in the program (Hitchcock, 2009:1). Active participation in sharing knowledge, interacting, movement between expert groups and professional socialisation encouraged students to engage in intellectual and practical activities which they are likely to encounter in their professional careers (Hitchcock, 2009:1,5).

2.7 Conclusion

The literature review for this study confirms that multimodal methods can be implemented in music education. This blend of face-to-face and online instruction is driven by the course goals and objectives and pedagogical approaches used. Teaching and learning for the current generation (digital natives) needs to suit students’ diversity and values and should challenge them to pursue lifelong learning and take responsibility for their own learning through learner-centred activities. The multimodal model of Picciano is the starting point in this study to find the ultimate design and use for multimodality in music education.

Multimodality is associated with BL and suggested definitions and characteristics of BL are discussed as described in literature. Multiple approaches driven by curriculum design and pedagogical approaches for music education indicate that a music curriculum that accommodates multimodality requires a rethink and restructuring of the teaching and learning relationship. Research literature explicates the recent implementation of online technology in

current music curricula, education projects and the professional development of music educators.

CHAPTER 3: EXAMPLES OF MULTIMODAL TEACHING AND LEARNING ACTIVITIES IN MUSIC EDUCATION AT UP

3.1 Introduction

Although this chapter is not a research chapter, it is impossible for the reader to follow the discourse without the relevant information that supports the development process. The clickUP content and activities presented here as screen capture examples, enabled me to understand how a multimodal model can be implemented in the ME modules. These document examples form the backbone of this research and are not numbered as figures. The examples are:

- clickUP environment
- course environment:
 - o personalised course home page (§3.3.1.1)
 - o course administration (§ 3.3.1.2)
 - ISME research domains
 - o Contacts (§ 3.3.1.3)
 - o Calendar (§ 3.3.1.4)
 - o module theme structure (§ 3.3.1.5)
 - module themes
 - course navigation steps
 - o guitar tutorials, Assignments and My Grades (§ 3.3.1.6)
 - o course management (§ 3.3.1.7)
- Examples of assignments using different course tools
 - o Blackboard Collaborate: chatroom (§ 3.3.2.1)
 - o discussion board (§ 3.3.2.2)
 - o journal (§ 3.3.2.3)
 - o Turnitin assignments (§ 3.3.2.4)
 - o wiki (§ 3.3.2.5)

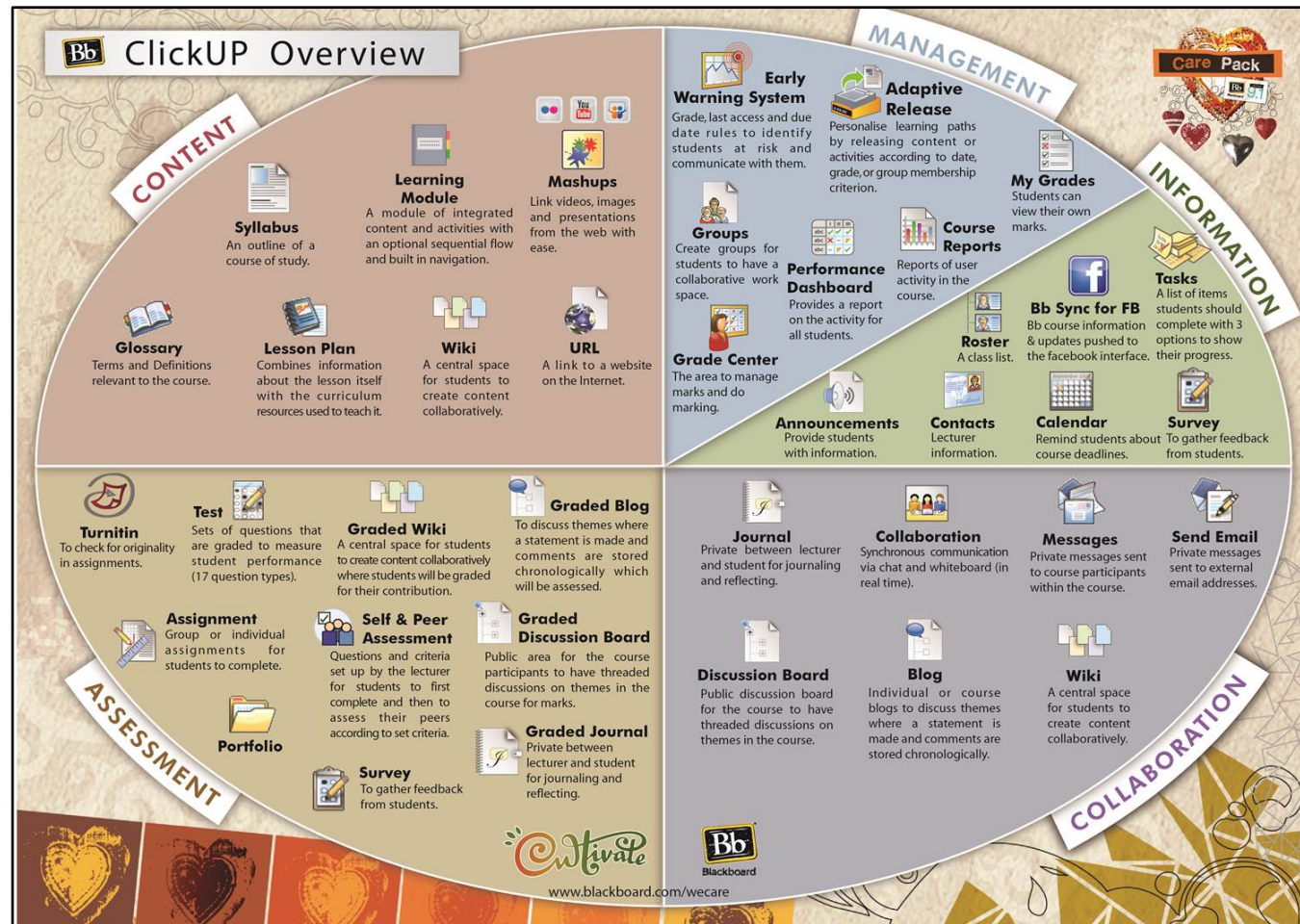
3.2 The process of constructing all course material and online activities

I was appointed as lecturer for undergraduate and postgraduate modules in ME at UP in July 2012. The undergraduate modules I am responsible for are MPE170 (first-year), MPE270 (second-year) and MPE370 (third-year). For the duration of the second semester in 2012, I was using conventional methodologies, but soon realised I needed to rethink my teaching and learning approaches. In 2013 I started to restructure the undergraduate ME curricula. During this time I enrolled as a Northwest University (NWU) Ph.D. student and at that stage it was obvious to me that I wanted to research something new and challenging. While deciding on a topic I attended a BL workshop at the University of the Free State. I knew immediately that researching BL teaching and learning environments for Music Education was a challenging topic for conducting my research. This research journey started with the exploration of BL options at UP which uses the learning management system clickUP²⁴ to implement BL.

In order to administer clickUP, I attended in-service training and upskilling courses presented by the Department for Education Innovation (EI) at UP, a component of UP's personal and departmental development programmes. The courses I completed include clickUP Overview, clickUP Content, clickUP Management, clickUP Collaborate, clickUP Assessment, clickUP Grade course, clickUP Turnitin as well as the Mobile and Web Technologies Workshop. I use the clickUP help site or contact the instructional designer for the Faculty of Humanities at UP when I need support and to revisit the activities carried out and to improve the skills acquired at these courses.

²⁴(Blackboard Learn™)

The following graphic²⁵ provides an overview of what Education Innovation UP shares with instructors to introduce the options of clickUP and to keep lecturers focused on activities that tie in with the course goals and objectives.



²⁵ Provided by Education Innovation at UP as clickUP course material

After familiarising myself with the clickUP environment, I started visualising the BL components necessary for the subject ME. My teaching philosophy provides the main orientation for creating the ME blended teaching and learning environment. This personal philosophical approach — influenced by Barell (2010), Barrett (2005), Luckett (2001b) and Wiggins (2015) — entails a striving to prepare music students to find their own teaching path (understand how to teach and how students learn) through engaging them holistically in real-life musical problem-solving situations. These interactions establish meaningful, lifelong experiences. The ME curriculum uses the Status Quo model, which is defined in the UP draft document for hybrid learning (Pretoria, 2015) as “a technology-enhanced course where modules are presented in a contact mode using online and classroom technologies and media to engage students more in an online environment (outside contact sessions), but do not reduce time on campus. Less than 20% contact time is replaced by online activities” (Pretoria, 2015). As digital natives (§2.3.1), the UP music students are fortunate to have sufficient online resources available to implement the BL activities. Those students who do not have their own Internet connection and devices can make use of a Wi-Fi network and computers on campus. I have a few extra devices of my own to provide to students for use during online activities in the classroom.

3.3. Preparing modules on clickUP

To access clickUP I use the Internet browser Google Chrome™ or Explorer™. I can access and administer a clickUP page provided I am registered as the instructor of the ME modules I teach. An instructional designer handles this process.

3.3.1 Getting started with the course environment

In constructing the course environment I took the following steps into consideration:

- the design of the home page and which messages would be communicated in the banner;
- administrative communication documents to be submitted;
- guidelines for submitting contact information;

- the academic calendar;
- menu planning and organisation (e.g. where to add dividers to indicate subdivisions on the menu);
- planning course content to submit course documents (videos, class notes, additional reading, etc.);
- the best method to make assignments available;
- deciding on which course tools I would use to enhance learning through BL;
- customising the interactive grade centre for module assignments.

These steps provide the framework for presenting the clickUP documentation in this chapter (§ 3.3.1.1-3.3.1.7).

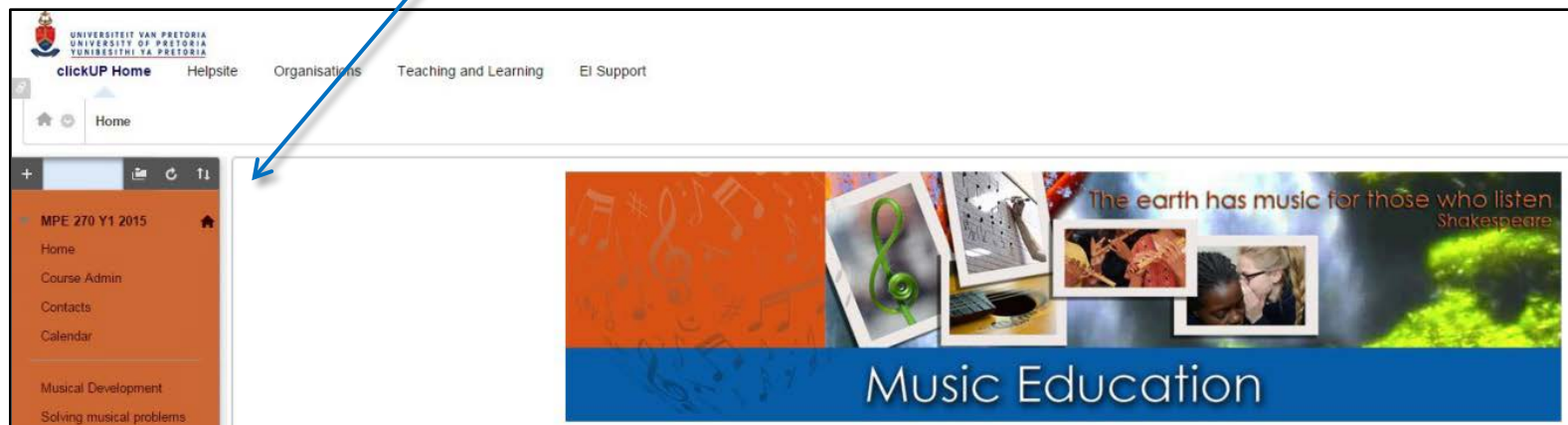
3.3.1.1 Personalise the course home page

To personalise the module home pages I added a customised banner. Planning and creating this banner was a time consuming activity. I used Adobe Photoshop CC with filters and effects for the design to create my idea of integrating visual and word art.

The words of Shakespeare provided the inspiration for the theme of nature and the music notation and photographs depict some music education activities, music and cultures, and social constructivism.



To customise the home page, I changed the default colour scheme to a similar colour endorsed by the Faculty Humanities at UP.



The next step was to add any other course modules. I could choose from alerts, calculator, dictionary, announcements, calendar, thesaurus, etc. I decided on announcements (messages, reminders, where to look for new supplementary course material, etc.) and clickUP Mobile Support (support for students who use only their cellular phones to go onto clickUP).

Home 

Add Course ModuleCustomize Page

▼ My Announcements

No Course or Organization Announcements have been posted in the last 7 days.

more announcements...→

▼ clickUP Mobile Support

Steps to Download the clickUP (Blackboard) Mobile Learn application on your smartphone, Frequent Asked Questions and other relevant information is [available here.](#)


How To Use Mobile Learn


Logins


Purchasing and Installing


Available Features


Platforms and Devices


Mobile Tests


Resources for Instructors & In...


Known Issues

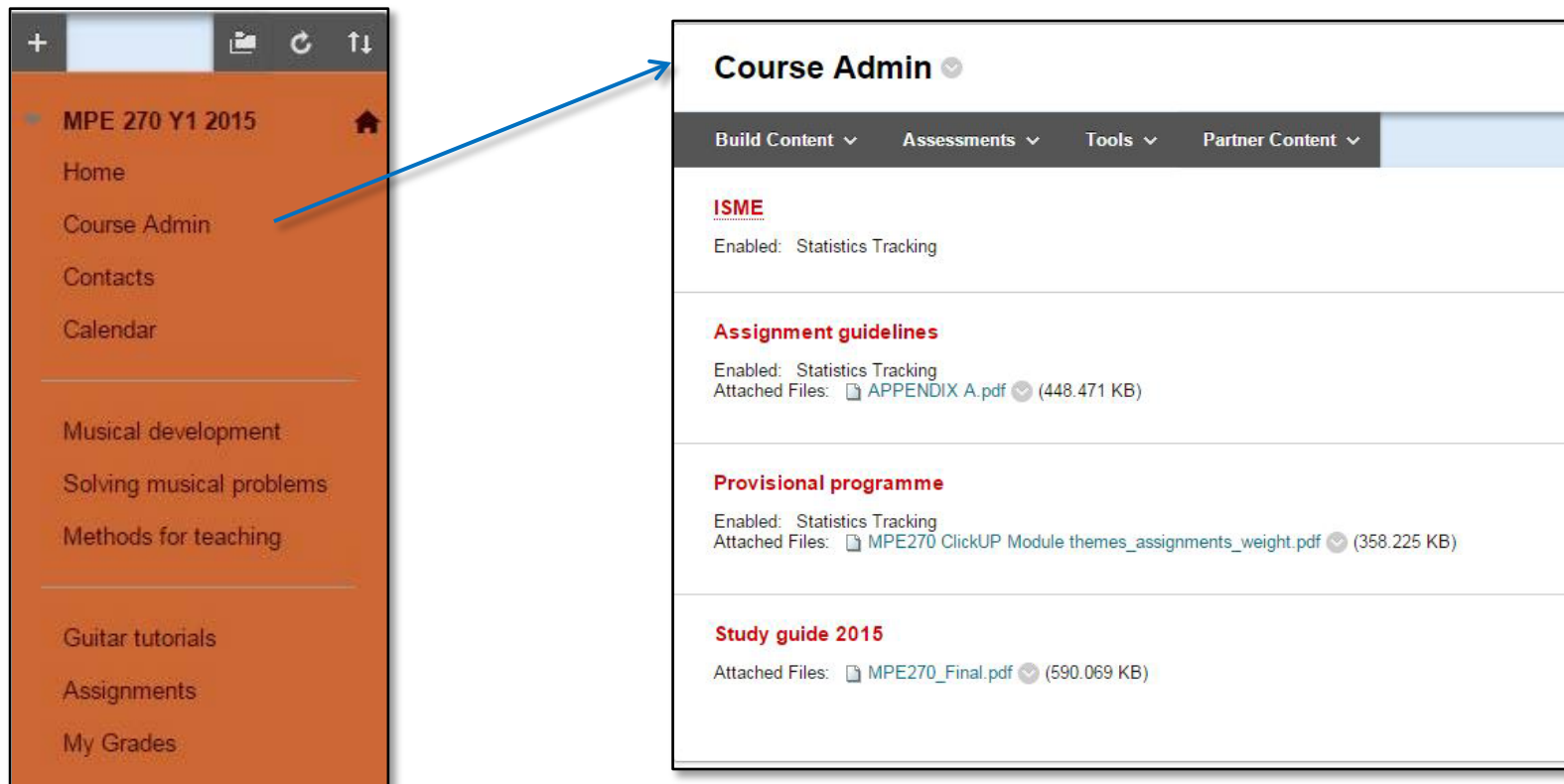
Support

- Please take note that no technical device support (such as connecting to the internet from your phone etc.) will be provided.

3.3.1.2 Course administration

Course administration relates to the following:

- a document to explain research commissions for ISME (International Society for Music Education);
- assignment guidelines;
- a provisional programme (dates, classwork and assignments due);
- a study guide.

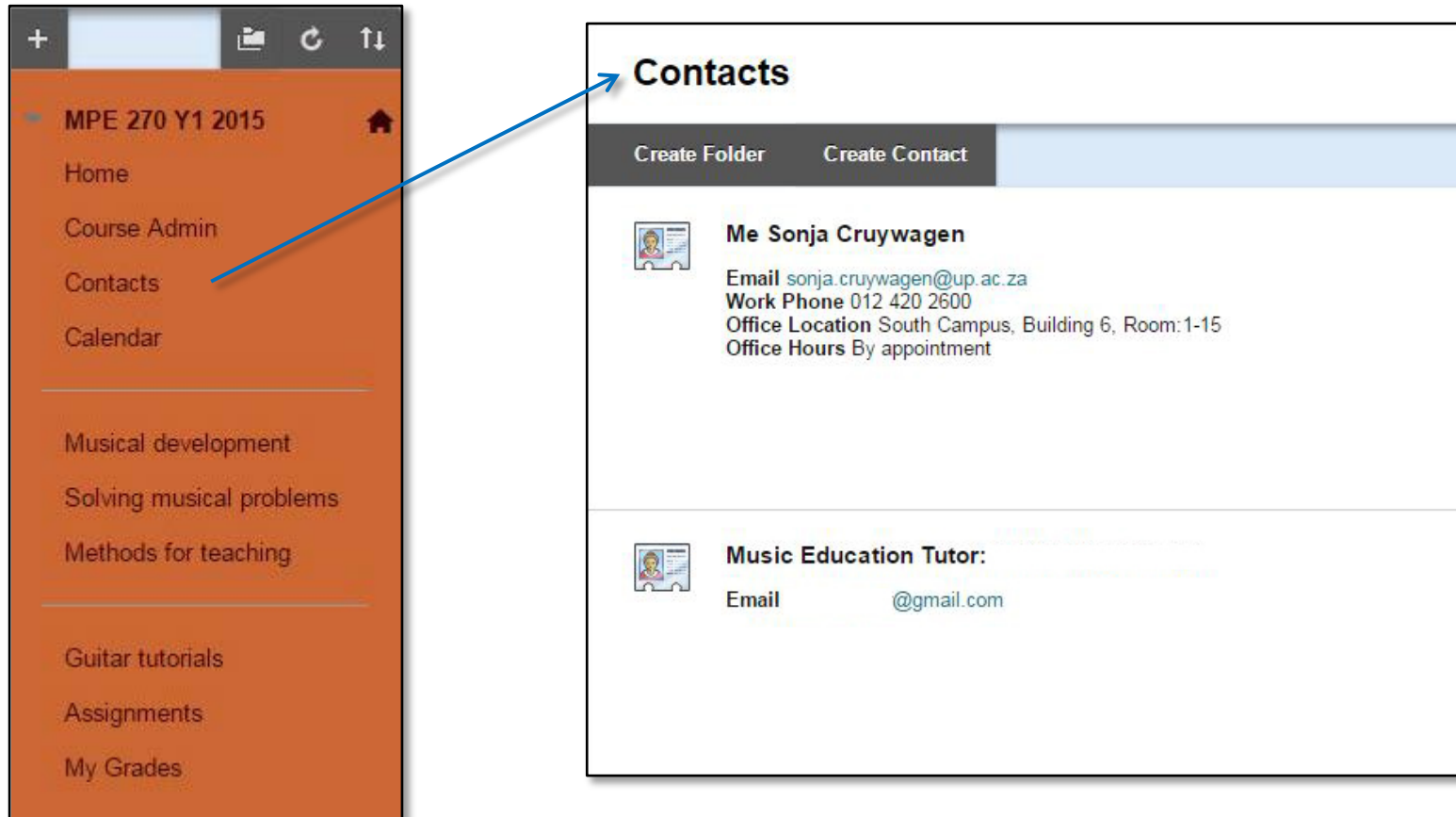


The research commissions for ISME to make students aware of music education as an internationally well researched domain. I created this graphic to include in the course material and the content was adapted from information given on the ISME website (<http://www.isme.org/>).



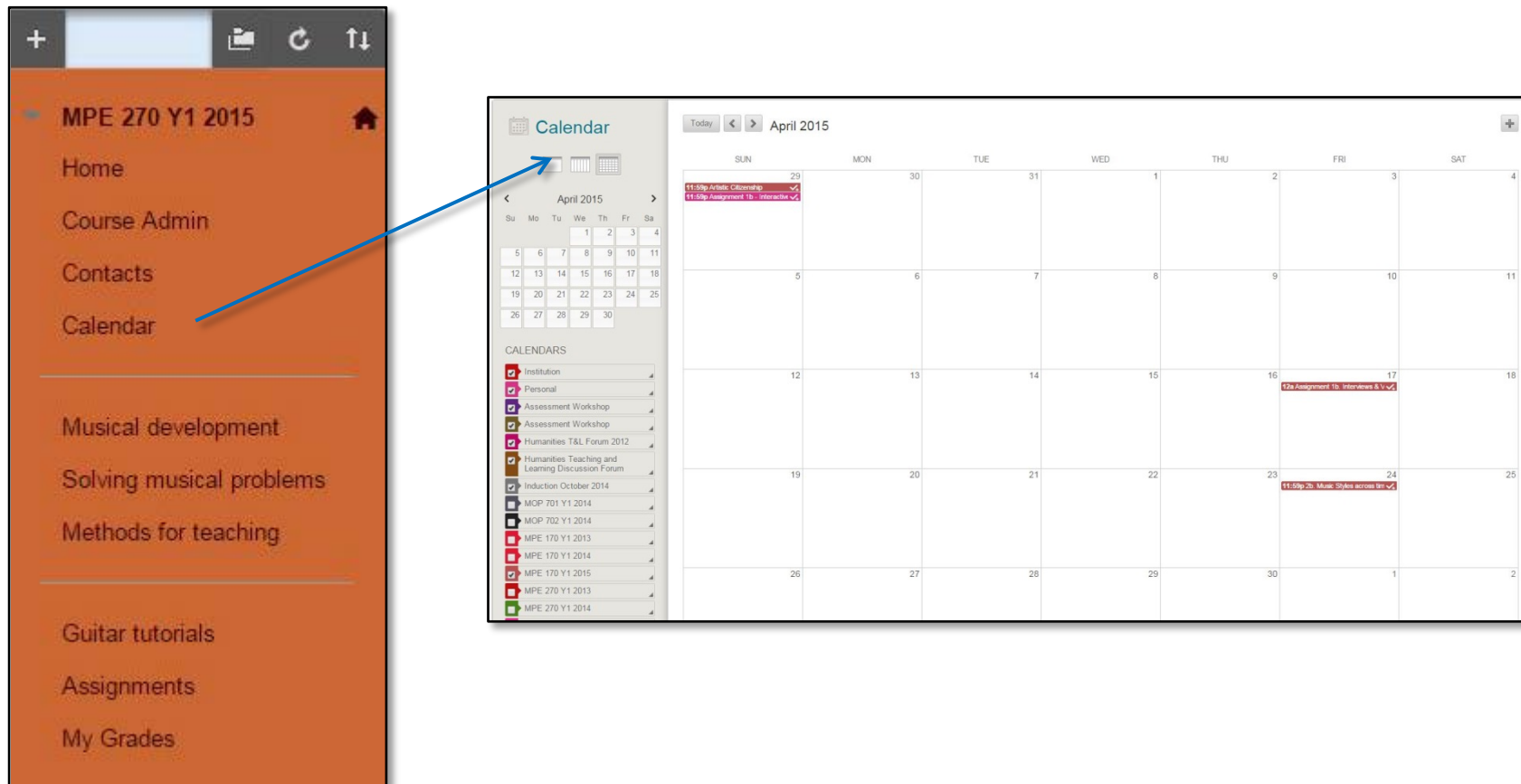
3.3.1.3 Contacts

The contact information the lecturer and tutor is displayed in the contact page in a pre-determined structure.



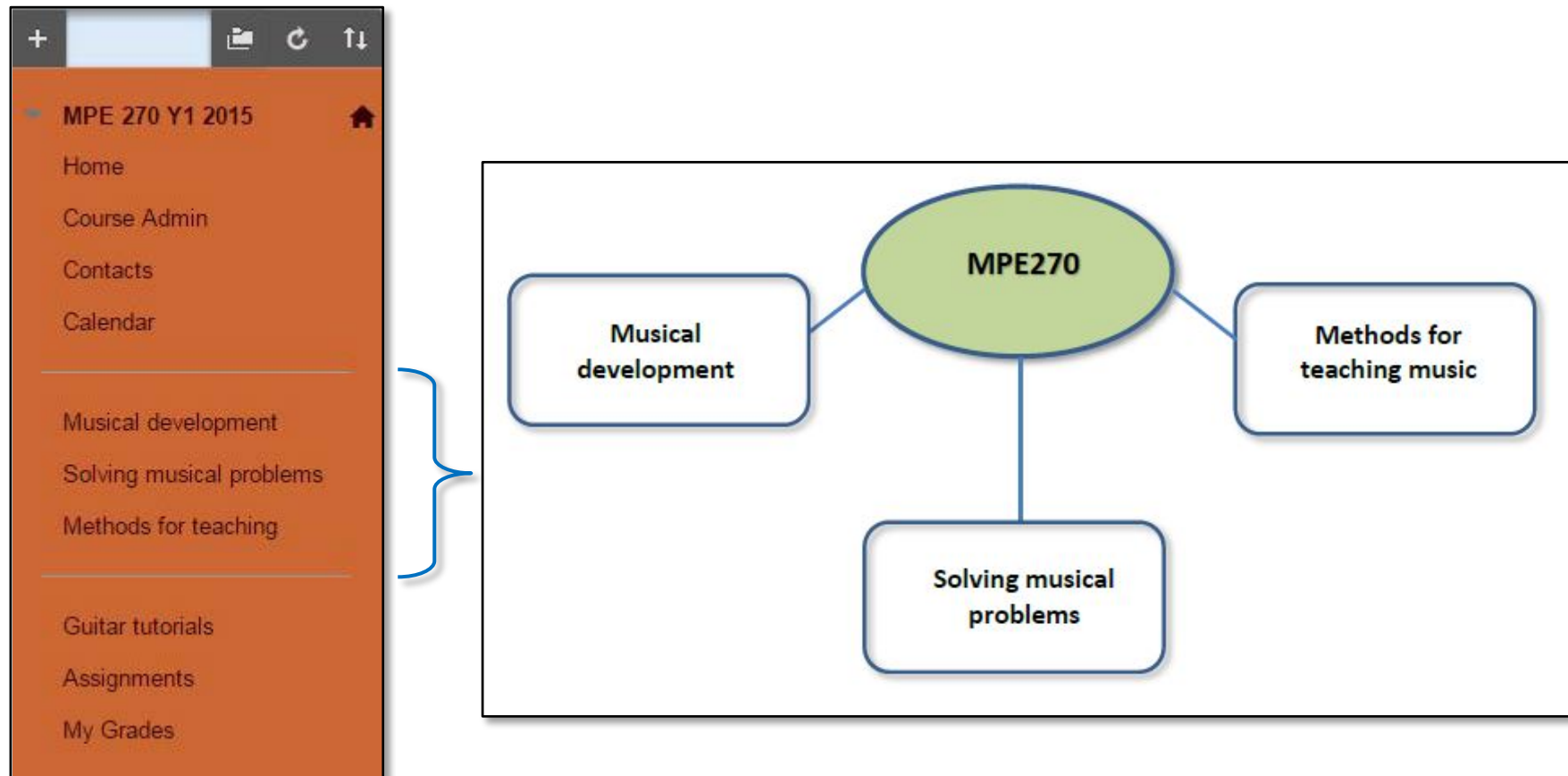
3.3.1.4 Calendar

Students can use the calendar that reminds them of institutional, course calendar events and assignment due dates.

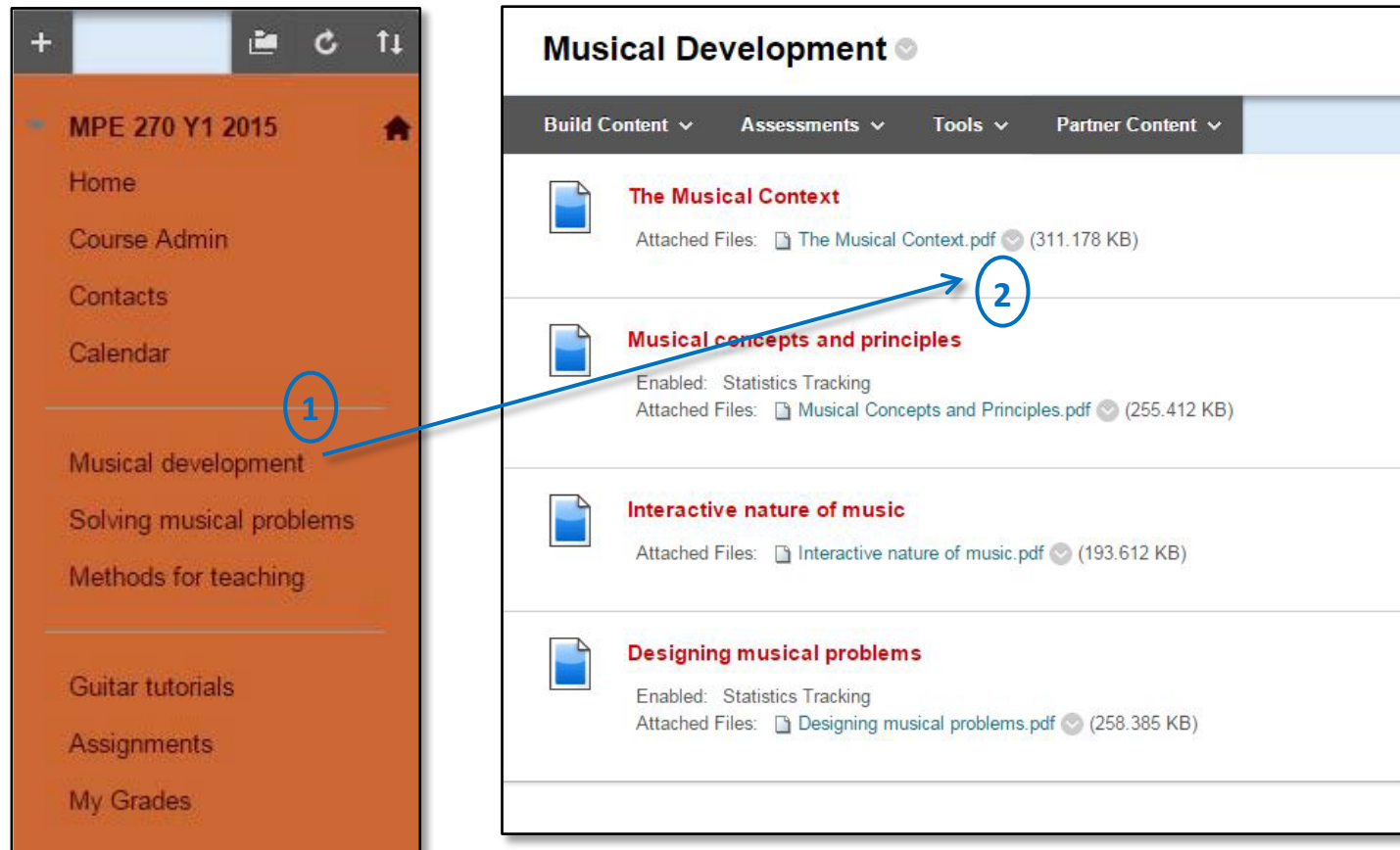


3.3.1.5 Module theme structure

The second section of the course menu reflects the structure of the themes of the MPE modules as presented in the course study guide (§ 3.3). These themes are created in top-level course areas called content areas.



An informal web design rule suggests that a user of a website must find all navigation in three steps.²⁶ I did take the rule into consideration by ensuring the student does not click more than 3 times to access information/content. The next example can be accessed in two clicks.



²⁶https://en.wikipedia.org/wiki/Three-click_rule

This example needs three clicks to be accessed.

The image illustrates a three-click navigation path within a learning management system. The first screenshot shows the course menu on the left, with 'Course Admin' circled in blue and labeled '1'. The second screenshot shows the 'Videos - Students' folder circled in blue and labeled '2'. The third screenshot shows a list of video resources, with the first item, 'FilmSkills - How to Shoot Documentaries - The Art of the', circled in blue and labeled '3'. Arrows indicate the flow from the menu to the folder and then to the video.

Course Menu (Screenshot 1):

- MPE 170 Y1 2015
- Home
- Contacts
- Calendar
- Course Admin (1)
- Music in the lives of people
- Organisation of music across time and place

Video Library (Screenshot 2):

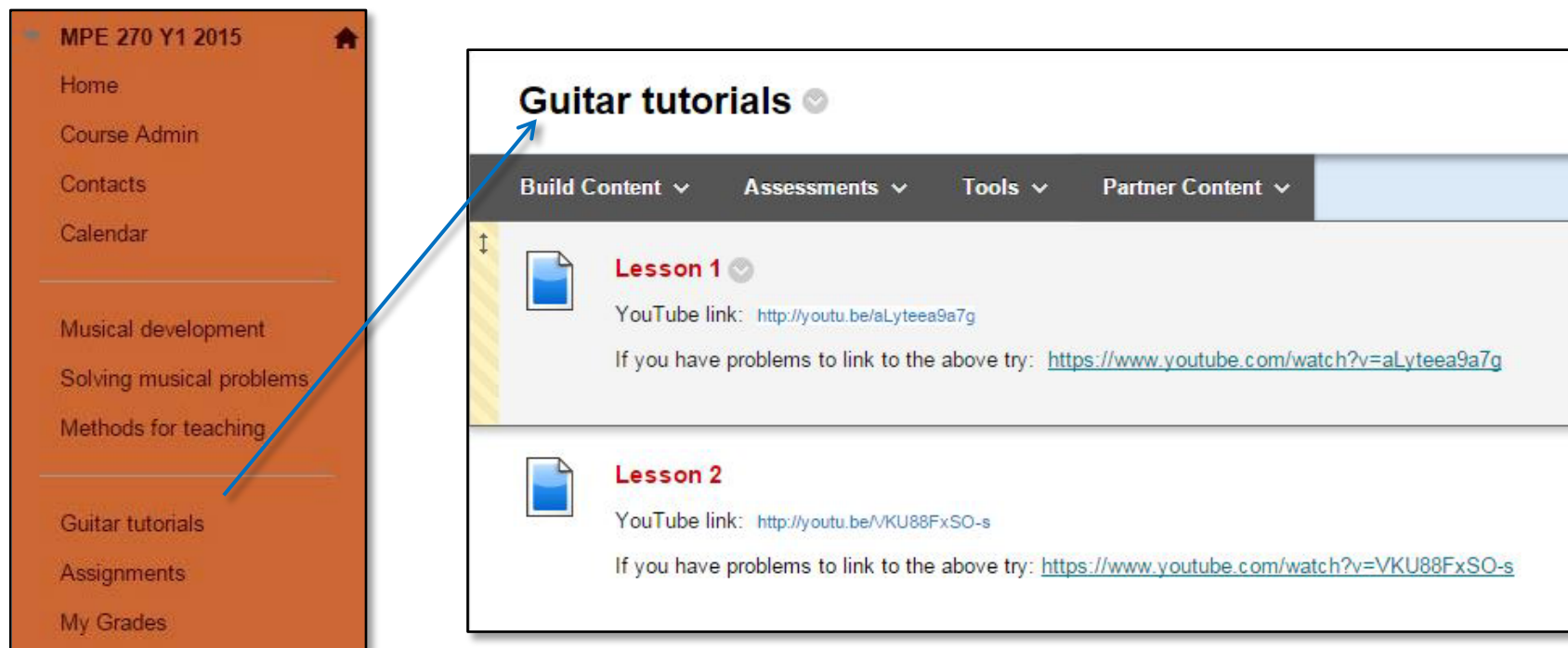
- Build Content
- Assessments
- Tools
- Videos - Students (2)

Video Resources (Screenshot 3):

- FilmSkills - How to Shoot Documentaries - The Art of the**
Availability: Item is no longer available. It was last available on Mar 9
Enabled: Statistics Tracking
Duration: (7:47)
User: filmschoolondvd - Added: 3/14/13
YouTube URL: <http://www.youtube.com/watch?v=...>
Watch Video (3)
- How to Create a Storyboard for Your Video Shoot - Reel**
Availability: Item is no longer available. It was last available on Apr 1
Duration: (2:37)
User: reelseo - Added: 6/6/12
Watch Video
- How to Make Storyboards**
Availability: Item is no longer available. It was last available on Apr 1
Duration: (3:34)
User: lunawebs - Added: 8/13/09
Watch Video

3.3.1.6 Guitar tutorials, Assignments and My Grades

In the second section of the MPE270 menu I added guitar tutorials, assignments and the students' grades. Playing guitar as accompaniment is part of the MPE270 module. With the help of the media department at UP and a well-known guitarist and guitar teacher we created 17 guitar tutorial videos as a flipped classroom²⁷ instructional strategy introduced in August 2015. This activity was still in the early stages of research and the data did not form part of this study.



²⁷The flipped classroom instructional strategy includes video lectures that are presented as homework, freeing up valuable class time for engaging directly with the materials (Gaughan, 2014:221; Milman, 2012:85).

All assignments can be located in the Assignments course menu item.

The image shows two screenshots from a learning management system. On the left is a course menu for 'MPE 270 Y1 2015'. It lists several options: Home, Course Admin, Contacts, Calendar, Musical development, Solving musical problems, Methods for teaching, Guitar tutorials, Assignments, and My Grades. A blue arrow points from the 'Assignments' item in the menu to the right-hand screenshot. The right-hand screenshot shows the 'Assignments' page. At the top, there's a header 'Assignments' with a dropdown arrow. Below it is a navigation bar with four tabs: 'Build Content', 'Assessments', 'Tools', and 'Partner Content'. The 'Assessments' tab is selected. The main content area lists four assignments, each with an icon, a title, and availability information:

- Assignment 1a - Bruner & Piaget**
Availability: Item is no longer available. It was last available on Feb 12, 2015 11:59 PM.
- Assignment 1a - Discussion board**
Availability: Item is no longer available. It was last available on Mar 5, 2015 11:59 PM.
Enabled: Statistics Tracking
- Assignment 1b - preparation for the wiki**
Availability: Item is no longer available. It was last available on May 13, 2015 3:00 PM.
1b. Interactive nature of music
- Assignment 1b - Interactive nature of music**
Availability: Item is no longer available. It was last available on May 13, 2015 3:00 PM.

Students view their grades in My Grades where they can find all assignment marks and the weighted totals of their semester mark.

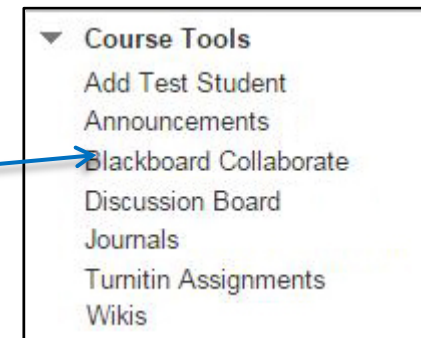
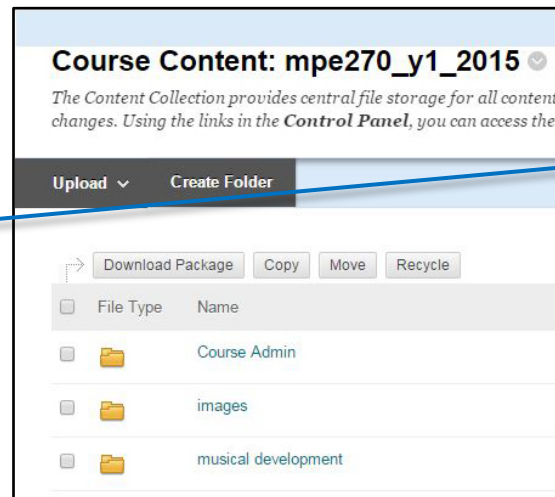
The image shows a user interface for a course management system. On the left is a vertical sidebar with an orange background. At the top of the sidebar is a header with a plus icon, a search bar, and icons for a folder, refresh, and sort. Below this, the sidebar is divided into sections. The first section is for the course 'MPE 270 Y1 2015' and includes links for Home, Course Admin, Contacts, and Calendar. The second section contains links for Musical development, Solving musical problems, and Methods for teaching. The third section contains links for Guitar tutorials, Assignments, and My Grades. A blue arrow originates from the 'My Grades' link and points to the 'My Grades' title in the main content area.

The main content area is titled 'My Grades' and features a tabbed interface with four tabs: 'All' (selected), 'Graded', 'Upcoming', and 'Submitted'. Below the tabs is a table with the following structure:

ITEM
Weighted Total View Description Grading Criteria
Total View Description Grading Criteria
Weighted Total View Description Grading Criteria
Assignment 1a - Bruner & Piaget DUE: MAR 5, 2015 Discussion
Assignment 1b - Interactive nature of music DUE: MAR 29, 2015 Wiki

3.3.1.7 Course management

Students have no access to the control panel. The lecturer can upload files and documents to the content collection to be able to link to multiple places within the course. In the Grade Center (as spelt in the Control Panel) I find assignments that have been submitted by students and are ready to be graded. I can also manage all assignment marks and semester totals and add examination marks.



The course tools I use in this research.

To monitor if allocated marks are reflected in the grades column I added a test/demo student.

A screenshot of the 'Grade Center : Full Grade Center' page. It shows a table with student grades. The table has columns for 'Last Name', 'First Name', 'Username', 'Total', 'Semester 1', 'Assignment 1a', and 'Assignment 1b'. A single row of data is visible.

Last Name	First Name	Username	Total	Semester 1	Assignment 1a	Assignment 1b
			220	66.00%	14.00	18.00

3.3.2 Examples of assignments using different course tools

3.3.2.1 Discussion board

The discussion board is made up of discussion threads that students can organise around the subject researched. Students click on the discussion board name to start the process.

Discussion Board

Forums are made up of individual discussion threads that can be organized around a particular subject. Create Forums to organize discussions. [More Help](#)

Create Forum Search

Forum	Description	Total Posts	Unread Posts	Total Participants
Assignment 1a - Bruner & Piaget compared to Wiggins Forum is no longer available. Available until: Thursday, March 5, 2015 11:59:00 PM SAST.		51	0	15

Then they open the discussion that I as instructor had posted previously.

List View Tree View

Forum: Assignment 1a - Bruner & Piaget compared to Wiggins

Organize Forum Threads on this page and apply settings to several or all threads. Threads are listed in a tabular format. The Threads can be sorted by clicking the column title or the caret at the top of each column. [More Help](#)

Create Thread Grade Discussion Forum Subscribe Alignments Search Display

Thread Actions Collect Delete

Date	Thread	Author	Status	Unread Posts	Total Posts
2/12/15 11:44 AM	Examine and compare :	S (Sonja) Cruywagen	Published	0	8
2/12/15 11:42 AM	Discuss Piaget's Theory of Cognitive Development	S (Sonja) Cruywagen	Published	0	18
2/12/15 11:41 AM	Discuss Bruner's Theory of Development	S (Sonja) Cruywagen	Published	0	13
2/12/15 11:39 AM	Wiggins 2001: Chapter 6 p 114-117	S (Sonja) Cruywagen	Published	0	12

Thread Actions Collect Delete

The students post researched information with threads and replies.



S (Sonja) Cruywagen  6 months ago

RE: Discuss Piaget's Theory of Cognitive Development

There were also critique on the work of Piaget. What were the complaints about his research?

[▲ Hide 4 replies](#)



SM  6 months ago

RE: Discuss Piaget's Theory of Cognitive Development

One of the critiques or complaints about his research is that Piaget acknowledged that some children may pass through the stages at different ages than the averages noted in his theory, and that some children may show characteristics of more than one stage at a given time. Making this argument at the same time he insisted that the development of children must always follow this sequence, he argues that stages cannot be skipped, and that each stage is marked by new intellectual abilities and a more complex understanding of the world.

[▲ Hide 1 reply](#)



RM  6 months ago

RE: Discuss Piaget's Theory of Cognitive Development

Criticisms questioned whether the stages were in fact real? Bruner would rather not talk about stages at all, preferring to see development as continuous. Others have queried the age ranges of the stages. Studies have shown that progress to the formal operational stage isn't guaranteed. For example, It was reported that only one-third of adults ever reach the formal operational stage. As such, Piaget concentrated on the universal stages of cognitive development and failed to consider the effect that the social setting and culture may have on cognitive development. Piaget's methods are more open to biased interpretation than other methods since he conducted the observations alone. The data collected is based on his own subjective interpretation of events. It would have been more reliable if Piaget conducted the observations with another researcher and compared the results afterwards to check if they are similar (i.e. have inter rater reliability). Studies have shown Piaget underestimate the abilities of children because his tests were sometimes confusing or difficult to understand. Piaget carried out his studies with a handful of participants (i.e. small sample size) – and in the early studies he generally used his own children. This sample is biased, and accordingly the results of these studies cannot be generalized to children from different cultures.

3.3.2.3 Journal

In a journal the students have an opportunity to communicate with the instructor to share personal reflections on lesson observations at primary schools.

Assignment 1c - Observation Journal

If a Blog or Journal can be graded, a grade assigned to an individual member is applied only to that individual. [More Help](#)

Journal Instructions ^

Instructions

[Alignments](#)

- Visit a school to observe music education classes
- Write a journal on observations of 4 lessons observed at a primary school (music as part of Life Skills: Gr 4-7) or high school (music as a subject)
- Submit journal on clickUP
- Discuss a lesson plan with teacher
- Compare above lesson plan with Wiggins's suggested lesson plan format (2009:98)

Notes available on clickUP: Menu item Lesson Planning

Sunday, May 17, 2015

Grade 6

Posted by  A at Sunday, May 17, 2015 10:18:49 PM
Last Edited: Tuesday, May 26, 2015 11:33:38 AM

Grade 6 Music Lesson Observations

Venue: St Mary's Diocesan School

Date: 13 May 2015

Time: 13:30 to 14:10

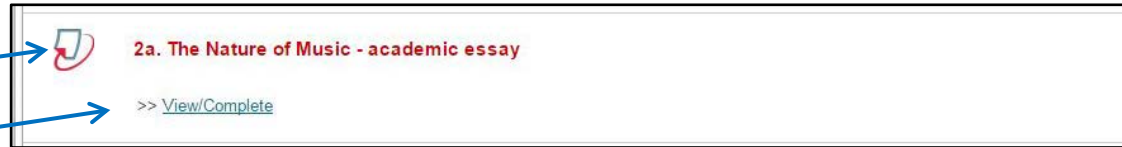
Teacher: Ms.

Lesson Procedure

- **Focus Question:**

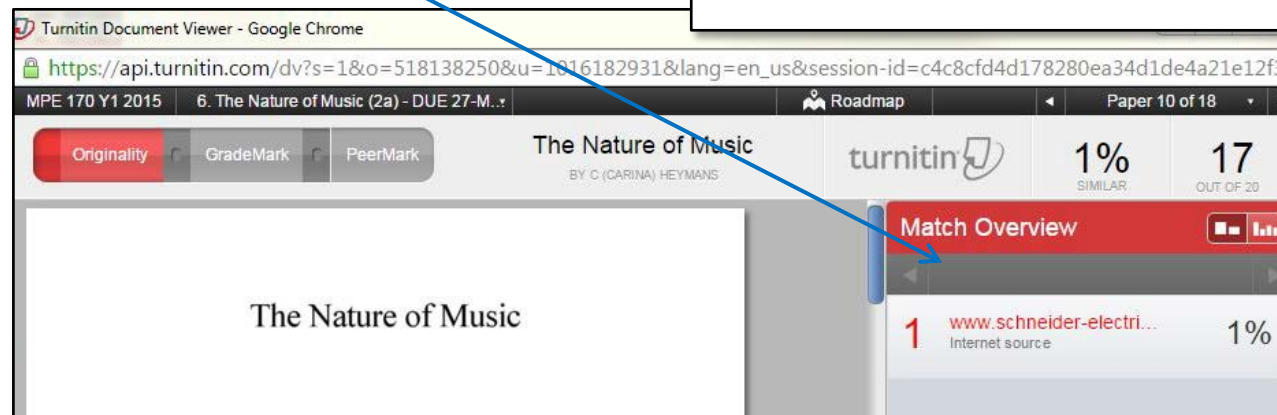
3.3.2.4 Turnitin assignments

Using Course tools, I created a Turnitin (Tii) assignment in clickUP before students' submission date.



Students submit their research essays to the Tii assignment link. I then assess the assignment, make comments (e.g. Quickmark Comments), and give a mark for the paper that automatically goes to the Grade Centre.

Students can see comments made by the instructor, their results and a plagiarism similarity score. The Turnitin assignment tool is valuable to help students in the process of implementing original writing and proper citation.



3.3.2.5 Wiki

As instructor I created the wiki pages for the different groups. To work on the wiki page group members log into the wiki assigned to their group and individual entries are made. Students click on their group name and start to add and edit course-related material. Wiki pages are continually edited and the content becomes richer as collaboration among group members deepens:

Wikis

A Wiki is a collaborative tool that allows Students to contribute and modify one or more pages of Course-related materials. [More Help](#)

Create Wiki

→ Delete Availability ▾ Student Access ▾ Student Comment Access ▾

☐ Name 📁	Type	Student Access	Student Comment Access	Last Modified Date
☐ Group 1 - Understand musical concepts (Wiki is not available. Last available on: 11/30/14 11:59 PM)	Course	Open to Editing	Open to Commenting	10/19/14 11:55 PM
☐ Group 2 - Understand musical concepts (Wiki is not available. Last available on: 11/30/14 11:59 PM)	Course	Open to Editing	Open to Commenting	10/14/14 2:34 PM
☐ Group 3 - Understand musical concepts (Wiki is not available. Last available on: 11/30/14 11:59 PM)	Course	Open to Editing	Open to Commenting	10/13/14 10:50 AM
☐ Group 4 - Understand musical concepts (Wiki is not available. Last available on: 10/12/14 11:59 PM)	Course	Open to Editing	Open to Commenting	9/25/14 3:39 PM
☐ Listening wiki	Course	Open to Editing	Open to Commenting	4/4/14 10:43 AM

→ Delete Availability ▾ Student Access ▾ Student Comment Access ▾

Displaying 1 to 5 of 5 items Show All Edit Paging...

Example of a wiki home page (created by ME students) with web page content introduction and hyperlinks to relevant wiki sub-pages.

Progression of teaching musical conceptsEdit Wiki Content

Created By NL on Thursday, September 25, 2014 3:19:55 PM SAST
last modified by A on Monday, October 13, 2014 10:50:36 AM SAST

Progression of Teaching Musical Concepts

Teaching music concepts is a progressive process. From a very young age, children must be introduced to the various musical concepts so that they can progressively better their understanding of the concepts as they grow up and mature. It is very easy for children to absorb various concepts and learn them quickly. This wiki aims to teach children through grades K to 6 or grades 1 to 7, various musical concepts progressively.

The concepts that are covered in this wiki are:

- [01. Rhythm and Beat](#)
- [02. Timbre](#)
- [03. Harmony and Texture](#)
- [04. Melody](#)
- [05. Articulation](#)
- [06. Mood](#)
- [07. Form](#)
- [08. Tempo](#)
- [09. Dynamics](#)



Example of a wiki sub-page (created by ME students) with researched information and colour pictures.

Grade K

In Grade K, **movement** as a skill takes an important role.

It is aware that the kids in this stage cannot read music notations so the teacher must help the children to **feel the rhythm** with their body.



The movements include the following:

Moving with **locomotor and non-locomotor movements** on the beat, move to show the **steady beat**, imitating steady beat movements modelled.



3.4 Study guides: module specifications

3.4.1 Articulation with other modules in the programme

Figure 15 illustrates the articulation of Music Education with other modules in the UP music programmes:

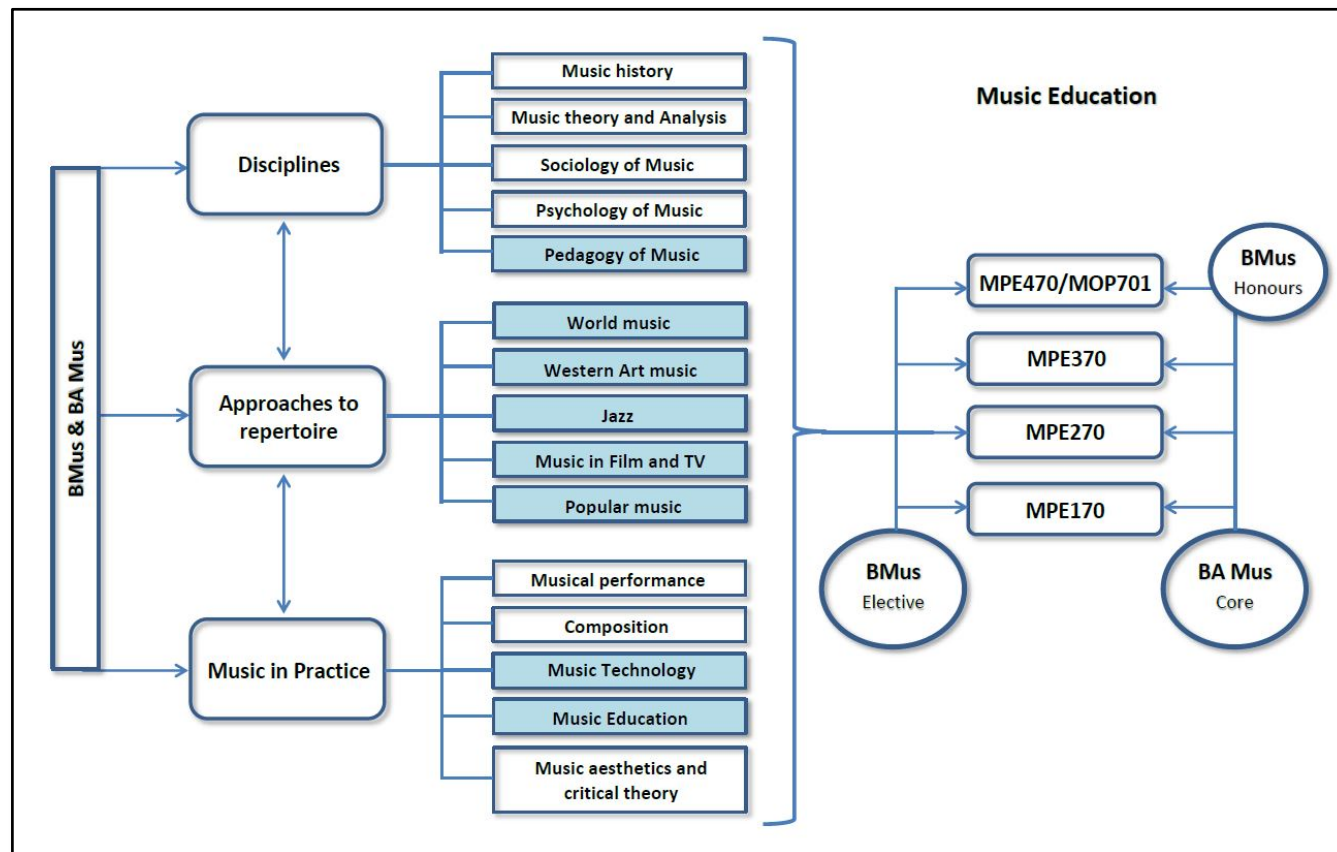


Figure 15: The articulation of Music Education with other modules in the UP music programme based on Harper-Scott and Samson (2009)

3.4.2 MPE170

3.4.2.1 Purpose statement

This module exposes music students to a broader and varied view of music in education across time and place. The focus is on musical independence so that the students can value the richness of music and music education in their lives. The teaching and learning experience can be enhanced by using technology and information and communications technologies.

3.4.2.2 Structure of the MPE170 module

Figure 16 illustrates the proposed themes for MPE170:

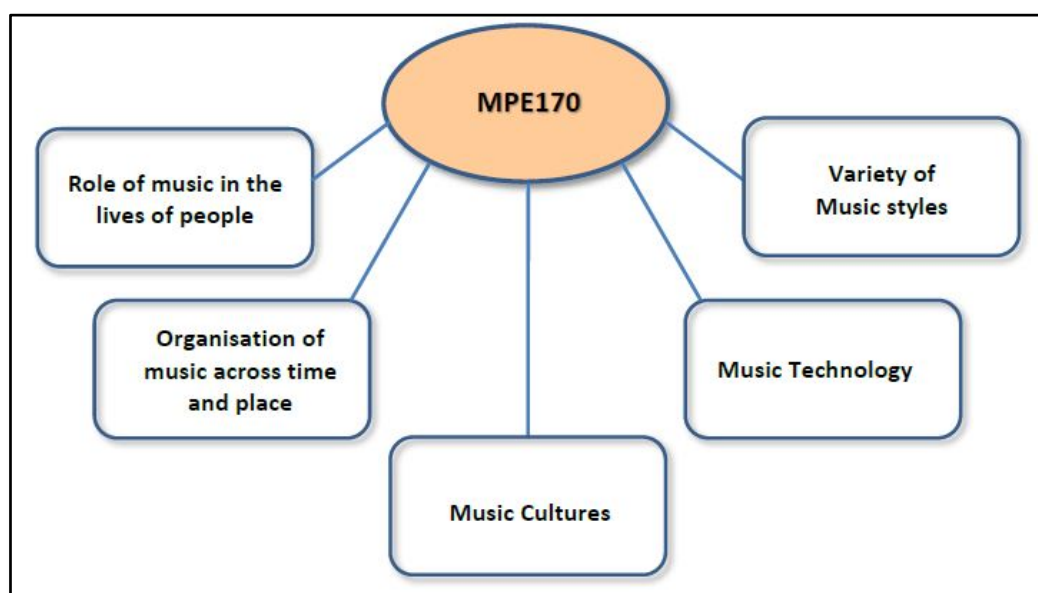


Figure 16: Structure of the MPE170 module

3.4.2.3 Critical cross-field outcomes

By the end of this module students should be able to:

- function effectively in various instructional settings (whole group, small group, pairs and independently);
- actively engage in their own learning through real-life, music problem-solving situations that are holistic in nature;
- demonstrate the same processes expert musicians do: performing, listening and creating;

- construct new understanding of music by developing their conceptual understanding of the structural elements of music in its diversity;
- reflect on music and its value in order to give meaning to music;
- perform basic tasks in music technology that are required within a music education career.

3.4.3 MPE270

3.4.3.1 Purpose statement

This module focuses on the preparation of musicians as music teachers and directs students in developing their own musical understanding and their understanding of teaching processes. The students are trained to understand the diversity of possibilities to interact directly with music, using the same processes as expert musicians: performing, listening and creating.

3.4.3.2 Structure of the MPE270 module

Figure 17 illustrates the proposed themes for MPE270:

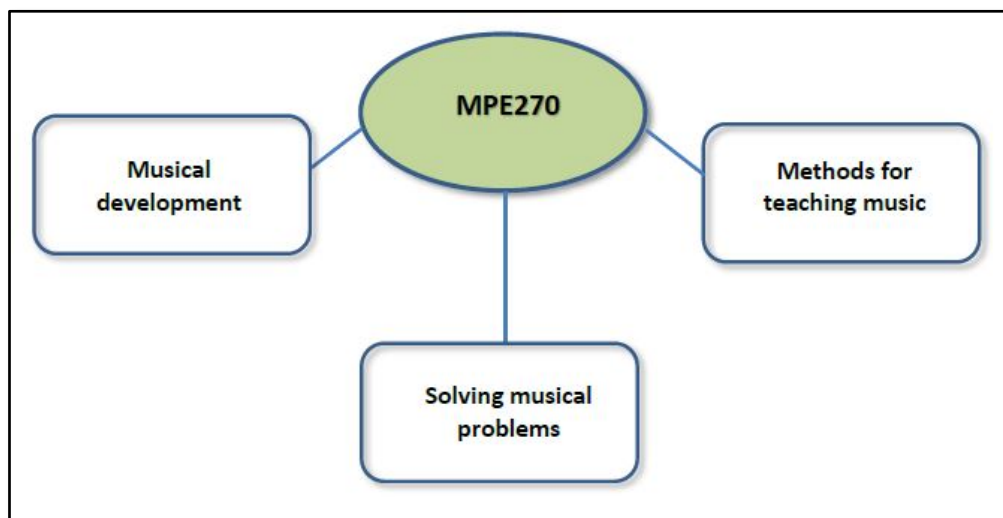


Figure 17: Structure of the MPE270 module

3.4.3.3 Critical cross-field outcomes

By the end of this module students should be able to:

- function effectively in various instructional settings (whole group, small group, pairs and independently);

- actively engage in their own learning through real-life, music problem-solving situations that are holistic in nature;
- demonstrate the same processes expert musicians do: performing, listening and creating;
- construct new understanding of music by developing their conceptual understanding of the structural elements of music in its diversity;
- engage in musical thinking.

3.4.4 MPE370

3.4.4.1 Purpose statement

This module gives music students the opportunity to bring together their knowledge and personal development as a musician, and their understanding of the teaching and learning process, in a musical cognitive apprenticeship. They get to know and understand authoritative theories in music education and practically apply them to the facilitation of structured and planned music learning sequences.

3.4.4.2 Structure of the MPE370 module

Figure 18 illustrates the proposed themes for MPE370:

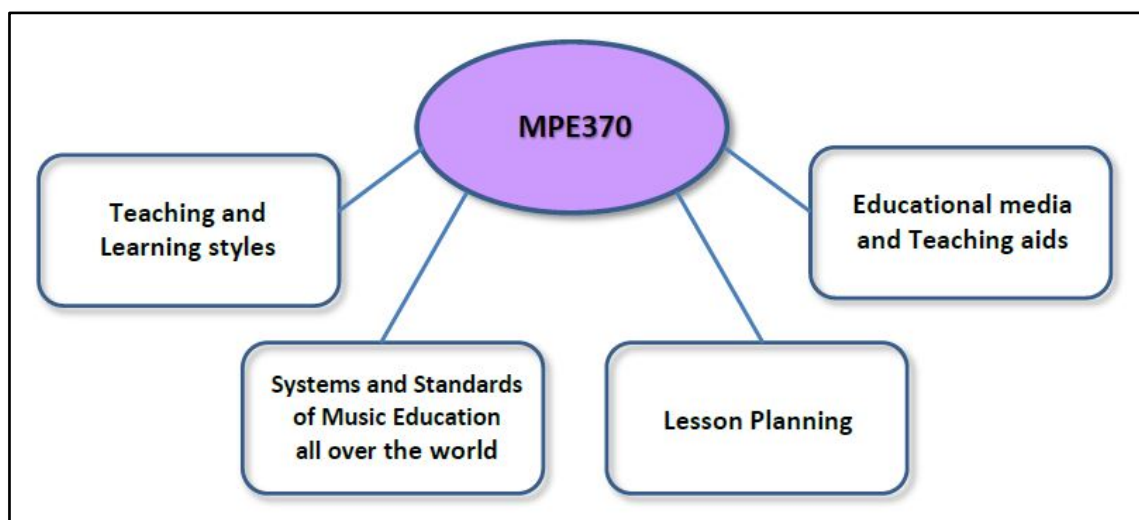


Figure 18: Structure of the MPE370 module

3.4.4.3 Critical cross-field outcomes

By the end of this module students should be able to:

- use facilitating teaching skills as determining factor of the quality and the success of any educational method (Savery & Duffy, 1995:13);
- function effectively in various instructional settings (whole group, small group, pairs and independently);
- actively engage in their own learning through real-life, problem-solving situations that are holistic in nature;
- demonstrate the same processes expert musicians do: performing, listening and creating;
- engage in musical thinking;
- apply the social constructivist learning theory;
- plan music lessons to facilitate teaching and learning;
- observe and evaluate teaching and learning in the field.

3.5 Conclusion

Incorporating hybrid teaching and learning is not merely a notion of using either face-to-face or online technology. The concept involves a progression that starts out organically and in time reflects a hybrid teaching and learning method. Creating a workable environment in clickUP takes time and effort that originates as a trial and error practice to combine the what-and-how of teaching and learning in ME. This long term process involves deciding on how to organise the module menus, where and how to make teaching and learning content available, how to structure the assignment criteria and research content.

CHAPTER 4: RESEARCH DESIGN, APPROACH AND METHODS

4.1. Introduction

This chapter summarises the methodology for designing this qualitative case study. I am the main research instrument in this qualitative study and the starting point is an interpretive framework. I address the research problem of understanding teaching and learning in tertiary ME through multimodal learning (also referred to in this study as BL for BMus. and BA Mus. undergraduate students at UP). The final written report on this study includes the voices of participants, their contributions to the research, my reflections on this study, a multifaceted account and understanding of the problem, its contribution to relevant academic literature and the way forward to explore the phenomenon (Creswell, 2013:44) of using web technology in music education.

4.2. Qualitative research design procedures

Through qualitative research researchers and observers can discover what is going on in the world, study phenomena in their field of enquiry and use an interpretive, naturalistic approach (Creswell, 2013:43; Henning *et al.*, 2004:7; Merriam, 2009:13). Qualitative research represents events, interactions, meanings, social actions (Strauss & Corbin, 1990:9) and makes the 'world visible' (Creswell, 2013:43) to those interested in the field of enquiry described in a specific research study.

The framework for the research design of this thesis is explained in Figure 19:

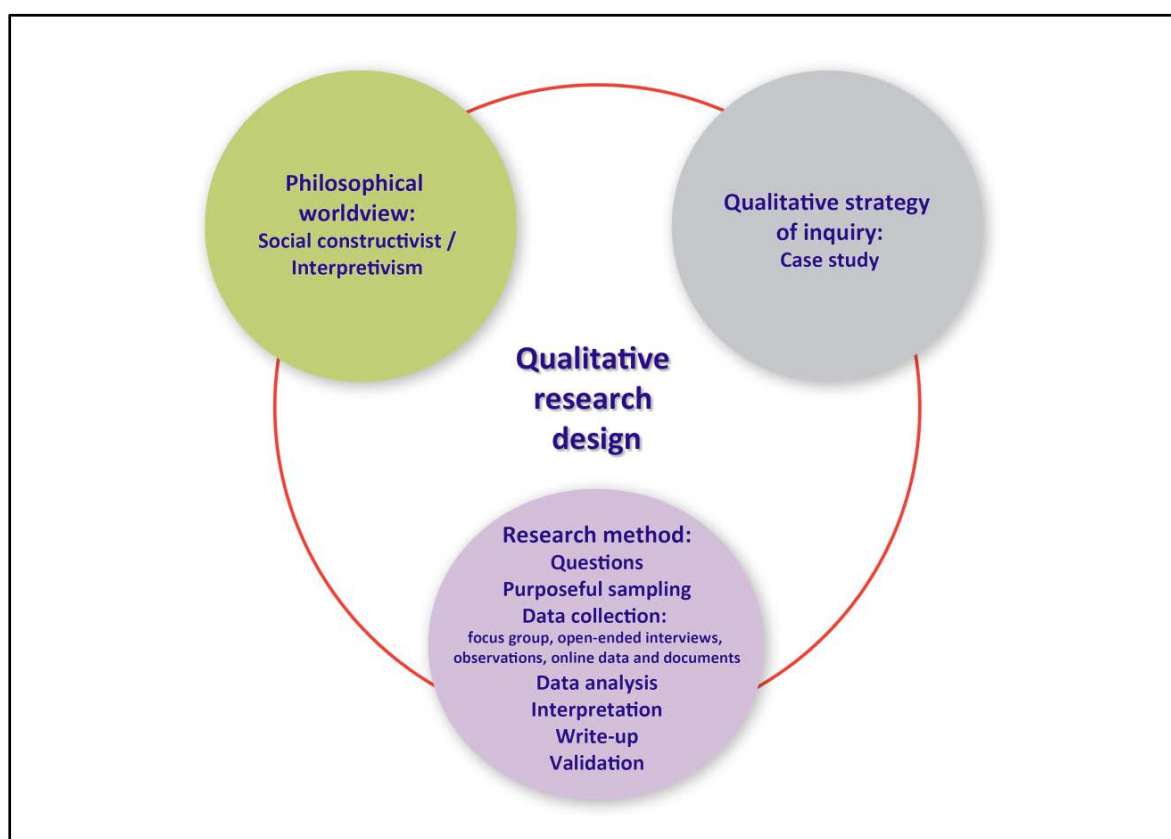


Figure19: Research framework — adapted from Creswell (2009)

4.2.1 Philosophical worldview

This research focuses on an interpretive/social constructivist perspective (Creswell, 2013:43; Merriam, 2016:9). ME students at UP describe, understand and interpret the environment of this discipline through multiple meanings that are socially and historically constructed and are viewed through multiple realities (Creswell, 2007:11; Merriam, 2016:9) that are bound to teaching and learning through multimodal learning. As the inquiry proceeded, subjective meaning was made of the experiences of teaching and learning ME through BL by participants through their interaction with the lecturer and peers. These experiences were explored through open-ended questioning in interviews, module assignments and observed classroom behaviour and activities.

The module assignments that made a contribution to this study were 1) research essays handed in through Turnitin; 2) discussion boards that developed critical thinking, encouraged collaborative activities with peers and allowed individual

reflection on posted messages; 3) wikis that focused on research activities and students' collaborative learning support, and 4) a reflective journal.

The ME module at UP is not an online-only module but the lecturer and students can be regarded as a 'music educator community of inquiry' (MECoI), with involvement in the social, cognitive and teaching presence. It is essential that this MECoI, similar to an online CoI, strive to shift the social presence from socio-emotional support to a focus on purposeful relationships (group cohesion). The inquiry process can also move discussion from exploration to resolution. Being the teaching presence I am a designer, facilitator and instructor (Garrison, 2007:67). These three presences focus the goal of the MECoI on teaching for musical understanding (Webster, 2011:35; Wiggins, 2015:1-102). The music classroom can be perceived as "a mini society, a community of learners engaged in activity, discourse, interpretation, justification and reflection" (Fosnot, 2005:10) and we use certain BL activities to accommodate this collaborative constructivist perspective on education (Figure 20).

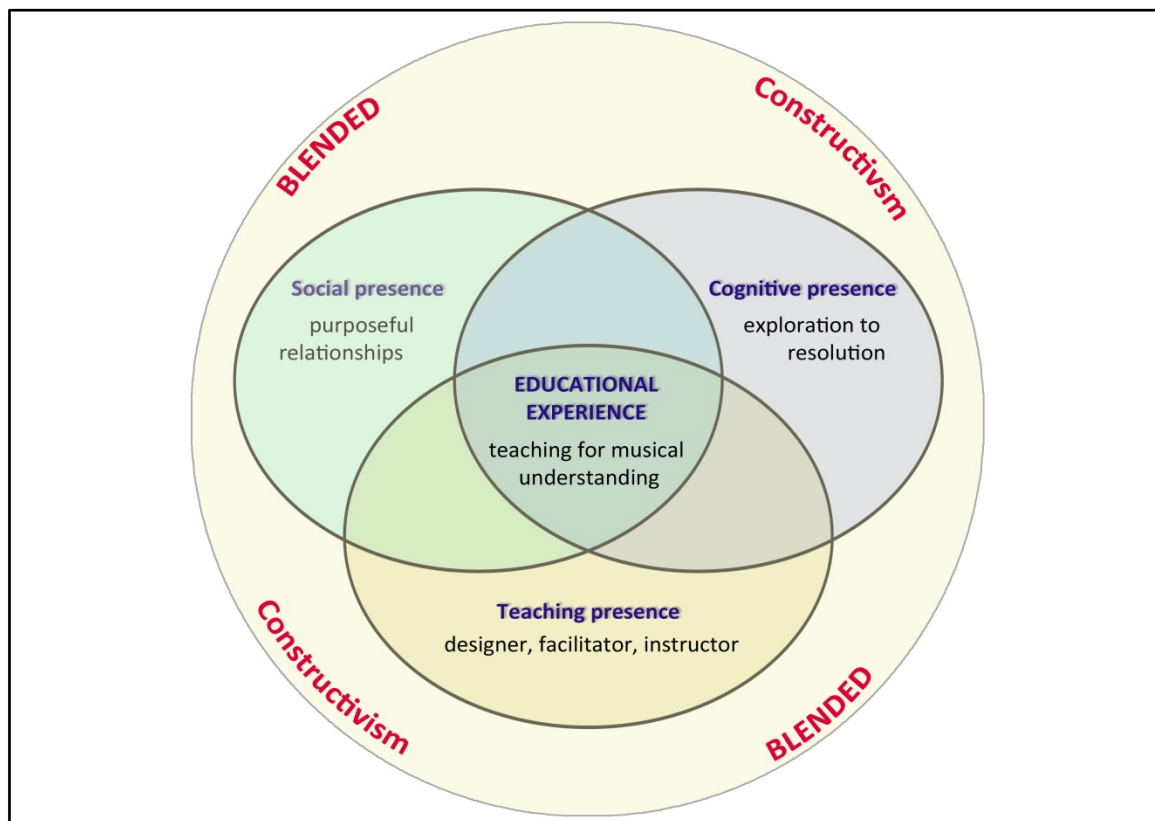


Figure 20: Music Education Community of Inquiry — a collaborative, constructivist perspective (adapted from Fig 1. Elements of an educational experience (Garrison et al., 2000:88; Vaughan, 2010:61))

Crotty (1998:42-65) identifies assumptions about qualitative research (Figure 21) in discussing constructivism.

- Qualitative researchers use open-ended questions to encourage participants to share their perceptions of experiences and views. Constructivists share this view by asserting that human beings construct their own understanding and reality through engagement with the world (Wiggins, 2015:25).
- Qualitative researchers try to comprehend the perspective or environment of the participants through collecting information personally. They also understand and interpret their findings, shaped by own experiences and background. Constructivism states that the ways in which we observe the world are illuminated by our personal experiences (Wiggins, 2015:25).
- Qualitative research is mostly inductive, with the inquirer finding evidence while working with participants in the field. Constructivists argue that meaning is formed through human relationships (Fosnot, 2005:5).

I was able to gather reliable information from participants because, as their ME lecturer, I could build a close relationship with them.



Figure 21: The relationship between interpretive research and social constructivist perspectives (my interpretation)

4.2.2.1 Key instrument

I am the key instrument that collected data through examining multimodal course assignments (§4.2.1), observed class behaviour when students did online activities, and conducted in-depth interviews through open-ended questions answered by participants.

4.2.2.2 Multiple methods of data collection

I collected several forms of data: participant interviews, participant observations (§ ATLAS.ti 7.1.6 documents copied to attached CD), module documents and assignments (§ Chapter 3) that produced valuable quotes and codes that are

grouped into categories ²⁸ of relationships in meaning (Henning *et al.*, 2004:105).

4.2.2.3 Complex reasoning through inductive and deductive logic

Throughout the progress of the research I awarded codes, constructed themes and composed theories (Henning *et al.*, 2004:115) to get involved in the inductive-deductive logic process (Creswell, 2013:Chapter 3). Deductive reasoning suggests theories that the researcher can test to confirm or reject against the data that has been collected (Creswell, 2013:Chapter 3; Henning *et al.*, 2004:17). I started my analysis deductively with Picciano's (2009) *Blending for Purpose Multimodal Model* as a theoretical lens. In this study, abductive thinking determined which codes to apply to which data and which code combinations and groupings worked best for constructing categories (Saldaña, 2015:Chapter 2). Clusters of data units (categories) appeared and as the study progressed an inductive standpoint supported the final themes. This inductive process required working to and fro between themes and the database. I later reflect on how different themes may enlighten one another to establish a broad set of themes.

4.2.2.4 Emergent design

The emergent design of this qualitative research implies that the initial plan could be roughly prescribed only (Creswell, 2013:Chapter 3). BL had not been used before in the UP ME module. Phases of the process changed and were still changing while the data collection took place. I collected meaningful research information on the research problem by focusing on current face-to-face and online practices to perceive participants' views, behaviours in online class activities and the execution of online assignments. Because I understood and interpreted my findings in a social constructivist environment, illuminated by my personal experiences, the context will necessarily be transformed as the research progresses (Merriam, 2016:251).

²⁸Saldaña (2013:8) also arranges codes into categories.

4.2.2.5 Reflexivity

As a creative music educator teaching media and the use of the technology available had intrigued me since my first year of teaching in 1983. This technology included high fidelity equipment for recording and manipulating sound excerpts, the overhead projector and transparencies. I soon discovered that I have a talent for instructional design and experimented with different coloured pens, coloured transparencies, colour printers, etc. To enhance the presentation effects, I used shadow figures, revealing techniques for specific information, lay-over transparencies to present development of themes, stories and listening guides to focus learners' attention on active learning and listening experiences.

My master's dissertation explored Class Music in grades 7-9,²⁹ and this culminated in publications and multimedia for facilitating music teaching in practice in senior primary and secondary school grades.³⁰ I received requests from colleagues to create and produce Grade 1 music notation interpretations, inspired by the well-known *Liederfibel* of Johannes Grüger (1906).³¹ I also reproduced an updated version of Philip McLachlan's visual note cards for music education for younger children.³² With the explosion of the World Wide Web I was a lecturer in music modules for sound engineers at Damelin S.A. and developed compilations of sound, media and content. My interest in graphic design led to my enrolment in 2008 in a graphic design course at CTU Training Solutions in Pretoria. In 2012 I was appointed as ME lecturer in the Department of Music, University of Pretoria.

As ME lecturer at UP I realised that the traditional way of student interaction in face-to-face teaching was challenged by incorporating 21st century information and communication technologies to benefit the learning experience of ME students. UP invested in a course management system (Blackboard Learn™,

²⁹Klasmusiek in Standerd 5,6 en 7: 'n Handleiding (Cruywagen, 1991b).

³⁰3 short videos: *Aspekte van Popmusiek*, *Die opneem van 'n klankbaan* and *Tema en variasie in styl* (first of its kind for teenagers to use in music education) (Cruywagen, 1991a) *Transparencies for Music Education*: creative aid to understanding the dimensions of music (Cruywagen, 1992).

A Music style for every day: the origin of jazz and pop music (Cruywagen, 1996). *Music Styles in Practice* (Cruywagen & Schoeman, 1996).

³¹*Klasmusiek is Pret / Class Music is Fun* (Markgraaff, 1995).

³²*Sing, lees en luister*. These cards were privately published and distributed by A. Kerkovius and W. Taljaard (Kerkovius & Taljaard, 1999/2000).

renamed as *clickUP*) to “support structure to maintain technological stability for their online learning activities” (Picciano, 2009:6). As researcher it was my responsibility to find the most suitable model for implementing successful BL practices and the *Blending with Purpose Multimodal Model* of Picciano was identified because of the fact that its objectives, activities and approaches can be adapted to suit the needs of the ME students at UP. This model recommends that the pedagogical objectives and activities should drive the approaches used in instruction and I had to rewrite the module goals and objectives (§ 3.4). This challenged my role as curriculum developer. In collaboration with the programme adviser for the Faculty of Humanities, I redesigned the ME curricula to provide a different pedagogical approach for music students to interact with ME.

As administrator, facilitator and ME lecturer, I had to familiarise myself with the clickUP course management system and attended in-house courses in 2013 (§ 3.2) and 2015. In 2014 I implemented clickUP in ME at UP for the first time. I refined the 2014 outlay and in 2015 I redesigned and implemented the current structure for the ME modules (§ Chapter 3).

4.2.2.6 Holistic account of the research

During the data collection process I identified complex interactions of factors (Creswell, 2013:Chapter 3) such as the novelty, challenges and the complexity of multimodal processes in ME at UP. The diverse advantages of developing cognitive skills, and engaging students actively and independently in their own learning enhanced the experiences to be gained. To find the holistic picture in this research was a challenge in the light of the diversity of the music students (ethnic groups, personalities and learning styles) regulated by the music students' appropriate conformity to the characteristics of the Net Generation.

4.3 Research approach

The research approach in this study is an intrinsic (Creswell, 2013:Chapter 4; Merriam, 2016:39), in-depth description and analysis of a bounded case (Merriam, 2016:36). This bounded case study allowed me to retain the holistic and meaningful characteristic of understanding (Yin, 2009:Chapter 1) teaching and learning in tertiary ME through multimodal learning for BMus. and BA Mus.

undergraduate students at UP. I explored a real-life contemporary bounded system (Creswell, 2013:Chapter 4), ME at UP, over a period of two years (2014-1015) through interviews, class observations and course-related documents.

4.4 What is my case?

The identified case in this study is the ME students at UP enrolled in 2014 and 2015 for the year modules MPE170 (first-year), MPE270 (second-year) and MPE370 (third-year) (Figure 22). ME at UP is part of the music programmes BA Mus. and BMus. ME is an elective for BMus. students and a core module for BA Mus. students.

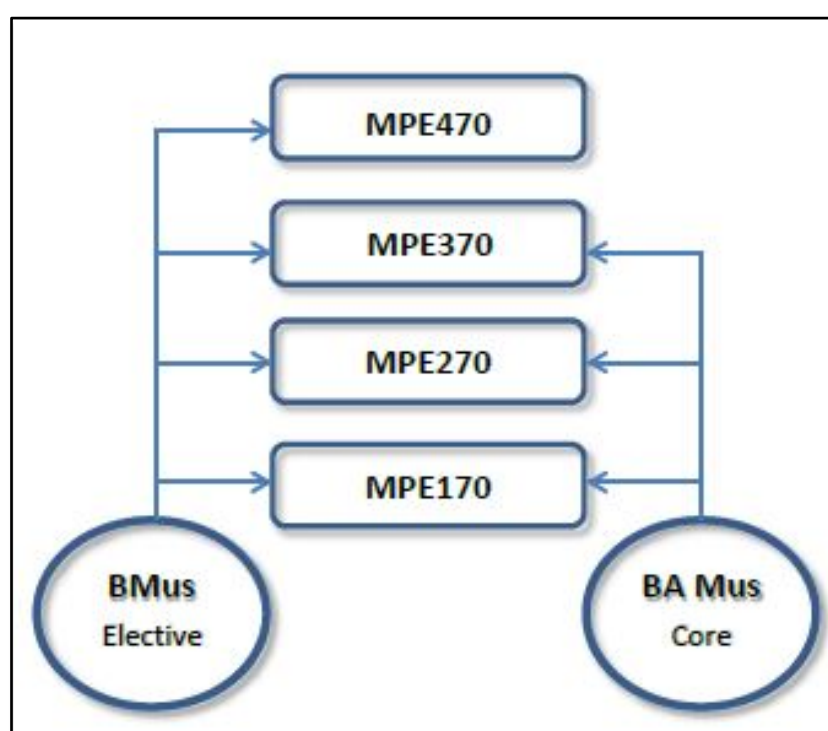


Figure 22: Music Education modules in the BA Mus. and BMus. programmes at UP

The first-year group is the biggest (22 students) since music technology comprises half of the subject's contact and homework time. Students in the first year are still not sure what their career focus is. The second- and third-year groups usually decrease to about 13-15 students and music technology does not form part of the ME modules. Music technology then becomes a separate elective module from the third year. Nearly one third of the classes consists of BA Mus. students and the rest are BMus. students. Students in both programmes follow the same module content and are subject to the same

assessment methods in the class sessions. BMus. is a four-year course designed to impart specialist music skills and knowledge. BA Mus. is a broadly-based, three-year degree course, designed primarily to train classroom teachers in music. Students enrolled for this course also specialise in another BA. subject.³³

4.4.1 The case study is bounded by time, place and activity

4.4.1.1 Time

This study was conducted during the academic years of 2014 and 2015. An academic year has 28 weeks, from February to November with a semester examination in June and a year-end examination in November. MPE170 is divided into two sections: the music education contact time session lasts 50 minutes per week and a total of 50 minutes per week is devoted to music technology lectured by a music technology expert. The second-year and third-year group have 100 minutes per week contact time.

4.4.1.2 Place

Classes are conducted in the lecture room in the music education building on UP's South Campus, just across the road from the main campus. The lecture room is equipped with separate desks, a media projector, an interactive white board, sound system and moderate space for activities. There are a piano, classical guitars, marimbas, djembes and an instrumental storeroom stocked with Orff instruments for students to use for creative and performing activities. The Department of Music's building on main campus is known as the Musaion. We have a music library at the Musaion.

4.4.1.3 Activities

Students come to class for face-to-face classroom sessions where we focus on module content-driven lectures, class discussions, individual and group presentations, group research endeavours, listening, performing and creative activities. We also use mobile phones, tablets and laptops for collaborative learning, dialectics, reflection and internet research. Educator and peer assessment take place to evaluate activities, presentations and group projects.

³³<http://www.up.ac.za/music/article/44441/undergraduate>

4.5 Procedures

The data collection activities for this case study are shown in Figure 23.

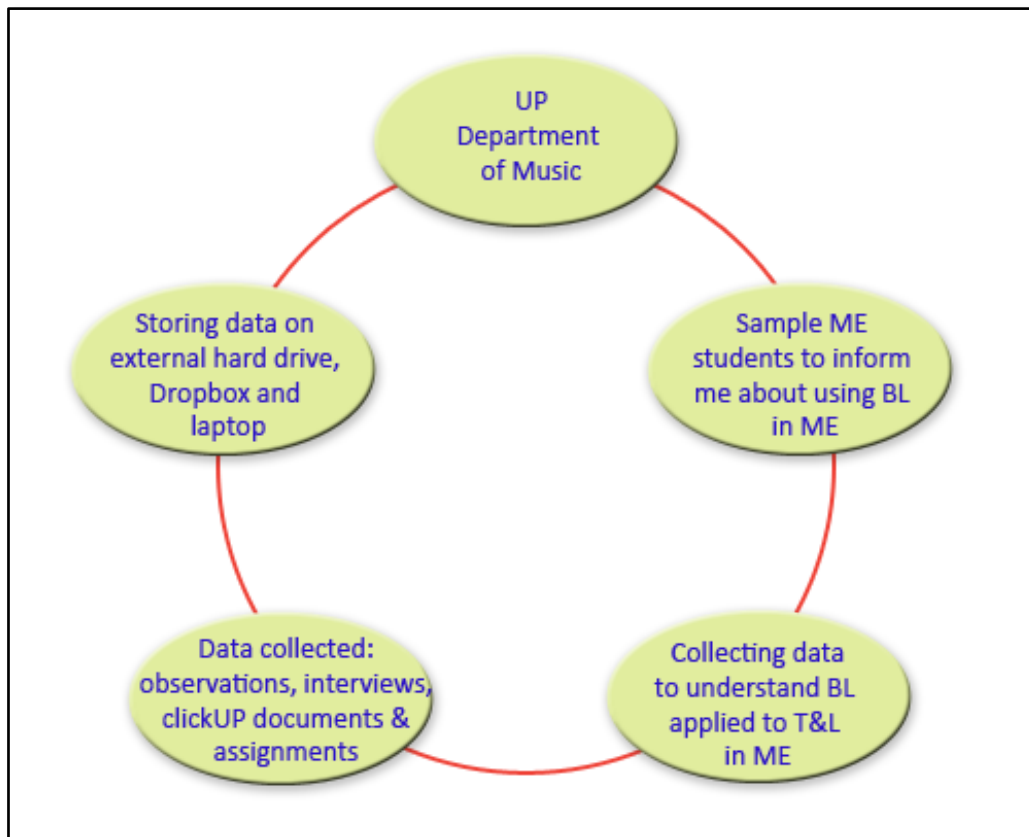


Figure 23: Data collection activities adapted for this case study (Creswell, 2013:Chapter 7)³⁴

4.5.1 Role of the researcher

My role in this research is multifold. I am lecturer, instructor, facilitator, researcher, curriculum designer (§ 4.2.2.6) and collector of data.

4.5.2 Case study data collection strategies

4.5.2.1 Interviews

Yin (2009:Chapter 4) mentions that interviews are “guided conversations rather than structured queries”. The interviews for this study focused on how participants experienced the blended teaching and learning in ME at UP in order to optimize the facilitation of ME at UP in the future. Creswell (2013:Chapter 7) points out that the data collection process is rooted within the larger research

³⁴For the sake of space restrictions I used T&L as an acronym of the term teaching and learning.

structure and identifies steps for interviewing (pp. 163-167). I did use some of Creswell's steps, but adapted the process to fit in with the ME teaching and learning environment at UP. I decided to use mostly focus group interviews because of the constructive perspective that lies in the interaction of the group (Merriam, 2016:114). The students could respond to peers' answers and share individual experiences. Most of the online activities were also done in groups. The students are comfortable in one another's presence because they share many generation characteristics, musical "hustle and bustle" and everyday challenges. I video-recorded all interviews and duplicated these on an external hard drive. Through the literature study and online activities done in clickUP I established questions that guided the interview protocols (§ Addendum B.1-6). The interviews initially started off with semi-structured questions that were predetermined to elicit specific data, but the questioning usually developed into unstructured/informal sessions of open-ended questioning that resulted in discussions (Nieuwenhuis, 2010:87). I used semi-structured questions to establish select background information (age, ethnic group, previous experiences with online activities, etc.). Then I inquired about their opinions and values regarding how they experienced working online using clickUP tools to execute online assignments, basic pedagogical objectives, activities and approaches of BL. Open-ended questions led them to share ideas on working in groups and how they identified with the characteristics of being part of the Net Generation (§ 2.3.1).

Because of contact time restrictions after the first completed wikis, I asked the students to reflect on their technological and learning experiences in the form of a written report. They provided fundamental interpretations and responses to their wiki experience.

4.5.2.2 Observation

What to observe was determined by the purpose of this study (Merriam, 2016:139). As participant observer (Creswell, 2013:167; Merriam, 2016:139; Nieuwenhuis, 2010:85; Yin, 2009:Chapter 4) I observed how the participants behaved in multimodal (BL) activities to facilitate teaching and learning in ME at UP. "Observation is the systematic process of recording the behavioural patterns of participants, objects and occurrences without necessarily questioning or

communicating with them” (Nieuwenhuis, 2010:83-84). In this approach to observation I was not just a passive observer (Yin, 2009:chapter 4) but participated in the learning and teaching activities. It is difficult to observe and not to be distracted when participating and therefore all class sessions were video-recorded and observations were recorded to serve as data for the ATLAS.ti 7.1.6 analysis.

4.5.2.3 Documents

Documents are one of the primary sources of qualitative data (Merriam, 2016:xiii). The benefit of documents are that they can be reviewed repeatedly and they contain specific references and details (Yin, 2009:figure 4.1). Merriam (2016:162) explains that documents can include all written, digital and physical material (including visual images) significant to the study. Documents that are included as data for research in this study are mostly online data sources: clickUP documents (§ Chapter 3 for examples), online assignments (discussion boards, journals, research essays, wikis and photographs of class activities). Downloads and hard copies of the discussion boards (§ ATLAS.ti 7.1.6 P15-P39) and screen captures of online evidence (wikis and journals: § Chapter 3) are available for perusal.

4.6 Data analysis strategies

Integration of analysis with other research tasks is characteristic of a qualitative research design. Analysing the data is a logical process and becomes more focused as the study develops (Merriam, 2016:195,201). In the course of this study I collected a data set (§ 4.5.2). I organised the collected data to allow for thorough analysis. The level of my personal involvement as a participant observer filtered how I perceived, documented and finally coded the data (Adler & Adler, 1987). Throughout this process codes started to develop, were assigned to each transcript of interviews, observations notes and documents that contributed to this data set. Keeping in mind that I wanted to answer the research questions (Merriam, 2016:202), I then reduced the data through a process of coding and condensing the codes into categories (Creswell, 2013:182). This inductive process (Merriam, 2016:209) entailed comparing units of information and looking for recurring regularities to assign to themes. The names of the themes reflect the focus of this study. It is at this point that the

mode of thought shifted to deductive thinking. Discovering codes became verifying the codes and finally themes were tested and confirmed against Picciano's *Blending with Purpose Multimodal Model*. I entered with my researched data set, circled around and around on several facets of analysis and exited with representations of the data in figures, tables and a discussion in between (Creswell, 2013:182) (Figure 24).

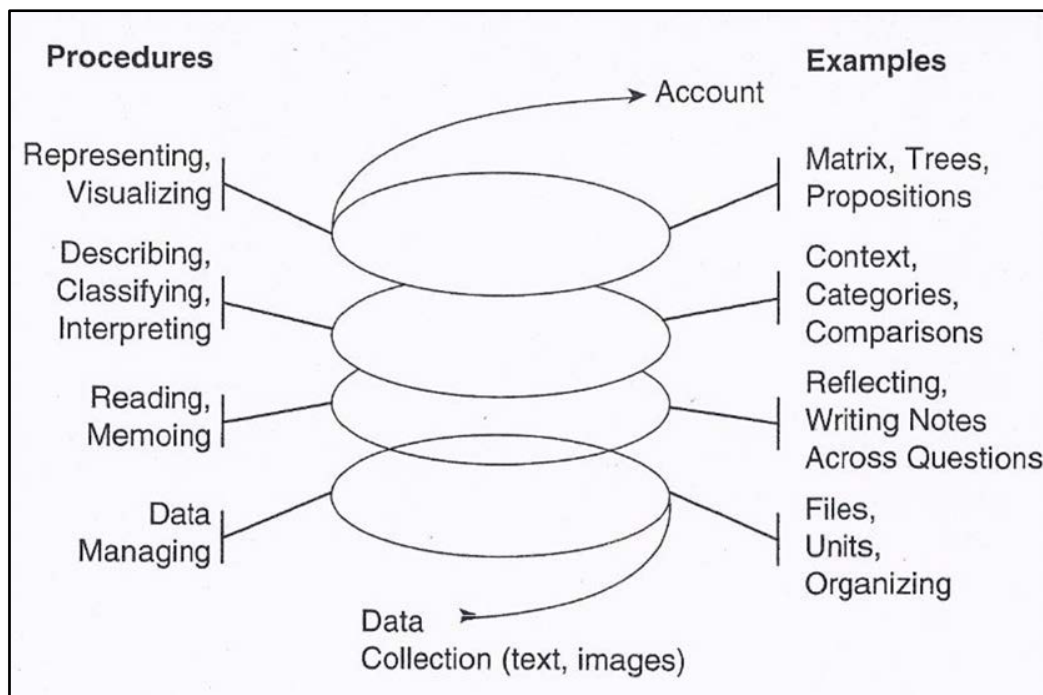


Figure 24: The data analysis spiral (Creswell, 2013:183)

4.6.1 Preparing the data

The data set for this study consists of interviews, observations and documents and was prepared for use in ATLAS.ti 7.1.6 (CAQDAS program).³⁵ All interviews and observations were recorded on video. The interviews and observations were carefully transcribed in rich text format. I removed all identifying personal information from the module documents except my name to provide authenticity. During installation ATLAS.ti 7.1.6 creates a folder by default called Scientific Software. In this folder I created a hierarchical folder structure (Figure 25).

³⁵ CAQDAS: computer assisted qualitative data analysis software



Figure 25: My folder structure for storing ATLAS.ti 7.1.6 documents

I copied the final prepared data from My Library. No information should be removed while analysing in ATLAS.ti 7.1.6 as this amounts to compromising the data.

After all the data had been prepared I created a hermeneutic unit in ATLAS.ti 7.1.6 that represents my project with all documents, codes, memos and other associated files in an integrated unit (§ attached CD).

4.6.2 Organising data

Heuristic pieces of data were identified from the hermeneutic unit (the data set). The data unit revealed ideas to me that related to the study and encouraged me to explore further than the obvious information (Merriam, 2016:203; Saldaña, 2013:8). I analysed the data set (§ 4.5.2) with an interpretive understanding. Through this hermeneutic interpretation (Creswell, 2013:Appendix A; Merriam, 2016:34) I described the findings of this study in detail.

4.6.3 Read-through and coding data

The process of coding the data in this research already started with my assessment of online assignments and the reading of interview transcripts and class observations reports (Creswell, 2013:Chapter 8). After thorough reading of all data collected I started to code the data. Saldaña (2013:3) defines codes as words or short phrases “that symbolically assign a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data”. After the first set of coding I went back to every code and tested it against the category I initially associated it with. More than once the code was divided into more detailed codes or merged with another code that described the significance of the quotation better.

4.6.4 Organising categories and themes

Figure 26 illustrates a codes-to-theory model for qualitative inquiry adapted from Saldaña (2013:12):

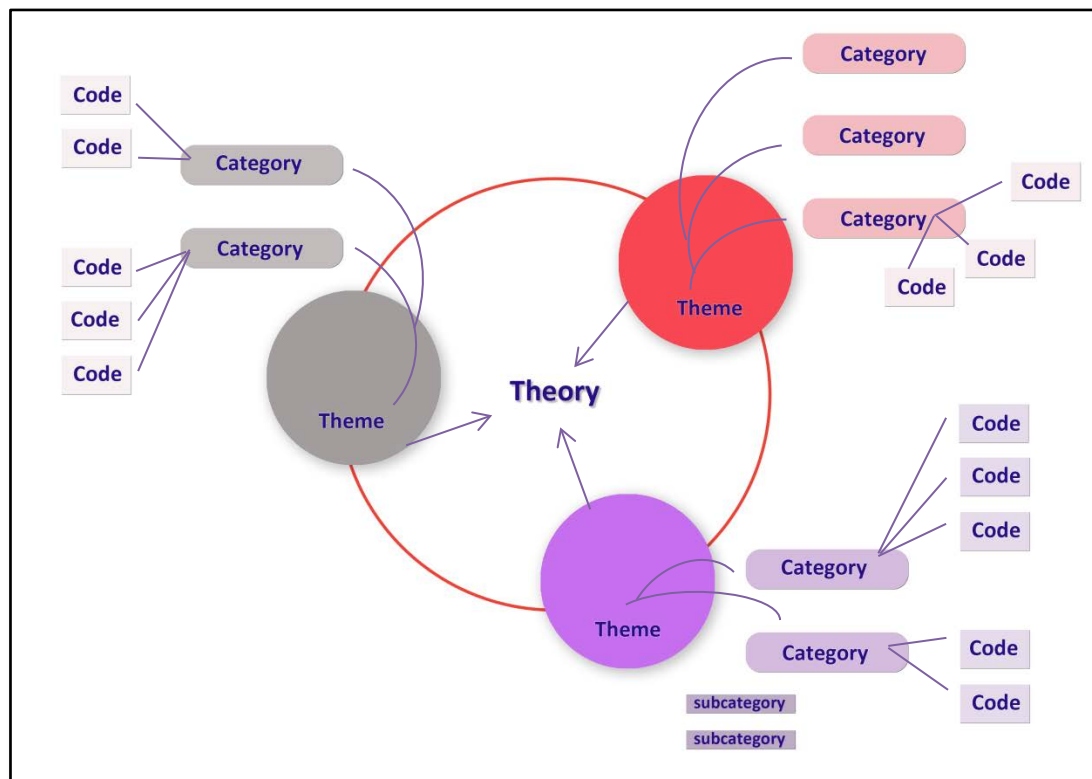


Figure 26: From codes-to-theory — adapted from Saldaña (2013:12)

The objective of data analysis is to find answers to one's research questions (Merriam, 2016:202; Saldaña, 2013:60). Saldaña (2013:260) shares his belief that it is not the questions but the *answers* that are interesting. The codes reduce the data and link pieces of data into categories. This is a systematic process and as I progressed, category names changed to reflect more accurately what were in the data (Merriam, 2016:208). Some of the category names I created myself, but the literature study was the main source for deciding on category names. The categories in turn provided ideas and were linked to themes that captured the essence of the research. Thinking about the data categorised into themes induced findings and conclusions. This theorising (Merriam, 2016:215) developed and helped to form an interpretation to write down my findings (Merriam, 2016:195).

4.6.5 Representing data and forming an interpretation

The codes that were linked to categories resulted in a network of views that structured the content to explain the themes that materialised. The networks were defined by sets of nodes and links and were used to build theoretical relationships between nodes. In implementing the Output Menus in ATLAS.ti 7.1.6 I had a variety of ways to induct outputs of quotations and codes. This method helped me to organise and discuss the themes separately. Reflection on the findings encouraged the development of my theory of how to understand teaching and learning in tertiary ME through multimodal learning for BMus. and BA Mus. undergraduate students at UP.

4.7 Ethics

Scholarship of Teaching and Learning (SoTL) generally involves research and the public sharing of this work (McKinney, 2007:1). As researcher in SoTL work, I am ethically obliged to deliberate the ethical issues involved in this study that concerns participants. The research for this study was not conducted on my students, but on my students' learning in response to my teaching practice in ME. The music students who are in my ME courses enrolled in the module to prepare for their future as musicians and music teachers. As their lecturer I am in a role of authority and if I did not follow the ethical obligations of teaching and learning research, I could place them in an unsure and vulnerable position. Fortunately there is a relationship of mutual trust between my students and I. They were not obligatory guinea pigs; and for that reason I acquired informed consent from all the participants. The informed consent included:

- Voluntary agreement to take part in this study with the option of withdrawing before the study commenced; or
- discontinuing after data collection had started; and
- their rights to privacy. I assured participants that no negative consequences for taking part in the study were envisaged. If any further information was needed, the researcher could be contacted.

A consent form (§ Addendum A.4-5) containing all of the above information was signed and is kept by the researcher. An information sheet notified the participants that they represent the case for my Ph.D. study in Musicology at North-West University (NWU) (§ Addendum A.3). They participated to fulfill the

purpose of this study (§ 1.2) which allows the need for the incorporation of digital technologies. This requires exploration of how to incorporate online teaching and learning in the ME curriculum. Multimodal teaching and learning is part of the hybrid learning commitment of the University and Department of Music (Pretoria, 2015). Participation entailed: (1) focus group interviews conducted by myself; (2) direct observations consisting of events in real time that cover part of the content of the case; and (3) documents and audio-visual material of their input in the course module. All data is to be kept private and no references to their identity appear in the thesis. The data is being kept confidential for the duration of the study. On completion of the thesis, it is to be retained for a further seven years and then destroyed.

The results are presented in the thesis. The outcome is available to the promoter, co-promoter and three examiners. The thesis may be read by music educators and future students. Aspects of it will be published in a research journal.

4.8 Validation

Validation of this qualitative research is an attempt to evaluate the accuracy of the researcher's construction of the reality (Merriam, 2016:243) of multimodal teaching and learning in ME at UP. The closeness of the researcher to participants, the expended time and the detailed and thick description indicates the divergent assets of the research done (Creswell, 2013:Chapter 10). Trustworthiness, authenticity and credibility are actions that help the researcher to assure that validity takes place. To validate this research I built continued trust with the participants as their facilitator, instructor and lecturer. Some researchers prefer crystallization in qualitative research.

Crystallization combines multiple forms of analysis and multiple genres of representation into a coherent text or series of related texts, building a rich and openly partial account of a phenomenon that problematizes its own construction, highlights researchers' vulnerabilities and positionality, makes claims about socially constructed meanings, and reveals the indeterminacy of knowledge claims even as it makes them (Ellingson, 2009:4).

4.9 Conclusion

Through a philosophical worldview of interpretivism the researcher conducted a case study as qualitative strategy of inquiry. A variety of research methods were used to embody the purpose of this study. As researcher I anticipated that the process of purposeful sampling will illuminate the understanding of teaching and learning in tertiary ME through multimodal learning B.Mus. and BA Mus. undergraduate students at UP. Chapter 4 gave an outline of the research process of this study. This qualitative research is within the social constructivist philosophical worldview. The data set was compiled of multiple methods of data collection, video recordings of class observations, semi-structured open-ended interviews, online data and documents. This data set enabled me to construct multiple realities through inductive, abductive and deductive processes of analytical thinking. The data was analysed and interpreted after which I built concepts aiming to better understand teaching and learning in tertiary ME through multimodal learning for undergraduate students at UP. I represent multiple perspectives on the phenomenon through a process of crystallisation.

CHAPTER 5: DATA ANALYSIS

5.1 Introduction and emergent themes

The purpose of this chapter is to investigate the themes that emerged from the data analysis. The themes were identified and categorised through the software program ATLAS.ti 7.1.6 and structured in network views that illuminate the central research question. Three main themes emerged (Figure 27):

1. Wide spectrum of students.
2. Picciano's *Blending with Purpose Multimodal Model*.
3. Music Education curriculum.

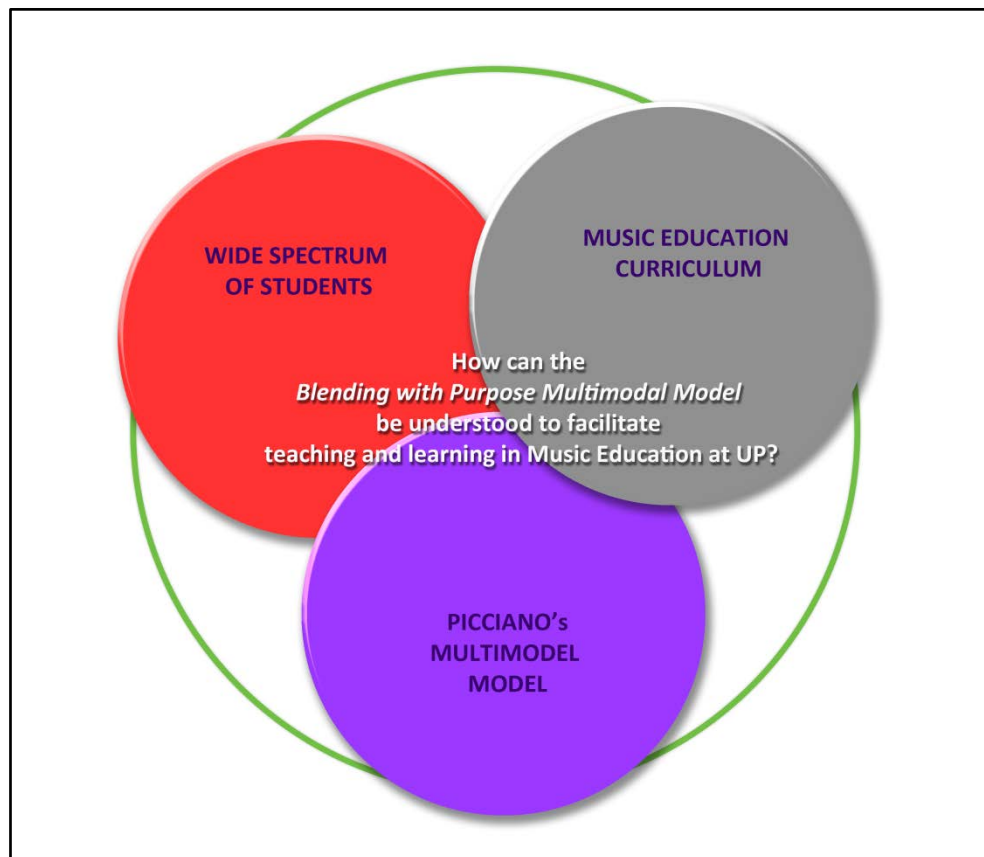


Figure 27: Emergent themes

These interrelated themes underscore the main research question:

How can the *Blending with Purpose multimodal model* be understood to facilitate teaching and learning in Music Education at UP?

The UP ME curriculum has been restructured to accommodate the needs of the wide spectrum of music students and is enhanced by exploring the *Blending with Purpose Multimodal Model* of Picciano. The subcategories developed the research (Figure 28) into deeper understanding of the impact that the restructured ME curriculum has on music students at UP.

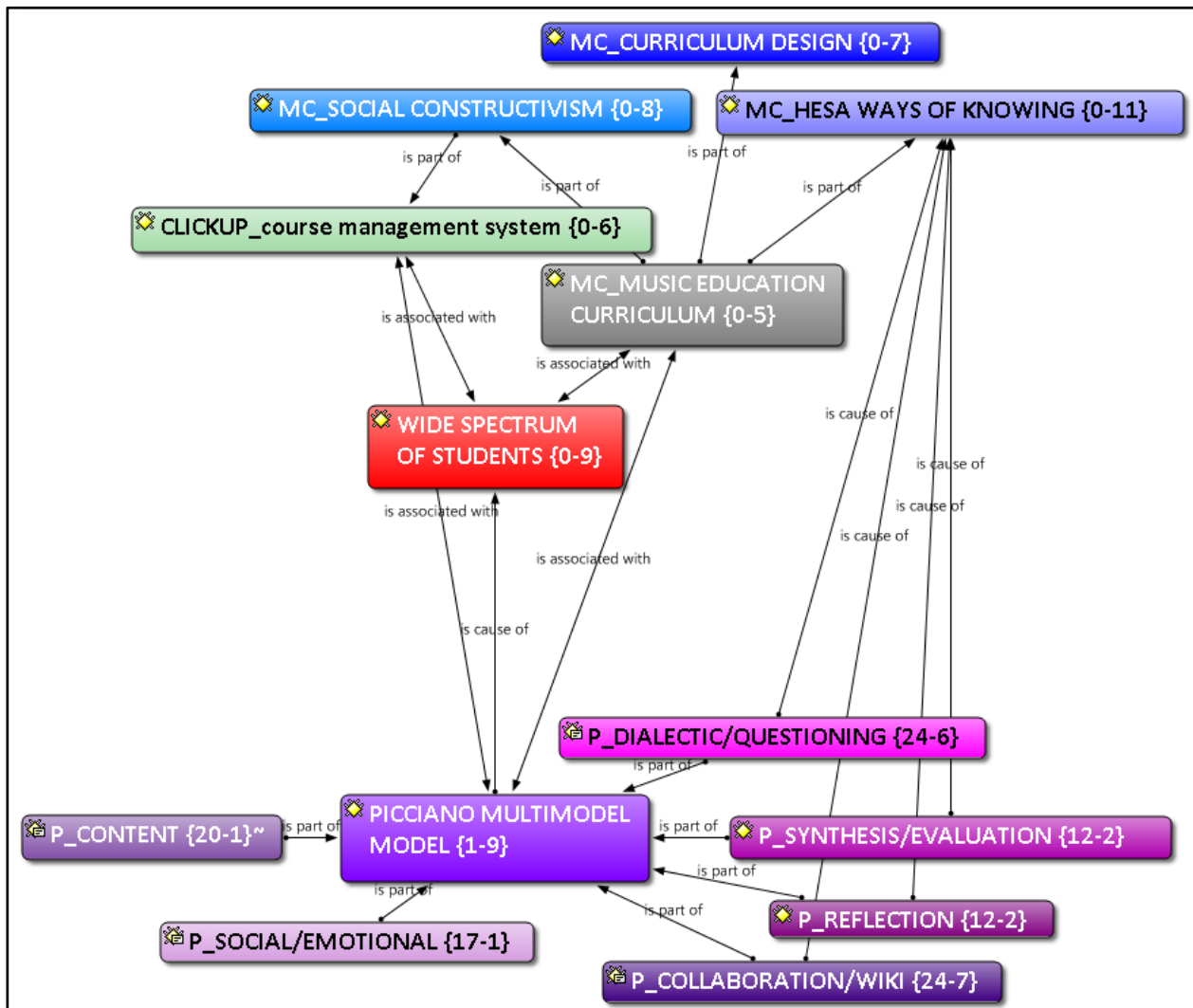


Figure 28: Main themes of study

5.2 Discussion of themes

I start this discussion with an introduction of the participants' perspectives of who they are.³⁶ Literature indicates (§ 2.3.1) that these students represent the first generation who grew up with information technology and therefore has an information-age mentality that identifies them as members of the Net

³⁶All names used in this chapter are pseudonyms to protect the identity of the participants.

Generation and also label them as *digital natives*. The discussion then focuses on the comments and document citations that explain the ME curriculum as the strength of HE music teaching and learning at UP. The discussion on how the clickUP learning management system complements Picciano's *Blending with Purpose Multimodal Model* concludes this chapter.

5.2.1 Wide spectrum of students



Figure 29: Wide spectrum of Music Education students

Figure 29 illustrates the different categories that explain the diversity of the music education students who are born into the Net Generation — exposed to the characteristics of this generation. Although the students are all part of the music education discipline, the different personality traits and learning styles represent a variety of opinions on many ideas of teaching and learning using

online technologies. South Africa is a nation of diversity and the different ethnic groups portraits this diversity.

5.2.1.1 Net Generation

Attributes of student values and behaviour that reflect the Net Generation (§ 2.3.1) were presented to the music students in the focus group interviews. They responded positively to these characteristics but there were some students who made remarks that are uncharacteristic of the assumed Net Generation attributes.

The following characteristics are discussed and have been provided with comments:³⁷

- *Multitasking is a way of life*

The students all agreed that this statement is true and that they do not have enough time during the day to do what they want to do (2:28, 3:10, 2:29, 2:34). They explained that they have to do more than one thing at a time because they get bored. Angela explained: “I can’t just sit and watch TV. I have to sit and watch and eat and text and play a phone game” (2:32). Students drive, talk on their cellular phones, eat and study at the same time (3:9). They search for multiple information using multiple apps on their cellular phones and computers. While texting a friend and with the television on in the background they can do various things simultaneously as Peter describes: “I can do (things) faster instead of going to a library to find all the information I need” (2:104). Morgan felt “[w]e are so busy with life all the time, we are used to it” (2:30). Thuli added that “[i]t is not just about we have no time — it has become really easy to multitask because of technology” (2:33). Lizette felt that “what everybody says about getting distracted while they are learning goes hand in hand with development of technology, because we become so used to multitasking that it becomes hard for us to pay attention” (2:81).

The discussion on multitasking led to comments on how the students manage their time. Kelsey explained, “It is not that there is not enough time in a day; it is how you manage your time” (2:35). Some of the students agreed that their

³⁷Student responses are provided verbatim and have not been edited.

generation does not know how to manage time “so we try to do as much as we can simultaneously and that is why we are so used to it” (2:105). The lack of time management influenced group work because some of the group members, according to Christelle, did not submit information until “the latest time possible, therefore [I] didn’t know what must be added to complete it until at a very late stage” (8:150). But the comment was also made by Ester that constructing a wiki saved time because they could “do it any time and not just in class” (11:5). ClickUP includes a calendar that students can use in order to resolve some of their time management problems (24:11). Peter mentioned that using technology can also be a “motivation for me to do it quickly and carry on with other things (2:76).

Multitasking is not necessarily a characteristic of all students. There were students who felt “technology distracts you totally”. Kim explained that “[w]hen you search for something, you see and focus on other stuff that has nothing to do with what you actually are doing” (2:75). Adrian mentioned “[w]hile I text and someone is talking to me, I just do not really listen to what the person says (2:103).

- *Experiences of unrealistic realities*

Students acknowledged that people live in unrealistic worlds because social media posts exemplify what they want you to see. Adele commented that “(anyone) can be totally anonymous on the internet” (2:7). Candis explained that on social media other people’s lives look so much better than hers, “they post only the photo’s of jolling. You have an unrealistic expectation of what your life should be like” (2:13). Alexis said, “You don’t get to meet the person first, you meet the ideal of the person first” (3:3). Virtual computer game worlds also create unreal realities to play in. As Lizette pointed out, “For example, as a soldier in war but (you) would probably never be a soldier. But you can do it through gaming with friends or with people all over the world” (2:65).

- *Typing rather than handwriting*

Different opinions were voiced by John, Aileen, Thuli and Stephanie: “I love typing” (2:40), “I prefer typing” (2:44), “I hate writing (2:67) ... it’s irritating” (2:42). Katherine felt that handwriting takes too long because she is used to

computers (2:46). Some students reason that typing is very convenient, but Stephanie added that if you want to communicate in a more personal way, writing is “so much more personal than just reading square letters” (2:49). Christelle explained that when she wants to write a note she still needs pen and paper” (3:12) and Andy mentioned that he writes when he studies (3:13).

- *Trial-and-error*

Students who participated in the discussion on whether the Net Generation chooses trial-and-error over logic have different views. Some do not agree about the attribute (2:17). Some argued that trial-and-error experimentation is evident in every generation and that every person explores it differently (2:23). Trial-and-error is not necessarily a Net Generation characteristic. Peter explained that “every person does practise some trial-and-error over logic. Sometimes you will try something without thinking it through entirely. No-one can say that he or she thought everything in life through to a point — not just in our generation but in every generation. There are many Net Generation members who do focus on it, but not every person in our generation can be classified with that” (2:22). Kevin added that “to some extent it can be true because this generation just goes onto the internet and asks how to do something. It gives you trial-and-error situations and you will end up choosing one of them” (2:21). Morgan felt that “to a certain extent (you) can’t really compare logical thinking to trial-and-error — logic is thinking and trial-and-error is something you actually do. With the internet a trial-and-error mind-set will actually lessen, because instead of doing a few things and see that it doesn’t work I can just Google and immediately find what will work” (2:24). Thebatso added: “Depends on what you are capable of because trial-and-error doesn’t necessarily mean it’s illogical — e.g. you practise a piece on the piano there’s many logical ways but use trial-and-error to find the right way” (2:27). But the approach some students used to navigate on clickUP to find the provisional program definitely indicated a trial-and-error attitude. Kim commented “to be honest, I will just click everything” (6:62).

- *Doing rather than knowing*

The reason given by students for this characteristic was that the internet allows one to access anything one wants to know easily and they now have more time to do things than research things they want to know about (2:14). Kelsey said, “I want to do it to know, to learn how” (3:5). Thuli experienced that “if I had to do an online activity having it being more interactive, more multiple choice kind of things ... not too much to read” (4:39). Some students preferred a more hands-on way of doing research and creating a project (8:43). This point of view matched what happened when they compiled a wiki. According to Christelle, “although you want to add extra functions you really have to Google what does what” (9:11). Adele learnt from her mother to prefer knowing things over doing things. Her mother is a lecturer who “is very big on learning things over just knowing how to do things” (2:16). And there are students that prefer knowing things to doing things (2:11).

- *Internet better than TV*

The response was an undisputed “Yes!” (2:3). Jason said: “I can watch series on internet without waiting for an episode to come out week after week. A whole series can download in five minutes. And I don’t have to watch ads” (2:4). This is related to the desire for immediate gratification in the next attribute.

- *Immediate gratification*

According to Katherine “the internet accommodates fast information on everyone” (4:5, 4:7), and Kim added “immediate gratification to find any kind of information” (3:16). The data shows that there can be a connection between immediate gratification and the attribute of doing rather than knowing because of Kelsey’s comment: “I agree it is not important to know everything because you can just Google something ... you don’t have to know it” (3:7). Immediate gratification is also experienced in the fast social media communication (4:12).

When clickUP was introduced to the students some of them took notes but others immediately connected to clickUP on their cellular phones to explore the clickUP MPE170 module (5:2). Katherine communicated excitedly and showed classmates her success in accessing the online facility (5:8). This attribute

initiated self-learning. Roland explained that “if I don’t understand something in the text book, I automatically Google it” (2:70). Noah submitted an example of searching for an immediate answer in a discussion board: “According to the web *promulgated* means to put (a law or decree) into effect by official proclamation” (45:1). Kevin added that “instead of doing a few things and see it doesn’t work I can just Google and immediately find what will work” (2:25).

- *Staying connected*

The music students’ overall opinion is that “you constantly have to be connected” (2:56, 3:15). There are some students that agree that there must be a balance, but Alexis felt that “if you do not have internet you feel stranded” (2:80). Their point of view is that it is easy enough to stay connected all the time (2:53). To access the internet music students can use Wi-Fi in UP public areas, the music library, the main library and at home. Problems that arise are the Eskom power cuts at home (3:36); Peter explained that the IT labs “are sometimes crowded or you have to wait very long”; and Kelsey discovered that “the discussion board posts do not always show on the phone” (6:4). Clara felt that “wherever I learn or study there must be internet” (2:69). Most students agreed that being connected is important for social networking to know what people are doing (4:6) and Clara wanted to stay connected to “everyone and everything” (4:4). Lizette mentioned that being connected is important to communicate with “family and friends who are living far away (2:57) and Roland added with “people all over the world” (2:9). According to most students the purpose of staying connected is for “entertainment, instant gratification, stalking, communication and to know new things” (2:52). Kelsey said: “Online technology keeps one interested in what one is doing and learning new stuff in new ways of interacting, incorporating music into our everyday lives” (4:24).

The music students at UP have a variety of devices (mobile phone, tablet or laptop) to collaborate in online class research activities and discussions. They use their own devices in class. The only student who did not participate in using a device was the blind first-year student (26:26).

To stay connected one needs internet. Students do have problems because of network errors and slow internet (6:5). Kim argued that even if “everything

becomes more digitalised ... it is still difficult, depending on one's background, if one cannot afford such things. Obviously we are in the technological era now but SA faces bigger problems than using technology. First focus on everyone getting a good education" (4:20).

Technology does not consume all Net Generation students' lives. They do not agree that computers are not seen as technological devices (2:2). Some students are just not "technologically advanced" (9:12) and some still want to study from an actual handbook. Christelle said, "I cannot study from the computer" (3:14). When they were asked to comment on the statement that "a higher level of interaction is experienced in online activities than in traditional face-to-face activities" they did not all agree. Corlise felt that "I can have more interaction and connection with a person face-to-face than on a phone. A lot of conversation has to do with body language. If you do not put a smiley face at the end of your message, all of a sudden it's interpreted completely differently. Information and connection is lost" (3:22). There are students who have been influenced by their Generation X (§ *Table 2*) parents, to experience Net Generation attributes differently. Kelsey explained that when her family goes on a trip, "because we are so connected to technology my dad takes all our cell phones, takes books with or audio tapes, and we listen together and discuss the book as a family — it is something stupid, but we do not have conversations anymore" (2:54). Clara added that "when we go out for supper, we put all the cell phones in the middle of the table and the one who reaches for a phone first, must pay the bill" (2:55).

Most Net Generation music students who participated in this case study feel that online technology is a part of their lives. Katherine said: "When there is no signal on holiday, you become depressed" (2:58, 2:59). Clara explained that "I was lucky enough, my parents fed technology into us" (2:45). Thuli said: "You rather WhatsApp or phone to say you arrived at your friend's house" (2:60). John felt that "doing assignments is pretty simple. You have to play around the program and once you have figured it out it is very simple" (10:2). Frederick mentioned that "I didn't find (the wiki) too difficult ... The moment you know how to, it's easy" (10:3).

5.2.1.2 Diversity of student personalities

Picciano (2009:9) mentions that Jung's theory focuses on four basic psychological dimensions (Jung, 1971) (§ Figure 6):

- Extroversion (E) vs. Introversion (I).
- Sensation (S) vs. Intuition (N).
- Thinking (T) vs. Feeling (F).
- Judging (J) vs. Perceiving (P).

Table 5 shows the results of a test done by the music students based on Jung's and Briggs Myers' typological approach to personality³⁸ (14:1) (§ Addendum C.1).

Table 5: Music education students' MBTI personality profiles

INFJ	ESTJ	EIFP	INFP	ENFP	ISTJ	ISFJ	ISFP	EITJ	ESFJ	ENFJ
INFJ	ESTJ		INFP	ENFP	ISTJ	ISFJ			ESFJ	
INFJ	ESTJ		INFP		ISTJ				ESFJ	
INFJ	ESTJ		INFP		ISTJ				ESFJ	
	ESTJ		INFP		ISTJ					

The profiles that stood out are the combinations of Extroversion-Sensation-Thinking-Judging, Introversion-Intuition-Feeling-Perceiving, Introversion-Sensation-Thinking-Judging and Extroversion-Sensation-Feeling-Judging.

5.2.1.3 Student diversity in learning styles

Various comments were made by the music students to describe their learning styles. Thuli explained that “[w]e write out what we study” (2:43). Lizette said: “With typed notes everything is beautifully organised” (2:47). Katherine explained that “I have to study with colours, so instead of wasting four hours with colour pens, I just do it on the computer” (2:48). Jason felt that “an effective learning environment must be balanced, combined with today's various technology, through interaction with teachers in class and also a more practical online search in class — online activities like research” (2:72). Kim mentioned

³⁸This test was used by Rula Bulk Materials Handling (www.rula.co.za).

that the classroom must be “calm and very informative. Strait to the point, I don’t like games” (4:13). Alexis felt that a learning environment can in some sort of way accommodate all students who do learn in different ways (4:14). Aileen said: “I hate reading with a passion, if I can’t see something or hear it, I’m not interested. I get bored so quickly and I miss everything (4:37). Clara explained that

it depends on the person you are. I prefer to learn in an interactive sort of way. If I was sitting in class and was asked to contribute to a discussion, even though it might not be correct, I might have think about it more and formulate an answer in my head without the information. For me that would stick more than just researching the answer and putting it on the discussion board (4:58).

During an online discussion board in class the video camera that recorded the session was moved from group to group. One of the group members seemed not to be part of the discussion. Group members were uncomfortable regarding her lack of interest, tried to include her more by moving closer, but she just continued looking at her cellular phone. Later it seemed that she actually did read the posts on her own device but chose not to take part in the group discussion. She made one comment during this time and took notes, which is why the observer changed opinion from not participating to participating in her own time and under her own preferences (7:21).

The music students did respond to activities that indicated their learning preferences and learning style.³⁹ The outcome indicates that the majority of music students have a tactile learning style preference (14:2). The ME study guides indicate that teaching and learning in the courses will make use of multiple approaches and learning activities to meet the needs of the diverse group of music students (21:33, 22:24, 23:56).

³⁹The Neethling brain profile activity (Le Roux, 2006:3.6-3.12).

5.2.1.3 Student diversity in ethnic groups

The music students in the ME modules come from different ethnic groups. Most students are South African, but there are also one Korean student, a student from Botswana (Tswana) and a student from Malawi (Chewa) (13:1). The South African students represent Sotho, Tsonga, Afrikaans, English, Greek and Turkish ethnic groups (2:1). The ME classes are attended by representatives from so many cultures but there are no differences in how they manage multimodal teaching and learning.

5.2.2 Music Education curriculum

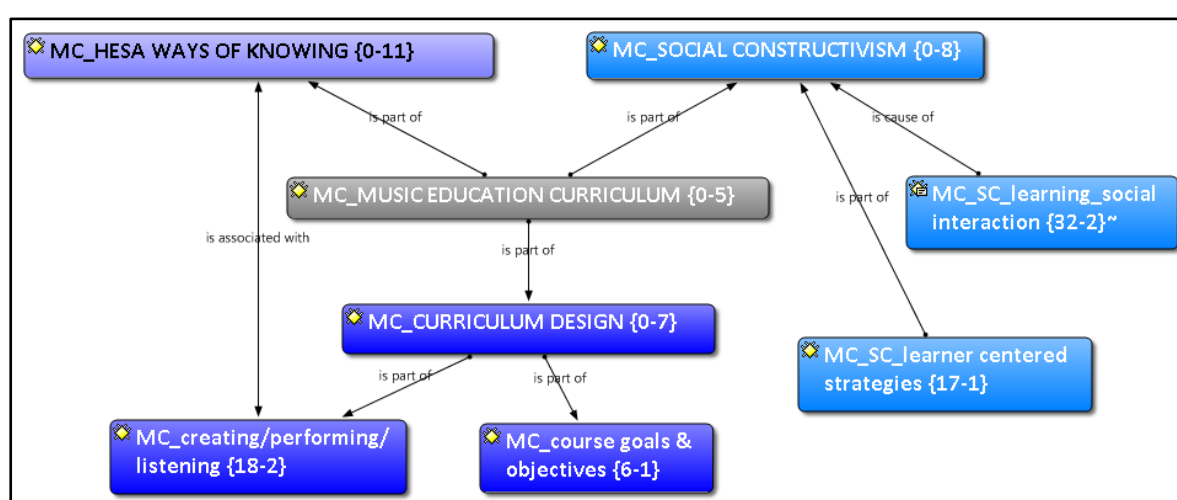


Figure 30: Music Education curriculum

Figure 30 illustrates the connection between the ME curriculum and the categories that influence its structure. Social constructivism is the pedagogical approach that describes teaching and learning in the musical community of practice (§ 4.2.1). The HE ways of knowing complement the implementation of the music curriculum designed to allow teaching and learning challenges in South Africa (§ 5.2.2.4).

5.2.2.1 Music curriculum design

Figure 31 explains the synthesis of categories that work together to implement a successful curriculum design. The point of departure for constructing the music curriculum is the experienced musical life worlds of the music students. A holistic

teaching philosophy directs course goals and objectives that are assessed accordingly. Online technology delivery permeates the ME curriculum.

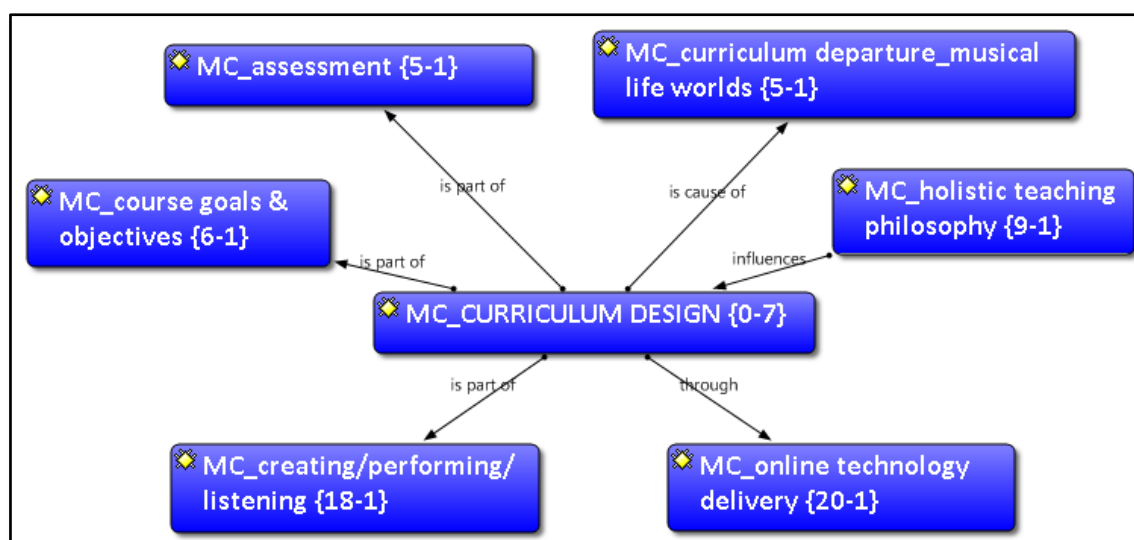


Figure 31: Music Education curriculum design

Lesego comes from Botswana and her comment illustrates that experienced life worlds influence teaching and learning. “In Botswana there’s a saying: ‘a child teaches another child’. I learn better from a peer than when it comes from a teacher. When you work on your own, you struggle more” (4:42). One of the critical cross-field outcomes of the ME curricula is “that by the end of the module students should be able to engage actively in their own learning through real-life, problem-solving situations that are holistic in nature” (23:3). On the discussion boards there are examples that the students answer in response to other students’ threads with knowledge they gathered through musical life world experiences. Peter stated: “I think it is very possible to enjoy one sphere of classical music and not another. Everybody’s tastes are different. Personally I enjoy most types of classical music but I have a preference for the romantic era, i.e. Beethoven, Puccini, Chopin. Musical taste can be very specific or broad” (42:7). Thuli explained that “I, personally, enjoy both late Classical and Romantic music, and I dislike Baroque music and some of the twentieth century music (e.g. Schönberg). Despite this I still have an appreciation for music from all the eras” (42:9). Peter said that “in my personal experience Western Art Music is a fantastic basis for any musician as it provides an excellent background to all musical elements, except improvisation” (42:13).

A holistic teaching philosophy influences the curriculum design and is described in the course study guides. The MPE170 module covers “a wide range of topics relevant for teaching music effectively and growing as a potential musician and music teacher” (21:1). The focus is on musical independence so that music students will “value the richness of music and music education in their lives” (21:17). The MPE270 module directs students to “develop their own musical understanding and their understanding of teaching processes” (22:1). Outcomes from the study show that a holistic teaching philosophy are supported: “to solve genuine musical problems that prove to be the best way to nurture musical independence” (22:43) and to use “facilitating teaching skills as major determinant of the quality and the success of any educational method” (23:1). The MPE370 module structure and outcomes include “integration of knowledge to prepare students to be a successful music educator” (23:14). It will lead them in the process to be able to choose *what* they teach and the *ways* in which they choose to teach” (23:19).

Music education students recognise that ME needs online technology delivery methods. Jason explained that “we realised this because we see music as being practical is also technological and a big part of music today is based in technology (recording and producing sound)” (2:84). Christelle felt that “[as] the world progress we use more online technology. I would love using online technology for ME delivery methods” (3:37). Aileen explained that “[w]e live in a digital period now where most schools do not use the green board anymore, where you do not physically write out the notation but work with a projector. The generation growing up today is so technology inclined that everything they do is on a tablet/phone/computer. By the time we go out to teach ... they will not use books anymore. Everything will be digital” (4:17).

The online activities they completed in ME made Thuli realise that “they can thus work and communicate during holidays” (6:71). Roland mentioned that they “can be in separate places and different contexts” to use the tools (6:70). Kim explained that online interaction can happen “at their own time” (8:14). According to Corlise “it can be done over an extended period of time and can be done anywhere with an internet connection” (8:97). Study material can “be revisited to study for exams” (8:41) said Noah. The wiki assignment was

according to Kevin “technological and no printing was required. Everything remained online and was even being marked online. No hard copies were necessary” (8:113). Students commented several times to stress the fact that the wiki can be done online, anytime and not just in class (8:129, 11:4, 12:5).

ME learning experiences focus “on the same processes as expert musicians do — performing, listening, creating” (22:55). Peter answered the question whether online technology had a place in music education: “It depends on the subject and how practical the activities are” (2:83). Some music students argued that the use of online technology can be an added skill to create a variety of teaching methods to keep the learners interested (4:23). The teaching and learning outcomes “nurture musical independence” (23:51). In face-to-face teaching and learning approaches (22:47, 23:54) the focus is on the practical experiences of music education.

The purpose of the MPE170 course is “to expose music students to a broader and more varied view of music in education across time and place”. The focus is on “musical independence so that music students will value the richness of music and music education in their lives”. The teaching and learning experience is enhanced by “using technology and information and communications technologies” (21:3). The MPE270 module focuses on the “preparation of musicians as music teachers ... to understand the diversity of possibilities to interact directly with music using the same processes expert musicians do: performing, listening and creating” (22:3). The MPE370 module gives music students the “opportunity to bring together their knowledge and personal development as a musician, and their understanding of the teaching and learning process in a musical cognitive apprenticeship” (23:16).

Online assignments can be assessed by using the clickUP assessment tools: “Turnitin assignments; online tests with 17 question types; graded wikis, blogs, journals and discussion boards; group or individual assignments to complete; self- and peer assessment according to set criteria, and surveys to gather feedback from students” (24:4). Feedback after the first wiki students completed was that students regarded the role of the lecturer as “giving feedback in terms of comments” (8:83). According to the study guides, assessment is part of the learning process that occurs during the year (22:54, 23:26).

5.2.2.2 Social constructivism

Figure 32 illuminates social constructive teaching and learning in ME at UP. Learner-centred strategies include IBL and PBL approaches. Peer support is part of the zone of proximal development where the lecturer and learner decide where support is needed through continuous social interaction to reach the same learning goal. Social constructivism assignments are usually implemented in group work.

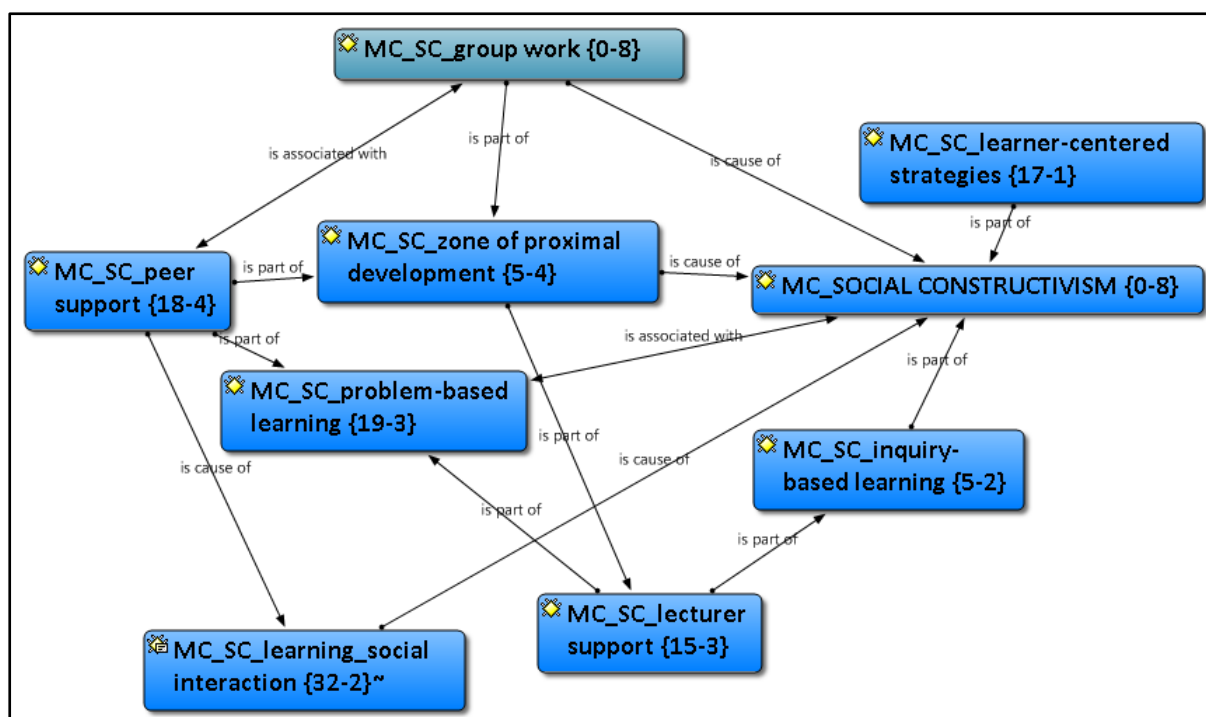


Figure 32: Social constructivism in Music Education

The ME modules are compiled in accordance with the characteristics of the social constructivist teaching and learning approach (23:9). According to the music students, online technologies cause ME to be an interactive environment (4:26). The critical cross-field outcomes of the ME study guides function effectively in various instructional settings (whole group, small group, pairs) (21:4, 22:6, 23:7). During face-to-face (21:31) and online (21:7) group activities (21:6, 22:52, 23:24) content is shared through student collaboration (group problem-solving: group projects and wikis) (22:16). Music students share the opinion that online technologies give them an idea of what other people think and help to gain other information that they probably have not thought about. Thuli mentioned that "it adds to your information and what you know and broadens

your general knowledge of music by seeing what you've posted and what others have posted — getting the opportunity to see others' opinions — broadens your knowledge as you read it" (4:29). Student collaboration helps according to Peter to "get different ideas, a variety of ideas from other people" (4:55). Kelsey explained that the use of online technology "allows everyone to share information" (8:49). Most music students enjoyed working in a group and experiencing the group dynamics (8:118), and this according to Lizette resulted in "discussing and sharing more things than just on paper" (12:6). Stephanie mentioned that the use of online technology "gave students a reason to do research on the topic and then compare the information I gathered with everyone else's info" (8:55). Peter said: "Everyone else sees your work and you will work harder" (9:5).

An outcome of the social constructivist theory is that individuals construct their own understanding (§ 2.5.2). The wiki tool allows them to compile their own information on a specific topic rather than it being provided for them (8:33). Adrian mentioned that they gain their "own understanding of the topic that we researched" (8:34). The wiki allows independent studies (8:78). A critical cross-field outcome gives MPE270 students "the chance to actively engage in their own learning" (22:27) by "developing their conceptual understanding" (22:30). The music students are prepared to understand (22:39) the "same processes expert musicians do: performing, listening and creating" (22:40). This approach enables music students to be "successful music teachers" (23:48). The lecturer uses the inquiry-based learning approach to develop self-directed learning skills (38:4). Students created their own videos in which they had to find the people and ask them questions and Jason responded to this activity: "We ourselves were experiencing what people's views were" (2:86).

Problem-based learning is based on social constructivist theory (§ 2.5.2). The ME study guides indicate that "the students must solve real-life musical problems" (21:20, 22:42, 22:44). MPE270 students "create music learning environments where problem-solving rooted in performing, listening and creating experiences forms the basis of learning within a variety of musical styles" (23:12).

An MPE370 music student commented on a lesson planning activity by saying “now I know I have to use problem-solving to guide (learners) to the right problem” (4:16). One of the outcomes of the MPE270 module is “to plan genuine musical problems that prove to be the best way to nurture musical independence” (23:34).

In the social constructivist music learning community the lecturer is engaged in the process by giving support to the learners. Students explained that they also need teacher interaction (2:77) and Kevin said that the lecturer “can try to mix teaching methods” (4:15). The lecturer guided and gave support during the whole online discussion board activity (7:20). As instructor the lecturer explained how to connect to clickUP and created posts beforehand (7:40). The students argued that the lecturer’s role in the wiki is to explain and lead (8:75) and Roland added to “give constant input and advice for a perfect product” (8:88). In the zone of proximal development the lecturer and learners can decide to give social guidance. Students want the lecturer to help to create a reliable source of information for future reference (8:161). Aileen explained that “having the ability to correct others was helpful” (8:29).

Peer support is part of the social constructivist learning community (§ 4.2.1). Adrian said: “In an online chat and discussion board you get an idea of what other people think and you gain other information that you probably haven’t thought about (4:64). Kelsey added that “others can give input on your efforts and add/correct info” (8:10). Stephanie added that she can also have peace of mind that all info provided is peer reviewed (8:19). Students can discuss and share opinions with one another (33:1) and modify other people’s information (8:91).

5.2.2.3 Group work in Music Education

Figure 33 illustrates the cooperative elements that create frustration and success in group work.

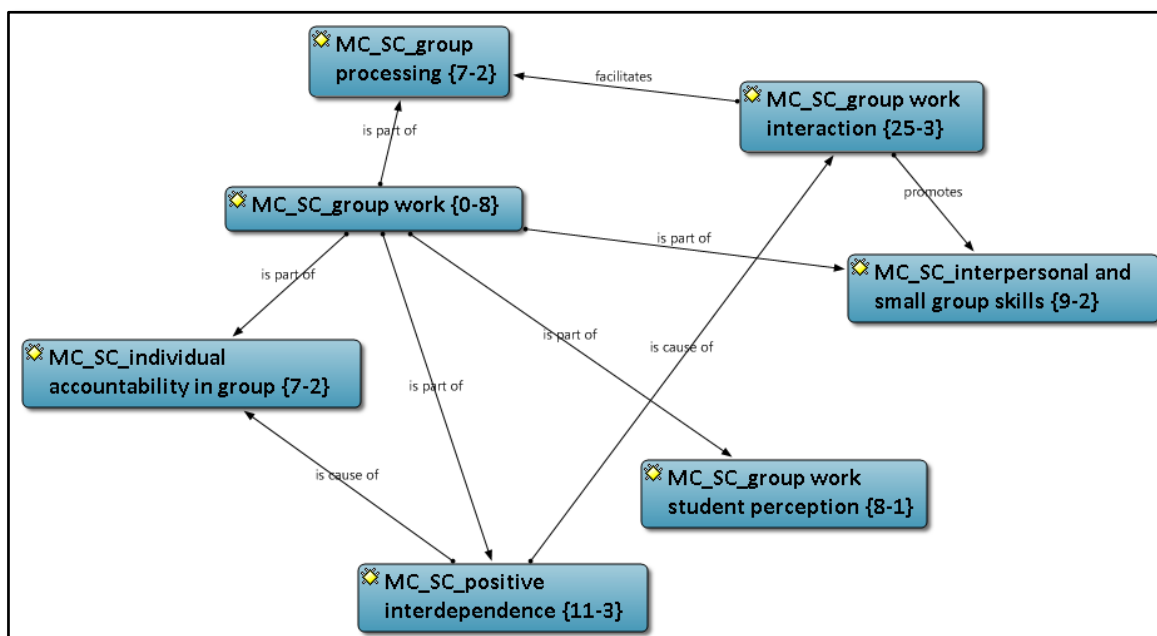


Figure 33: Group work in Music Education

Group work is part of the social constructivist approach and students discussed the interaction that occurs when working together on an assignment. Corlise said that “it is useful to have other peoples’ input and additions” (28:8). Support for group work was given from a group of students and Alexis added that “provided that every group member are doing his part” (8:50). Lebogang and Kevin felt that “if we get the opportunity to pick own group members, we will pick people who we work best with” (2:95, 4:44). Aileen explained that “I like the freedom of choosing people I can work with. It is difficult to get information across with some people. I want to choose somebody with whom I work well together (3:30). Peter found that it is “irritating when you have everyone else’s opinion about your work” (2:87).

Groups need to process how they achieve goals and maintain effective working relationships among members. Effective working relations can work but it “depends if there is somebody overseeing the process” (2:91). Some students have problems regarding group relationships. Adele said: “Group members didn’t agree with me — disagreement occurred” (8:132). Sometimes there is a lack of

effort in terms of partners' roles doing their share (8:135). Many students agreed with Adrian who asked: "How are you going to overcome the *sluiper* (loafer)" and Katherine's answer was, "Tell on them" (2:96).

Interpersonal and small group assistance can only happen if the members have social skills. The students are very clear about peers' group work assertiveness. Roland explained: "Some compete and get aggressive" (2:89); Lizette suggested to "give the lazy ones a responsibility" (2:97); Jason commented that "if there is somebody you don't like, deal with it" (2:94). Kelsey commented that

[y]ou need to be comfortable in your group, if there is personality clashes, it's not gonna work. How do you go to someone who is a know-it-all, that catches something immediately when you are a slow learner? If there are clashes and miscommunication, everybody will be frustrated (4:47).

It is essential that group members realise they need one another to complete the assignment successfully. Some students realise that they have to learn how to work with anyone (2:98). Thuli felt that "group work (that involves other people) is so much harder" (3:28). Peter suggested that online work groups can be organised "with an instigator — somebody that keeps everything in line" (2:92) and Corlise agreed that it has to be "people of different kinds of strengths" (2:93).

The students argued that group members need to be assessed separately and all of them agreed that they wanted to be accountable for their own work done (8:159). Peter explained that when the group is evaluated as a unit it can happen that the "work was not useful, since (group work) complicates matters and takes away from the project" (8:140). Students agreed that to "give marks separately is fair" (4:46).

A positive perception of group work came from Peter who said that it "diminishes the workload" (8:22). Online group work done in class is positively perceived (15:2) (Figure 34).

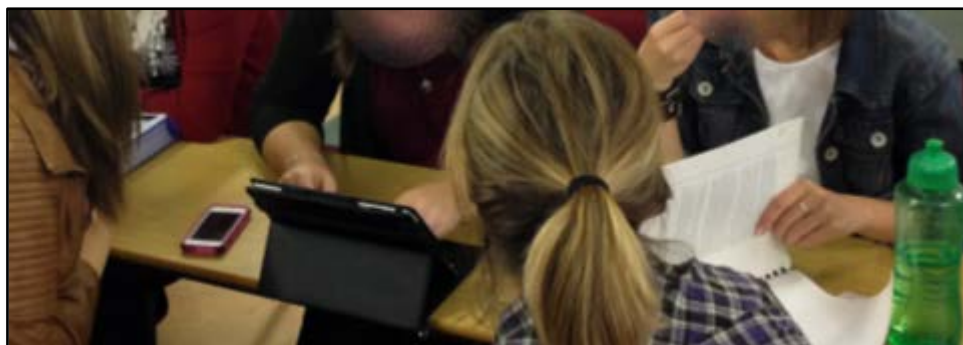


Figure 34: Social constructivist learning community in Music Education (15:2)

However, some students view group work in a negative light. Roland mentioned that there is sometimes “conflict between group members” (8:141). To perform group assignments effectively, Corlise felt that “a fair amount of work (should be) delegated to each member in the group” (8:148). According to Kevin “group members did not always work hard and many tasks were left until the last minute” (8:143), and Thuli concluded that “therefore I didn’t know what must be added to complete it until at a very late stage” (8:149).

5.2.2.4 Ways of knowing (HE curricula in South Africa)

Figure 35 illustrates how four ways of knowing and learning can develop the HE ME curriculum at UP. The course study guides include musical understanding as knowledge in the study themes presented (21:36, 22:59). The MPE170 course will “expose music students to a broader and more varied view of music in education across time and place” (21:38). The focus of the MPE170 course is on “musical independence” (21:39) and in all modules to “construct new understanding of music” (21:41, 22:60, 22:61). In the MPE170 module students “reflect on music and its value in order to give meaning to music” (21:42). The MPE370 study guide explains that the module “will lead you in the process to be able to choose *what* you teach and the *ways* in which you choose to teach (23:57). The purpose statement of the MPE370 course “gives music students the opportunity to bring together their knowledge and personal development as a musician” (23:58).

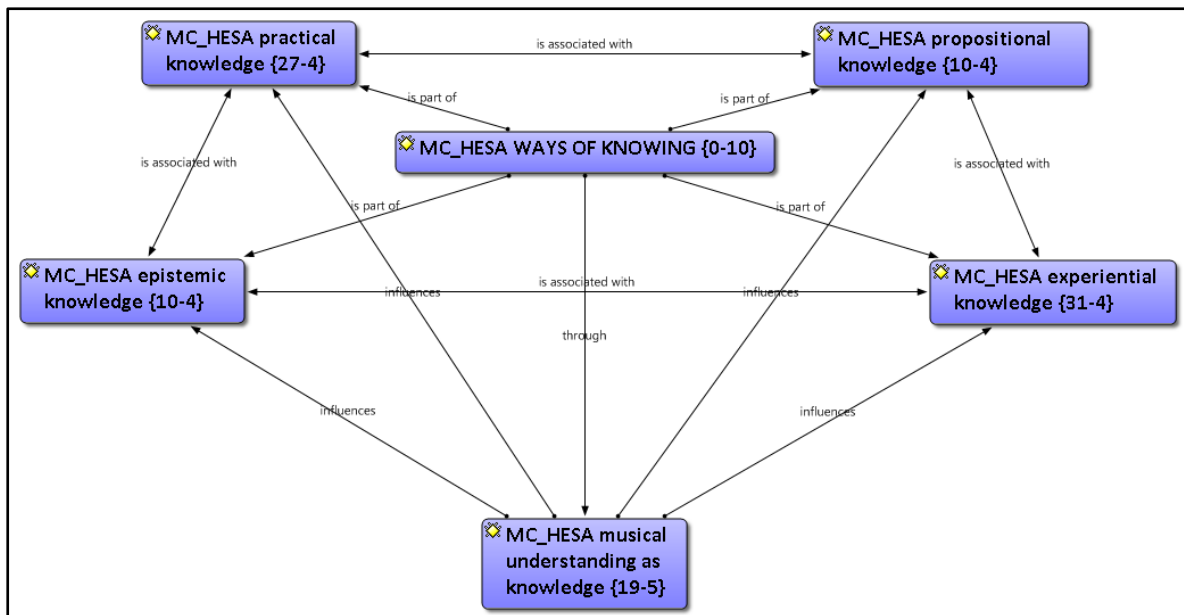


Figure 35: Higher Education in South Africa (Lockett, 2001b) — ways of knowing adapted for Music Education

The point of departure for HE curriculum restructuring may be to start with the diverse knowledge requirements of the UP music student. Some were of the opinion that online learning cannot be applied to the teaching and learning of ME at UP. Aileen said that “ME is a very hands-on practical subject, so how can you do it when you do not get that interaction?” (3:24). Peter felt that

music is practical and I would much rather sit with my lecturer and piece it out for myself. If you practise from a YouTube video, you start to practise mistakes. Music is something you have to feel and be a part of and it is disconnected if it is online (4:21).

Christelle's opinion was “the best way of learning for me in MPE is when we do class activities” (4:36). But students also agreed that online activities such as the wiki supports learning in how to structure a large amount of information so that it is clear to quick users of the page (8:119).

Teaching and learning that take place as propositional knowledge is based on knowledge production. Students commented on new knowledge that can be constructed. Lebogang said: “I learned a lot about the topic” (8:39); Aileen felt that the wiki helps to “create a reliable source of information” (8:80); and Clara mentioned that the wiki contained “all the music styles that we learnt about, correctly summarised and all in one area which made it convenient, quick and easy to use” (8:17); and Candis “didn’t know what pop music stood for before”

(8:13). The MPE170 course “exposes music students to a broader and more varied view of music in education across time and place” (21:16).

Practical competence leads to the application of knowledge. Problem-solving activities in class allow students to use different media to accomplish creative projects.



Figure 36: Practical activity using online technologies

Figure 36 (16:1) is an example where students did a composing activity. The group decided to use a mobile app to compose their song. The second group used the white board for their composition. Figure 37 (17:1) illustrates their effort.

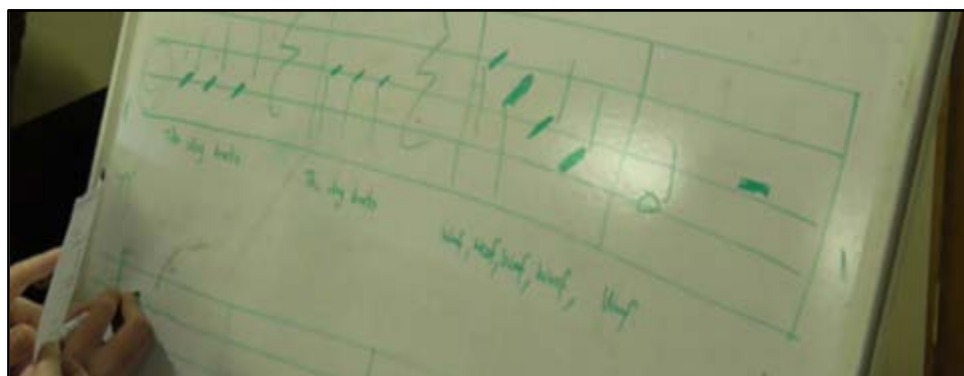


Figure 37: Practical activity using a white board

Figure 38 (18:1) demonstrates a totally different creative idea to present the composition. This group even included *tonic sol fa* and used the sheets of paper to present pitch and colours to indicate the note names:

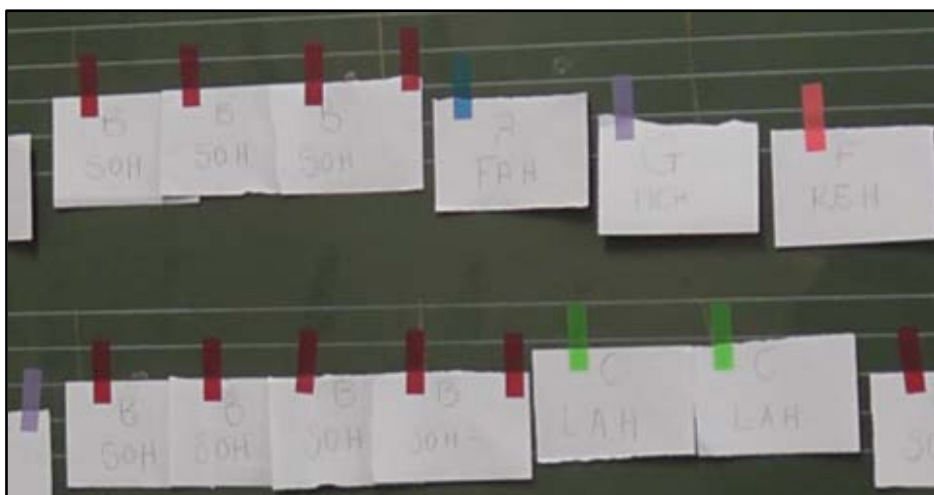
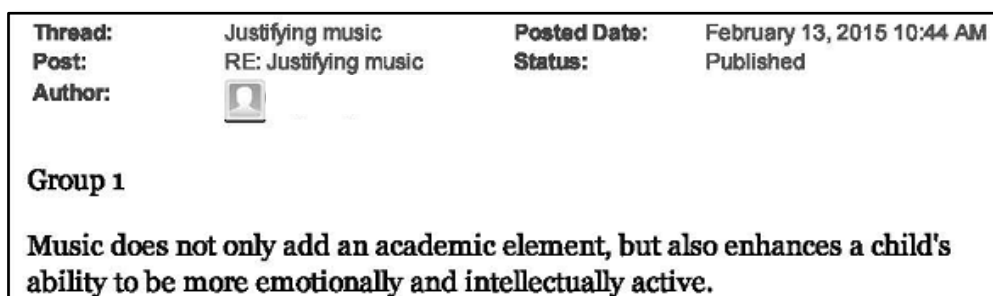


Figure 38: Practical activity using paper

The purpose statement of the MPE370 course indicates that students will “get to know and understand authoritative theories in music education and practically apply them” (23:28). The ME educational approach equips music students “with tools necessary to grow yourselves and your future pupils into the best you can be” (21:15, 23:18).

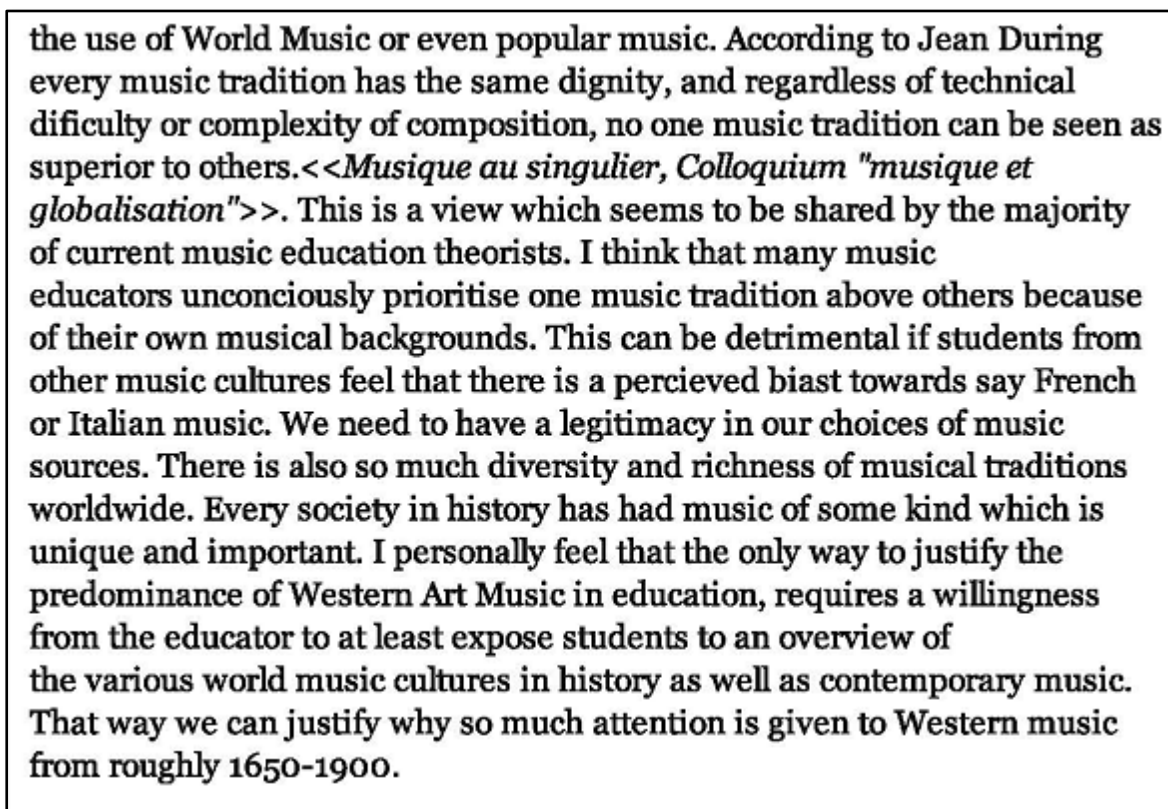
The HE ME curriculum accommodates experiential learning to prepare music students for their future careers. According to Christelle online activities enable students to “actually (apply) what we learned (from ME) in class. We have to incorporate (this) knowledge into a project like teaching examples and stuff” (4:56). The ME curriculum encourages music students to “think critically and deeply about your future as musician and music teacher” (21:14, 22:18). The focus of the MPE370 module is the “preparation of musicians as music teachers; the module directs students to develop their own musical understanding and their understanding of teaching processes” (22:25). Students demonstrate “focused knowledge” (22:32) in the MPE270 module and “nurture musical independence” (22:46). Learning activities in all ME modules include “research and writing” (22:50). MPE370 music students “observe and evaluate teaching and learning in the field” (23:11) and some of the learning outcomes are to “understand learning and contexts for learning to teach for musical understanding” (23:33) and to “find a balance between theoretical and practical information through research” (23:36).

In a discussion board a group indicated (Screen shot 1)⁴⁰ that they understood the knowledge they had acquired (27:3). The groups answered the question, “Why do we as musicians, in 2015, have to justify the importance of music in education?” Group 1 not only responded to another answer but also explicated their view on the question.



Screen shot 1: Experiential knowledge

Screen shot 2 is an example where a student understood the content learned (42:10):



Screen shot 2: Discussion board example (experiential knowledge)

⁴⁰The screen shots are examples that are taken directly from the PDF online assignments documents. Grammar and spelling mistakes are therefore not corrected.

The epistemic knowledge way requires students to rethink their assumptions about morals, beliefs and social responsibility. Students need to “engage in musical thinking” (22:10), “reflect as pedagogical strategy” (23:43) and “think critically and deeply about their future as musicians and music teachers” (23:45). The clickUP journal tool can assist in this level of thinking (24:5).

5.2.3 Picciano's Blending with Purpose Multimodal Model

This theme explains the main research question of this study:

How can the *Blending with Purpose Multimodal Model* be understood to facilitate teaching and learning in ME at UP?

The multimodal conceptual model (Figure 39) for planning a blended learning course recommends six basic pedagogical objectives or activities and approaches for accomplishing them. Student comments explain how this was achieved in ME at UP.

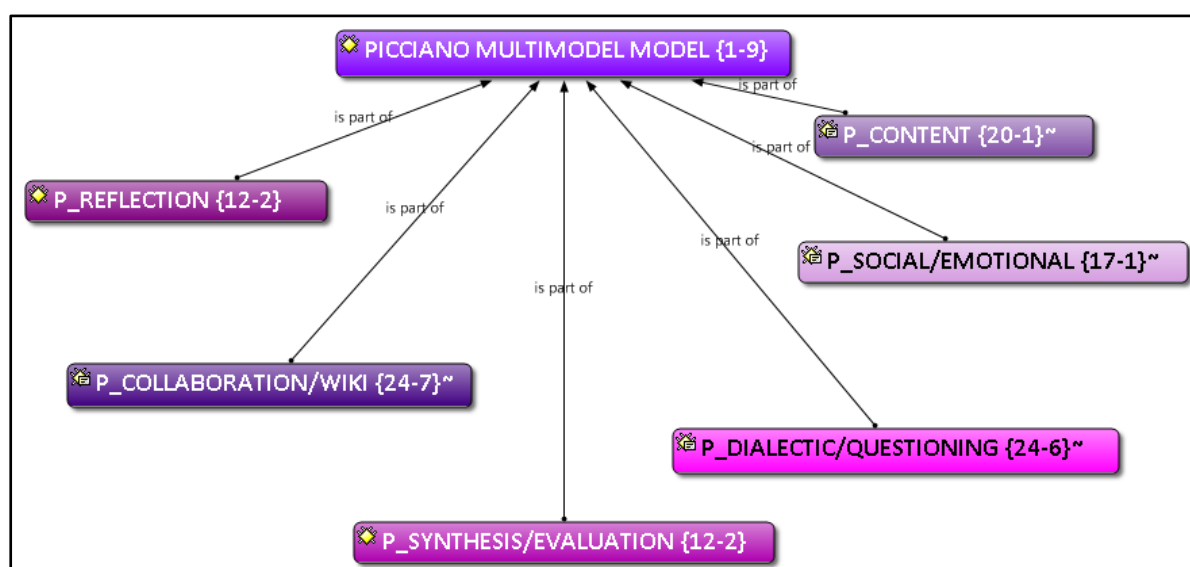


Figure 39: Blending with Purpose Multimodal Model in Music Education

5.2.3.1 Content

Picciano (2009:12) explains that content is “one of the primary drivers of instruction and there are many ways in which content can be delivered and presented”. Music students agreed that it is valuable to receive notes on clickUP (4:10) because students, as Thuli explained, “don’t need to take notes in class

and can take in what the lecturer says” (4:48). Online information was submitted to the clickUP module menu item (7:14). The ME study guides explain that delivery of content materialises “linguistically, through the course management system (clickUP), paper and media” (21:24, 22:33, 23:38). The clickUP pie chart includes “syllabuses, learning modules, lesson plans, wikis, URLs, mashups and a glossary” as content (24:3).

5.2.3.2 Social/emotional support

Supporting students socially and emotionally is part of teaching and learning in the music education environment. Music students commented that online academic interaction cannot give students the one-on-one attention that they may need. Christelle argued that “if you are online and you are logged in to someone’s lecture you cannot ask if you have no idea what a word means — you lose that personal touch” (3:23). Morgan also mentioned that “when you put students in a social situation rather than learning online we have to perform to prove that we can do what we are supposed to do — if we have online interaction we work at our own pace and might slack down a bit” (3:26). During the online discussion board in class the lecturer could encourage the blind student to participate (7:11). When the lecturer struggled with the tripod a student helped her to secure stability of the camera (7:22).

5.2.3.3 Dialectic/questioning

Figure 40 explains the category that focused mostly on using the online discussion board tool in clickUP and the Blackboard chatroom tool.

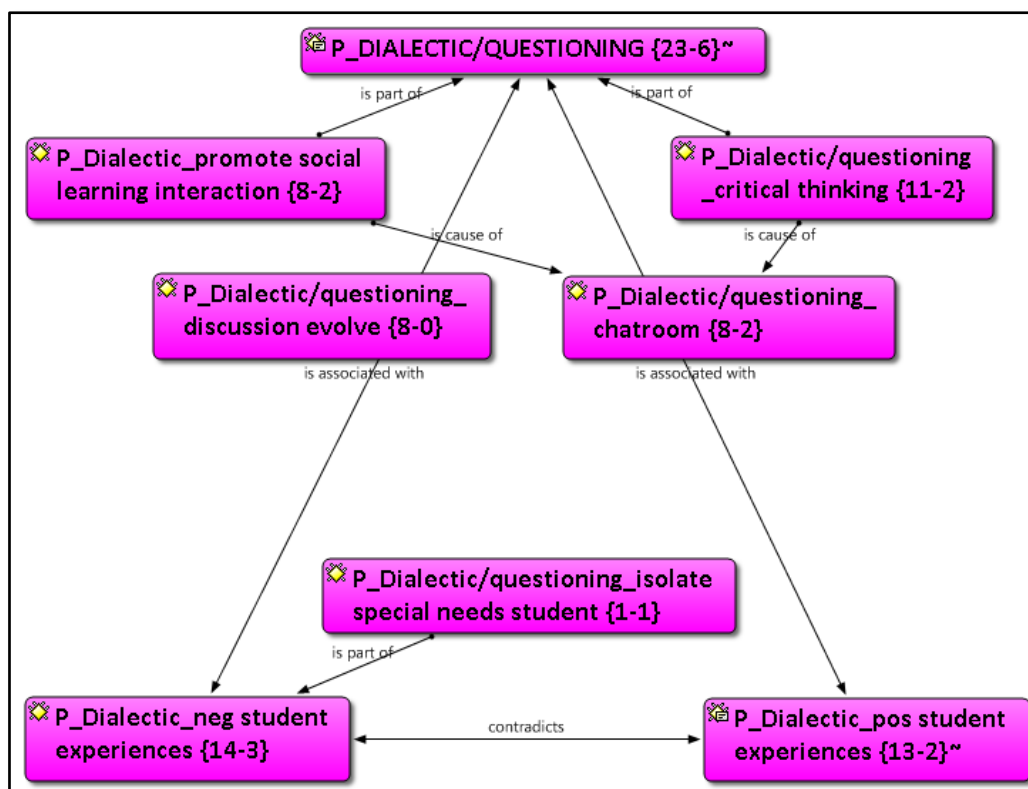


Figure 40: Dialectic/questioning: discussion board in clickUP in Music Education

Aileen experienced that “in class you don’t have time to research and think about a reply or answer. But online I could calmly reply, get my thoughts together and post a collaborative answer — in class it can quickly turn out into an argument” (4:30). Corlise felt that “by using the online chat and discussion board you get an idea of what other people think and you gain other information that you probably haven’t thought about” (4:63). Jason explained that “it adds to your information and what you know and broadens your general knowledge of music” (4:63). Lebogang felt that “everyone had to give their input, (you) got a sense of where you are with your thinking, and opened your mind for other students’ views” (6:65). During the online discussion board in class the lecturer observed that the groups read the posts of the other groups before posting their groups’ answers to the discussion board (7:28). Although it seemed as if there was no discussion, the different groups’ posts contributed to an overall answer to the question (7:34). “Discussion” (21:9) is one of the learning activities mentioned in the ME study guides that include “student cooperation by means of dialectic or questioning activities (e.g. class discussions and using the online discussion board” (21:26, 22:35, 23:40). But not all students can collaborate

efficiently. The blind student was part of the discussion but could not see the posts of the other groups. He relied on the comments of his group members (7:26).

When the instructors prepared the online chat room they “found that the most stable method of accessing the chat room was via the Blackboard Learn™ App” (26:8) and “that accessing the chat room on Wi-Fi worked the best” (26:12). “Blackboard Collaborate is an online, synchronous collaborative learning tool that makes learners feel as if they are together in the same room via collaboration and conference tools” (26:10). The instructor Lucy said that “students felt empowered to use the chat tool once they saw its benefit, and were excited to interact in the chat room” (26:13). She also explained

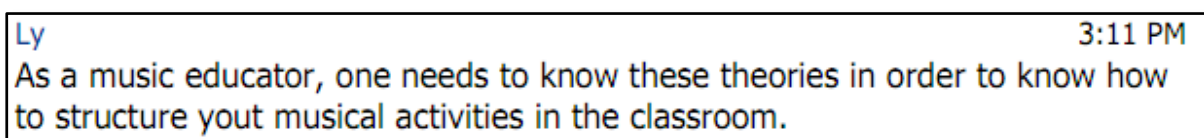
we realised the size of the class had a big impact, and with 15 students in the chat room, it can get difficult to manage the discussion. It would have been more ideal to have separate chat sessions with smaller groups of students. All in all, it was a worthwhile experience for students, and one which I believe can work successfully if transferred to the online environment with students on either their mobile phone or laptop (26:14).

Screen shots 3 (51:1) and 4 (51:2) are examples of a chatroom question and an answer:



S (Sonja) Cruywagen 3:10 PM
Explain why it is important to know about the theory of Jean Piaget
- N joined the Main Room. (3:10 PM) -

Screen shot 3: Chat room question



Ly 3:11 PM
As a music educator, one needs to know these theories in order to know how to structure your musical activities in the classroom.

Screen shot 4: Chat room answer

Discussion boards open up critical thinking as a learning skill. Screen shot 5 (34:2) is an example of how a student opens up the discussion through critical thinking:

We agree with all of the above statements. However, we would like to add that Elliot points out that teaching and learning music in the classroom and beyond, is subject to multiple interpretations. No matter the teaching method, each person will form their own opinion. Artistic citizenship is not about being labelled as "odd" and perhaps some of us do have magical gifts, but ultimately hard work will earn you artistic citizenship.

Screen shot 5: Critical thinking skill in a discussion board

As discussions evolved students explored what they really knew about the topic and this activity helped to refine their knowledge. Screen shots 6 and 7 (42:15, 42:17) are example of how a discussion can develop:

I would just like to add to what _____ says about the appreciation children develop for western classical music. I believe this appreciation comes with both age and maturity which is only so often noticed when the children grow up and are more likely to have an understanding of the kind of work and

Screen shot 6: Evolving discussion

I agree with you _____ Classical music strives toward perfection. It definitely develops a child's brain and makes them more prone to developing faster. Western music is definitely a fundamental and important bases for teaching music.

Screen shot 7: Evolving discussion

To prepare for the discussion boards students had to research a topic before they could collaborate in such a discussion. Screen shots 8 (38:6) and 9 (39:1) are examples of how students included their research in the posts they made to the discussion board.

Through the research I have done on Piaget it can also be said that Piaget's theory of cognitive development can also be used as a guideline into the development of a child, whether in a normal class environment or even music lessons. As it is implied in Piaget theory each stage has its own cognitive development level, for example in the first sensorimotor (0-2

Screen shot 8: Research is necessary for discussion board collaboration

José Picardo, an educator from southern Spain, noted that 'students nowadays...have easy access to a world of information through the internet. However, they still need to be guided through the process of discovery so that a deeper understanding of their own place in the world is developed.' (Picardo, 2012)

Although students can learn about other cultures through many different sources, the best way for them to learn is if they are discovering and

Screen shot 9: Research is necessary for discussion board collaboration

Participation in a discussion board promotes social learning interaction. Students did learn more about the topic they discussed in the discussion board because, according to Peter, “being able to share different opinions and views and not necessarily have to be together. I find using the tool stimulating” (6:68). Alexis said, “I did learn a bit more. Students did interact more than would be the case in class ... discussed extra info which won’t be part of a class discussion” (6:67).

There were negative student experiences in using the discussion board tool. Aileen argued that “there was too much to read” (2:88). Noah felt that “to study with a support group is hard because you worked hard, researched, planned it and when you went back somebody had already put online what you wanted to add. No way of preventing people to overlap instead of learning new things the whole time” (3:27). Kelsey explained that “sometimes when it is a really long conversation, the first time I read through, I read everything. But afterwards when people asked questions I just answered the questions they asked me” (4:35). Roland complained that “a lot of people’s answers on the discussion board was copy and paste answers” (4:59). Aileen felt that “personally I do not see the worth of learning through a discussion board” (6:66). Peter mentioned that sometimes students do not answer questions asked. He was joined by Frederick, Clara and Alexis and added that “they just post information and do not go back to read posts” (46:1, 47:1, 48:4, 49:3).

The students explained that the online discussion “we had to do the in class, was a positive experience. Some students are not able to express themselves, but online they can. I cannot remember everybody’s posts and online gives me time to think and broadens my viewpoint” (4:33). Kim explained that participating in the discussion board gave “me more time to think, because my language

(Korean) use is not perfect” (4:31). Thebatso said, “I learnt what others’ opinions were. Different viewpoints from what I thought. This is a kind of learning” (6:17). Christelle felt that “technology is slower than verbal conversation. However, it is organised and one can observe previous answers in more detail” (33:3).

5.2.3.4 Synthesis/evaluation

Learning activities in the ME modules conclude with assessment of work done (21:8). The study guides point out that blending with purpose will allow “synthesising, evaluating, and assessing learning as objectives (papers, essays, tests, student presentations, PowerPoint presentations, etc.)” (21:27, 22:36, 23:41).

5.2.3.5 Collaboration/Wiki

Figure 41 explains the sub-categories that developed from using the wiki as an online collaboration tool:

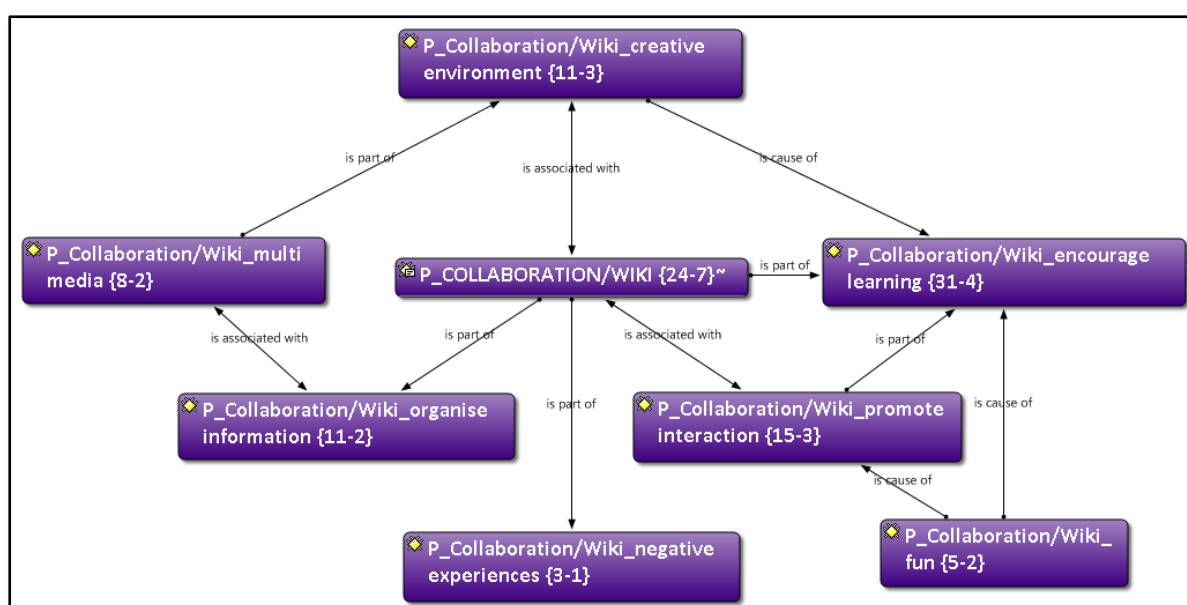


Figure 41: Collaboration: wiki in clickUP in Music Education

The wiki is an interactive environment. Alexis mentioned that

generally, in music, we do our individual instruments where we are only one person. But especially in terms of the wiki, ... you get an idea of what other people think and you gain other information that you probably haven’t thought about and it adds to your information and

what you know and broadens your general knowledge of music by seeing what you've posted and what others have posted — getting the opportunity to see other's opinions — broadens your knowledge as you read it (4:27).

Peter raised a negative experience about creating a wiki: “Unfortunately not everyone uses the wiki in collaborative context, but rather for individual input” (8:12).

The wiki promotes interaction” (6:22). Thuli felt that “group members did work together” (7:12, 8:154) and Noah added that they “shared information” (8:20). The wiki was used to plan lessons and Kelsey commented that

planning lessons is very relevant because we will do it in person one day. We get different ideas from other people (a variety of ideas) after we saw everyone else's wiki. It enables us to actually apply knowledge that we learned in ME class ... we have to find a way to incorporate this into a project like teaching examples and stuff (4:52).

Jason added that “everyone can access the wiki because it is on the internet and always available” (10:4). Corlise explained that the wiki “is a creative environment where you can use various media, YouTube links, sound, connect pages and make it interactive” (4:53). Ester felt the wiki “allows for a creative environment to condense my research in a fun and innovative way” (8:6) and Kelsey felt that she can “work in a group and is still able to delegate work” (8:52). Adele commented that “[I] was able to decorate my page the way I wanted” (8:98) and Corlise wanted to “be creative and express my own ideas” (8:112). “Roland commented that “it gave me a lot of satisfaction in creating the wiki” (8:116).

The wiki encourages learning because work is easily summarised and easier to understand (8:32). Christelle argued that “in order to present a well-informed and well-structured page, I had to know all the aspects before starting it. It takes good understanding of the material to structure the page properly” (8:46). Alexis felt that the activity “broadened my researching abilities and the wiki itself gave me a new perspective on how to critically think about the subject” (8:47). According to Noah working on the wiki “allowed us to compile our own information on a specific topic rather than it being provided to us” (8:61). Jason mentioned that the whole process “gave us exposure to so many things: how to introduce, develop and deliver content to learners. Taught me how to structure

information that builds on each other” (8:69). Peter did his “best with the research and now the subject is still clearly memorable” (8:123).

Frederick mentioned that to create the wiki was “fun” (8: 89). Adrian said: “I love technology, so having my work in the form of a wiki is great” (8:106). Clara “enjoyed seeing the end product” (8:115). Morgan felt that “the fun part of the wiki is to do the research and compile it in a way to make others understand what you understand” (4:50). Corlise was “anxious to see how others present the concept in different ways. It is fun to see the different interpretations” (4:51).

The wiki introduced an interesting and easy way to present a variety of media using technology (8:128). Kim explained that users “can click on hyperlinks” (8:125) and “be transported to a website for more information if they are interested” (8:36). The fact that Peter could use “pictures and URLs on my wiki page gave my assignment a new dimension” (8:63). Corlise explained that “plenty of multimedia input options are available” (8:94) and Roland liked “the fact that HTML snippets could be included” (8:108). Lebogang said that the “layout makes research simpler and the way the info is organised is useful” (8:117). Adele realised that “research was necessary to build the wiki” (8:40). Frederick asked: “Can we please do all research assignments in wiki’s?” (8:155). Online research (19:1) (Figure 42) on the topic also enabled Kelsey “to present our research effectively” (8:44):

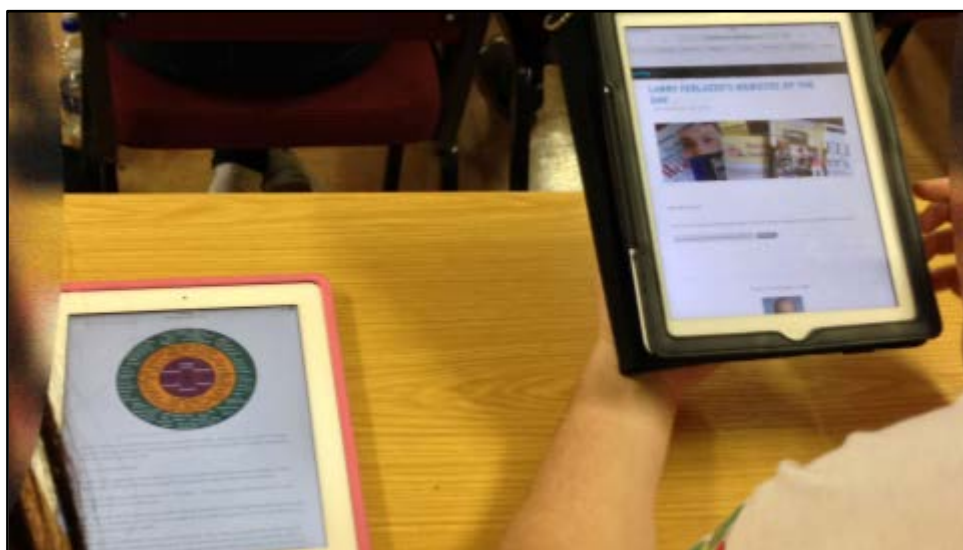


Figure 42: Online research to prepare for the wiki

According to Kevin the wiki provided “a way to organise information and provided a good method of layout” (8:57). Aileen felt that “having all the info neatly in one place was also good” (8:30), and Alexis added, “as well as planning and forming a layout of what is most important and what is not” (8:67). According to Kim the completed wiki offered “all the music styles that we learnt about, correctly summarised and all in one area which made it convenient” (8:59).

5.2.3.6 Reflection

Online assignments allow students to reflect on the assignments already done. Lizette added another post four months later when she prepared for the examination (7:32). During the online discussion board in class some students went back to all the posts and read through the contributions (7:33). “Reflection as pedagogical strategy” is a blending with purpose activity that is incorporated in the ME study guides (21:29, 22:17). The journal and blog tools are appropriate collaborative tools for students to reflect (24:6).

5.2.3.7 clickUP

Figure 43 indicates positive and negative clickUP relationships and experiences that can be found in documents and student interviews to explain how online teaching and learning in the ME curriculum can be supported.

The clickUP pie chart (24:1) (§ 3.2) shows that this system accommodates diversity and assists the use of the *Blending with Purpose Multimodal model* (24:12). The clickUP learning management system is a way of communicating and propagating further learning outside of the classroom (6:59). Stephanie said: “I didn’t like clickUP in the beginning but it is helpful for finding information” (6:49). Students did receive daily notifications (6:7) to inform them of new announcements, activities or information. ClickUP improves computer literacy. The use of clickUP lays the foundation for many online technology skills and Peter commented that he “can use the skills in the future” (8:100). Noah felt it “helped me knowing how to create” (8:27) an online assignment.

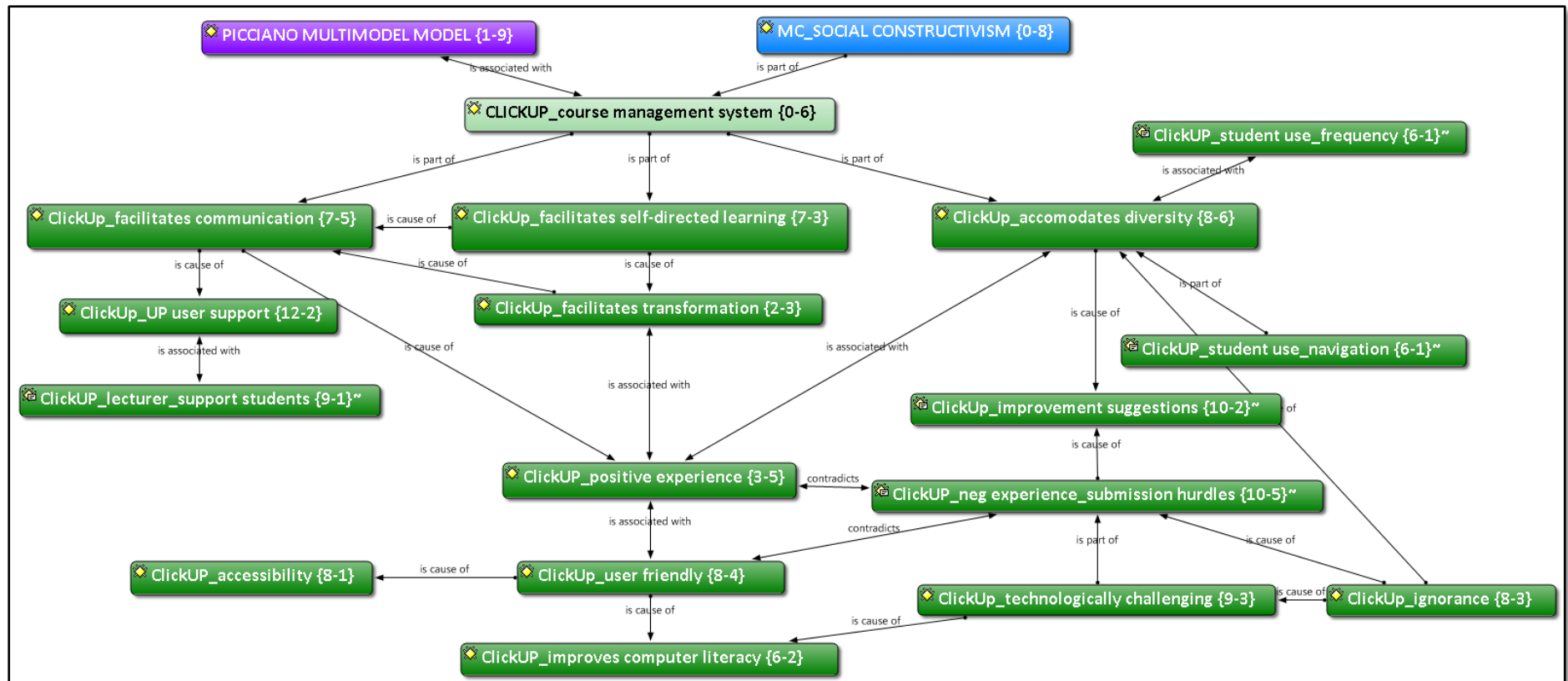


Figure 43: ClickUP in Music Education

ClickUP can be accessed throughout the day (4:62). Students used the Firefox browser to connect to the internet at home; some preferred Chrome and the disability centre at UP uses Explorer (6:44). The BA Mus. students use clickUP every day because all their BA subject modules make use of the management system (3:21). Some BA Mus. students go onto clickUP “nearly five times a day” (4:11). The BMus. students use clickUP “one to two times a week or two to three times a week”. Adele used clickUP only once “because her friend keeps her informed of what’s going on in the module” (3:34).

According to most music students the learning management system clickUP is user friendly (8:160). Peter did not spend much time to find the work and could “semi-logically find it easily” (2:101). Lizette “struggled a bit but it never was difficult” (8:72). Corlise said: “When you did it once you knew how to” (6:29). Kelsey felt that clickUP was “fairly easy to use and navigate and ensured that more effective research was conducted” (8:42).

UP supports online instruction and the use of clickUP to manage courses. There is, according to the students, “mostly free Wi-Fi” (2:102) and Thuli added that the “university supplies internet and computers. So there is no excuse not to be able to access clickUP” (6:14) on campus. Lesego explained that

coming from Botswana (I am 35 years old), teaching there with technology will not be implemented very soon. Fortunately we had the module AIM to teach me how to use clickUP, but it was a tough time for me. I used to struggle a lot, but I had lecturers who were patient with me (6:18).

Alexis felt that “in AIM they were supposed to show us how to use clickUP. We sort of had to guess, but it was not difficult to learn how” (3:35). Before the music students access the chat room tool, the instructors introduce them to the steps via “a PowerPoint presentation which included accessing the chat room from a variety of devices, such as smart phones, iPads and laptops” (26:3).

The music students indicated that they had positive and negative experiences with clickUP. Stephanie said: “To me it is like an added skill to keep students interested and on their toes, not getting bored not doing everything the same”(4:25). When the lecturer introduced clickUP to the first-year music education students Candis excitedly accessed clickUP on her phone and

communicated with others to show her success in accessing the online facility (5:6).

Negative experiences to submit data and the technological challenges students experienced clouded the initial excitement. Thuli mentioned that “sometimes the internet is too slow, but then I go on another time” (6:28). Adele commented that when she did not have airtime (6:31) on her smart phone she could not submit an assignment. Candis argued that clickUP “didn’t allow me to place pictures exactly where I wanted them” (8:136) and Kelsey said “sometimes the pictures didn’t show” (8:146). A few students struggled to upload pictures from the internet (8:137) and Kim “could not embed a YouTube video on my wiki, although I clicked the correct tool” (8:139). Alexis “couldn’t always access the wiki” (8:138).

Technological challenges included a lack of skills; Aileen said, “I am not technologically advanced. I really struggle with clickUP in general” (9:1). Christelle felt that the wiki is “time consuming with an awkward setup on clickUP” (8:1). John asked the lecturer to “speak to the administrators to allow us to drag a picture. It is tremendously difficult to line up all these pictures (space, space, enter, enter, etc.) ... very time consuming. It would cut used time in half if we were able to do this” (9:3). Candis commented that working on the wiki is “not for all of us because some of us are not familiar with how it works” (12:2).

While some students regard clickUP as being user friendly, others find it difficult to effectively navigate is essential to use clickUP successfully. Some students do not know” (6:6) how to navigate in clickUP. Alexis said that “the headings sometimes confuse me. I have to open every menu to find the content; clickUP is supposed to be easy to navigate between headings” (6:11). Christelle felt that “if you don’t know which topic the notes are supposed to go under, it takes you a while to find the information” (3:32). Academic ignorance also plays a role in the attitude towards using clickUP. Candis said: “I am not in the habit of going onto clickUP” (6:45) but there were students who displayed a self-learning assertiveness. Corlise commented that “we are not in school any more guys. We have to look for these things ourselves” (2:100).

The music students receive lecturer support to use clickUP. In the beginning of the year I explained the process and how it works (8:76). For students to be able to work in a discussion board, I create threads beforehand (7:8). During the online discussion board in class the activity is projected onto the whiteboard and I can assist students during the whole process (7:3). I assist students in familiarising themselves with how a wiki works and with uploading content to the wiki (8:82).

The music students make suggestions to improve the clickUP experience: “Maybe if you make the menu more colourful?” (3:33); “construct the menus to provide “easier” navigation on clickUP” (6:43). “Please add a “referencing guide” (6:52) and a “student plagiarism program” (6:53) on clickUP. Some music students request “more support for using clickUP” (6:54).

5.3 Conclusion

Throughout this chapter the opinions of the wide spectrum of students are evident in the comments that were made during the interviews. Picciano’s *Blending with Purpose Multimodal Model* was accommodated by using the tools used and activities in clickUP. Students were clear about their experiences relating to online teaching and learning. All online activities done are based on course themes and content. Through this investigation the multimodal model has proved that it can be applied to curriculum design and pedagogical approaches in music education.

CHAPTER 6: DISCUSSION AND CONCLUSION

6.1 Introduction

Trafford and Leshem (2008:15) propose a sequence of phases to help merge the vital dynamics of doctoral research (Figure 44).

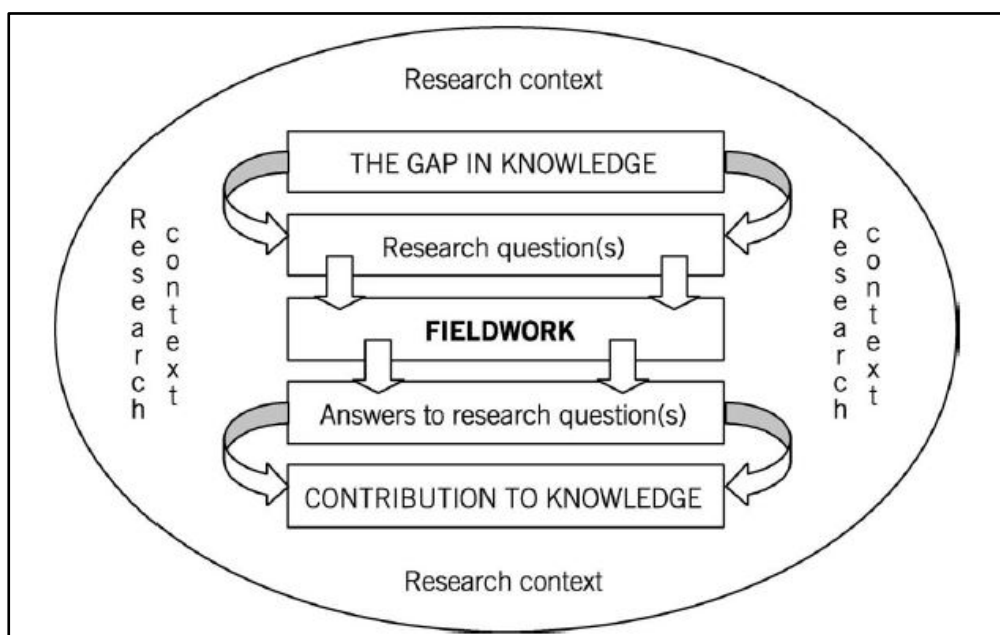


Figure 44: The bigger picture of your research (Trafford & Leshem, 2008:15)

The research context of this study is grounded in the use of online technologies to enhance the curriculum goals and objectives of ME at UP. This context reveals the gap in knowledge that prevails in the attempt to meet the responsibilities of teaching Music Education to a wide spectrum of students in a blended learning environment at UP in the 21st century. The *Blending with Purpose Multimodal Model* of Picciano (2009) has not been explored in music education before and was chosen to support blended learning in ME at UP. The chosen research questions generate answers and incorporate ideas drawn from the literature study (Chapter 2) and theoretical perspectives on how to apply the *Blending with Purpose Multimodal Model* in a new context. The result is that this thesis contributes towards creating new knowledge and stimulates future research.

Chapter 6 describes in detail the research experience and is a synthesis of the literature study, the analysed data and the emergent themes developed in Chapter 5. Throughout writing this thesis I discovered new sources, which

include relevant books, journals, on-line articles that opened up new experiences which contributed towards the research process. I also attended BL conferences where the concepts and expertise of national and international presenters broadened my ideas for applications and tools that enhance hybrid teaching and learning. These research activities opened up a different perspective on the meaning of BL and how it relates to ME. During this process a higher level of understanding of multimodal learning added value to a part of the vision for ME teaching and learning at UP. The data revealed the perspectives of the students and new literature added insights that proved significant in confirming ideas that were shaped in the course of this study.

6.2 Thematic discussion

To meet the challenging responsibilities of teaching Music Education to a wide spectrum of students in the 21st century at UP it is essential to include online technologies that can enhance ways to achieve the curriculum goals and objectives. Teaching and learning approaches dictate which online activities and tools will be suitable in the holistic approach of planning musical problems to solve through creating, performing and listening. The use of online technologies also strengthen the relationship between the ME curriculum, teaching and learning approaches and assessment strategies. For the purpose of this study the *Blending with Purpose Multimodal Model* of Picciano was ideal in the implementation of BL in ME at UP. From the analysed data three themes emerged that deepened the understanding of how the *Blending with Purpose Multimodal Model* can facilitate teaching and learning in Music Education at UP (main research question). The themes are the wide spectrum of students, the music education curriculum and Picciano's *Blending with Purpose Multimodal Model* (Figure 45).

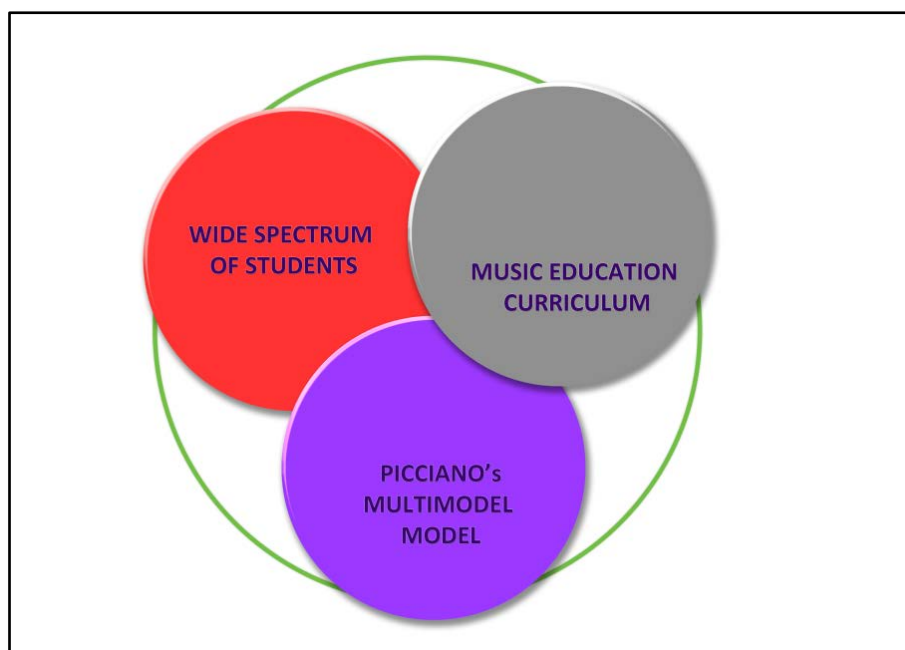


Figure 45: Three themes

Tables 6, 7 and 8 show the emergent themes and related literature. The first column indicates the theme and categories. In the second column I have listed literature related to the theme. I added new sources (typed in a blue font) that came across during the research period and that are not discussed in Chapter 2.

6.2.1 Wide spectrum of students

The music students who are enrolled in the ME courses at UP were born into the Net Generation (digital natives) and represent diverse personalities, learning styles and ethnic groups.

Table 6: The wide spectrum of students — theme, categories, description and related literature

THEME and CATEGORIES	LITERATURE RELATED TO THEME
1. WIDE SPECTRUM OF STUDENTS	
1.1. Net Generation	Jones et al. (2010:722): Net Generation and digital natives; Kennedy et al. (2008:108-122): digital natives — experiences with technology; Hosein et al. (2010): Net Generation;

	Salajan et al. (2010:1393–1403): inter-generational digital divide; Skiba and Barton (2006): accommodating the Net Generation; Howe and Strauss (2000): understanding the Net Generation; Oblinger and Oblinger (2005): understanding the Net Generation; Prensky (2001:1-6): digital natives; Tapscott (1998): Net Generation; Margaryan et al. (2011:429-440): digital natives; Waycott et al. (2010:1202–1211): digital divides.
1.2. Diversity in personality and 1.3. Diversity in learning styles	Jessee et al. (2006:645): personality types and learning preferences; Zhang and Sternberg (2005:6): intellectual styles; Capraro and Capraro (2002:594): MBTI score reliability; Perani et al. (2010): music processing in the human brain; Peretz and Zatorre (2005:106-107): brain organisation for music processing; Komaraju et al. (2011:472): personality traits and learning styles; Felder and Spurlin (2005:103-112): student learning styles; Gardner (2011): theory of multiple intelligences; Reimer (2007:11): theory of multiple intelligences and musical roles; Krätzig and Arbuthnott (2006:241,242): learning styles; Krause (2007:138): skills of the e-generation; Luckett (2001a:49): diversity in South Africa;

	Jaffer et al. (2007:134): HE in South Africa; Howie and Pietersen (2001:7-9): HE in South Africa.
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The collected data confirm that the music students who are enrolled in the ME courses at UP embody a wide spectrum of students. The ethnic diversity in South Africa alone is considerable (SouthAfrica.info, 2015). The official and commercial public language in South Africa is English. Most South African students are able to speak more than one language. For speakers of indigenous languages in South Africa isiZulu is a shared language. English- and Afrikaans-speaking people tend not to be proficient in indigenous languages, but can understand and speak each other's language (SouthAfrica.info, 2015). To add to this diversity the music students who were part of this research come from Korea, Botswana and Malawi and there are South African-born students who grew up in Turkish, German, Italian and Greek cultural environments. To accommodate this diversity the Language policy statement of UP indicates that "tuition programmes are presented in English, complemented by instruction in Afrikaans and/or Sepedi, depending on demand (at least 60 students per module) as well as feasibility within faculties" (Registrar:2). The University uses Afrikaans and English with Sepedi as a third language to conduct corporate communication.

The results of a test based on Jung's and Briggs Myers's typological approach to personality indicate that the music students who participated, embody a wide spectrum of personality styles. Capraro and Capraro (2002:596) indicate that overall the MBTI leans towards satisfactory score reliabilities. From the sixteen possible learning types (Jung's theory: §2.3.1) (Jessee et al., 2006:645) the profiles of the participants who stand out represent the following personality types:⁴¹

- ESTJ (excellent administrators, supervisors);
- ISTJ (practical and fact-minded individuals, inspectors);
- ESFJ (providers, extraordinarily caring, social and popular people);
- INFP (healers, poetic, kind and altruistic people).

⁴¹<http://www.16personalities.com/personality-types>
<http://www.truity.com/view/types>

The activities that the music students completed to test their first choice of learning style also indicate that most of the music students have a tactile learning style preference. Tactile learners learn by touching and doing.⁴² But the research of Krätzig and Arbuthnott (2006:241,242) supports the notion that each individual uses a blend of different learning modalities to learn efficiently.

The collected data indicate that participants reveal their diversity in how their technology user activities reflect the attributes of the Net Generation (Frاند, 2000:14-25). The attributes of multitasking as a way of life, experiences of virtual realities, internet downloads that are better than television programmes, immediate gratification and staying connected to the internet are definite realities in the lives of Net Generation music students. Music students mainly use technologies for socialising, entertainment and casual learning. The results of a study done by Kennedy *et al.* (2008:108) also shows that first-year students are very “tech-savvy”, but their access and use of technologies is restricted to embedded technologies and tools. The music students who participated in this study also are not homogenous in their everyday use of technology. While some of them do compile study notes on their computers others want to study from a printed book. All the participants use their cellular phones to link to social media but some of them prefer face-to-face activities to interact and connect with friends. Their experience is that communicating through technology sometimes results in losing personal connection and feelings are interpreted incorrectly. The analysed data show dissimilarities in students’ practices of online technologies. There are examples of students whose parents deliberately choose to exclude the use of online technology from holidays and family gatherings. These students respect their parents’ views but the majority of them feel stranded without 24/7 internet connectivity. Most students have a mindset that ‘does’ rather than ‘knows’ things they have searched on the internet, but there are students who have learnt from their parents to make knowing a priority and to prefer knowing to doing. The students also hold different views on the convenience of typing rather than writing by hand. It seems that they do not all agree on the devaluing of handwriting in today’s social and academic environments.

⁴² EducationPlanner.org. A public service of the Pennsylvania Higher Education Assistance Agency (PHEAA). Copyright © 2011 Pennsylvania Higher Education Assistance Agency.

The music students (except the student from Botswana), as part of the Net Generation, grew up with computers, the internet and information technologies that are always available (Salajan *et al.*, 2010:1393) explain. Jones *et al.* (2010:722) point out that the manner in which students from the Net Generation use new technologies often do not resemble the expectations formed by researchers such as Oblinger and Oblinger (2005), Prensky (2001) and Tapscott (1998). Krause (2007:138) states that the technological skills and practices of students differ considerably according to “socio-economic background, age and gender”. Hosein *et al.* (2010:1) point out that the nature and extend of the digital gap also depends on the cultural context. From the data collected it seems that there are more explanations for unsuccessful utilisation of technology to support students’ learning. Some music students do not realise the worth of online technology to enhance teaching and learning in music education. A small group are not interested in taking responsibility for their own learning in the subject and does not even visit the clickUP ME page to find course information and assignments. The music students who are anxious to study on their own and value instruction without the lecturer’s face-to-face support are the students who navigate the clickUP module page with ease, participate in discussion boards and find wikis exciting to work in. It seems to me that the above mentioned outcome supports Gardner’s (2011:xv) view on uses of intelligence which explains that intelligence is the approach in which one completes a task to accomplish one’s goals.

6.2.2 Music Education curriculum

Vignette: Starting a new job

The vignettes included in this chapter are based on real experiences that happened in the course of my teaching career at UP.

July 2012. I started teaching at the Department of Music at the University of Pretoria. My *alma mater*. My office is in another part of the main university grounds and to walk along the path under the old Jacaranda trees on campus as a lecturer and not as a student or course assistant, made me feel proud. I was also honoured to be part of an academic team of whom some had been my lecturers in my undergraduate years. Some twenty or so years ago. I even felt a special relationship with the Head of Department ... he shared a special day in my life ... his expertise as an organist added to the wonder of my wedding day.

But soon reality kicked in. We all know how a new job starts ... uncertainty and then reality! I was responsible for three undergraduate ME courses. But where should I start? Where is the curriculum? Which handbooks should I use? The casual remark from a colleague “do what you want” seemed to be a doorway to freedom, but it wasn’t. For a few weeks I did what I felt was appropriate, but soon the craving for structure overwhelmed me. My inner being needs structure and I knew I had to find some guide to direct my teaching. 15 years of teaching experience helped me to survive, but my survival didn’t mean I added value to the music students basic need for learning the subject. I started to read and read and read ... I found new ideas and approaches I wanted to explore. It took some weeks and months of trial and error, the help of a colleague at another university and the support of the programme advisor for Humanities at UP to place me slowly on my own teaching path in music education at UP. I started to dream about the ideal workable curriculum for ME. Why do I love the subject so much? I love teaching. Sharing interesting facts and workable approaches with my students is my strength. Discovering self-directed learning and learner centred pedagogical approaches made me happy. This was the way forward ...

Figure 46 shows the ME curriculum categories that unfolded from the data analysis. The curriculum design incorporates social constructivism as the pedagogical approach and also comprises different ways of knowing that are characteristic of the South African HE levels.

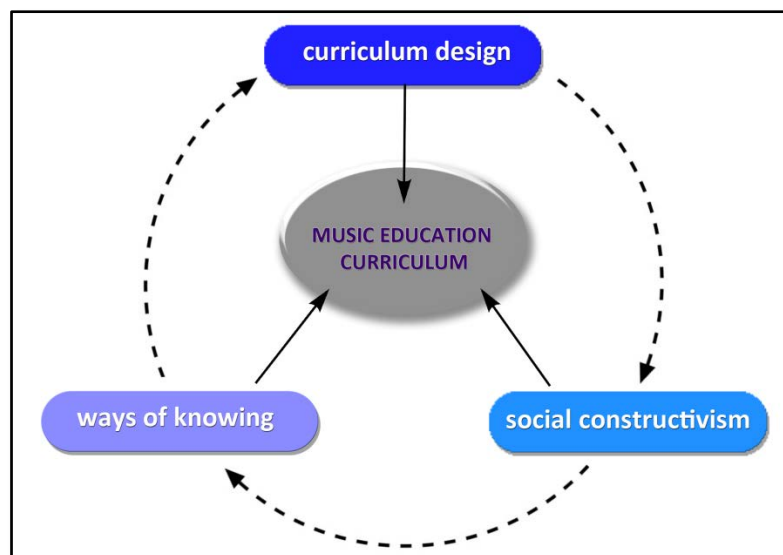


Figure 46: Music Education curriculum categories

Table 7: Music Education curriculum – theme, categories and related literature

THEME and CATEGORIES	LITERATURE RELATED TO THEME
2. MUSIC EDUCATION CURRICULUM	Upitis (2012:692):music and the arts
Online technology delivery for music education	Webster (2007a:1311-1328): use of technology in music education; Southcott and Crawford (2011:122-136): benefits of technology in music teaching and learning; Draper and Hitchcock (2008:137): benefits of technology in music teaching and learning; Carney (2010:1-67): online technology and music curriculum development; Crawford (2009a:147-167): music curriculum development in schools; Crawford (2013:717-734): online music education projects; Adileh (2012:71-79): BL as music instruction; Davis (2010:1-6):professional development; Biasutti (2011:1865-1875): music student online experiences.
2.1 Music curriculum design	Broughan and Hunt (2013:189): inclusive teaching; Angelo (2013:96): designing subjects for learning; Raiber and Teachout (2014:1-343): the journey form music student to teacher; Elliott (2012:21-27): artistic citizenship; Randles (2015:323-337): change in music education; Barrett (2005:21-25): the music curriculum; Barrett (2009:15-17): reconfiguring curriculum development; Carpenter and Pease (2012:36-41): 21st century learning skills; Pearlman (2006): 21st century learning skills; Walser (2008): teaching 21st century skills;

	McClellan (2011:36): music teacher education programmes; Wiggins (2007:36-42): music educators' programmes; Ballantyne (2007:182): pre-service music teacher education; Parkes and Jones (2012:50-52): choosing a career in music education. Reimer (2007:1): comprehensive music education
Online technology delivery for music education	Webster (2007a:1311-1328): use of technology in music education; Southcott and Crawford (2011:122-136): benefits of technology in music teaching and learning; Draper and Hitchcock (2008:137): benefits of technology in music teaching and learning; Carney (2010:1-67): online technology and music curriculum development; Crawford (2009a:147-167): music curriculum development in schools; Crawford (2013:717-734): online music education projects; Adileh (2012:71-79): BL as music instruction; Davis (2010:1-6): professional development; Biasutti (2011:1865-1875): music student online experiences.
2.1. Social constructivism	Swan et al. (2009:43-57): constructivist approach to online learning; Bliuc et al. (2010:514): learner centred and peer-based activities; Scott (2012:2): constructivist learning theory in music education; Wiggins (2015:1-56): learning a social constructivist process in music education; Morford (2007:76): constructivist learning theory in music education; Goodloe (2015:1-119): critical thinking and reflection;

	Barell (2010:174-199): problem based learning; Unver and Arabaciouglu (2011:303-310): problem based learning; Savery and Duffy (2001:1-2): constructivism Oakley et al. (2004:9-34): effective group work; Johnson and Johnson (2008:1-31): cooperation in the classroom; Armstrong (2011:3): natural learning in HE.
2.3 Ways of knowing in HESA	Luckett (2001a:26-35): HE in South Africa ways of knowing; Modisaotsile (2012:1-7): standard of basic education in South Africa.

Pre-service music educators need opportunities to prepare students to enter teaching and learning environments similar to those where they were once learners, but return as professional music teachers ([Raiber & Teachout](#), 2014:xi). Music students enter the BA Mus. and BMus. programmes from diverse backgrounds and find themselves in an academic environment where they have to find their own learning path to succeed in the working place. [Broughan and Hunt](#) (2013:189) propose that the course designer should “embrace the opportunities created by this diversity” to construct an innovative curriculum. Music education is a valuable part of a community ([Randles](#), 2015:324). The strength of a community is that there is a variety of opinions, traditions and cultures that can make a contribution to a socially creative process ([Randles](#), 2015:333). Music education benefits others’ lives and can be applied to the music all people listen to, create and perform through musical experiences that are at the same time emotional, cultural and cognitive. This embodied nature of human learning is part of informal and formal life experiences ([Elliott](#), 2012:21-23; [Wiggins](#), 2015:1-11).

The UP ME curriculum (structured by the researcher) provides teaching and learning approaches and assessment methods that support active and collaborative learning. Figure 47 shows a variety of teaching and learning activities that are included in the UP ME curriculum. This illustration also shows

the processes of learning and blending with purpose activities described in the ME study guides (MPE170, MPE270, MPE370). The activities are connected to themes that incorporate what Wiggins (2015:19) calls “life learning, holistic problem-solving experiences”.

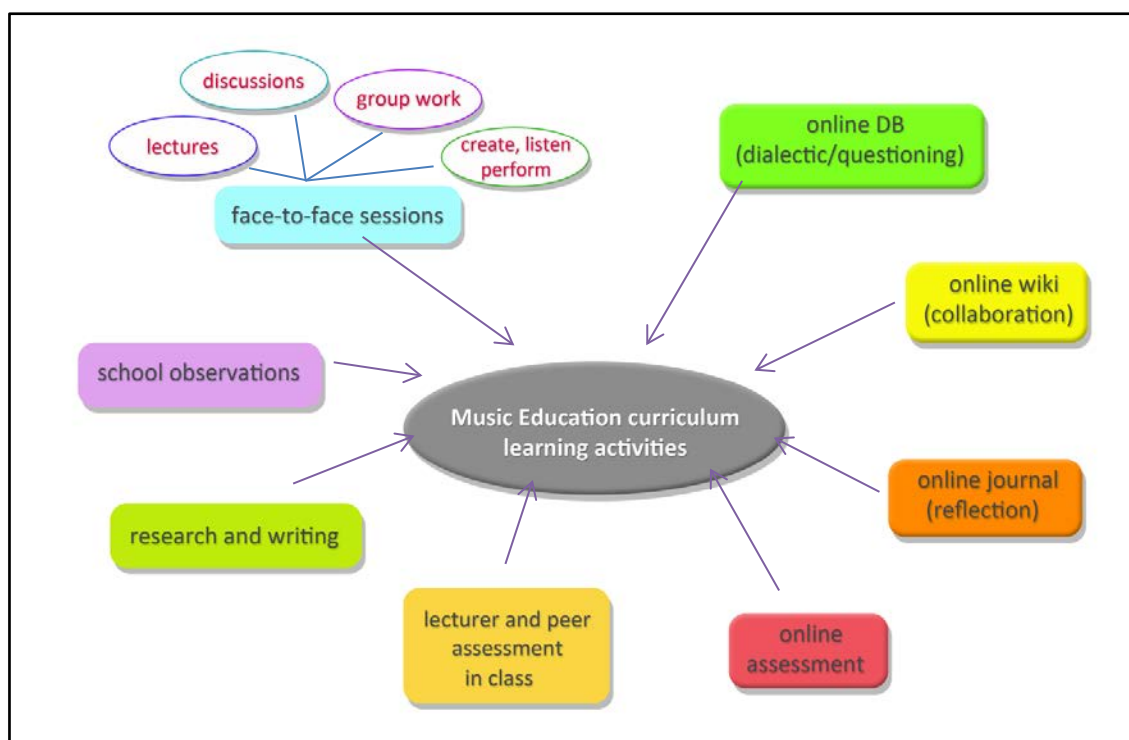


Figure 47: Music Education curriculum learning activities

Barrett (2005:24) encourages course designers to discard rigid formulas and inflexible practices and concentrate on student understanding and construction of meaning. Constructivist approaches make every effort to be “open-ended and responsive rather than closed and predictive” (Barrett, 2005:24). The fundamental perception of constructivism is that understanding is in our connections with our surroundings (Savery & Duffy, 2001:1). Individual reasoning is disseminated and tested against the individual understandings of others. Collaboration within groups enables learners to scrutinise the understanding of their peers and mentors with the goal of increasing, elevating and test their own cognition of specific problems or experiences (Savery & Duffy, 2001:2). The collaborative activities include in the UP ME curriculum (§ Table 46) that support the constructivist pedagogical approach are:

- lectures where the educator uses expert knowledge to direct and encourage students in the learning process;
- class discussions to inspire students to test their ideas against the views of peers and mentors;
- creating and performing problem-solving activities where groups work together;
- online discussion boards where learners learn from each other's opinions and understandings of a question or topic;
- online wikis that focus on peers' creative inputs and sharing technical skills;
- reflective online journals where students share their school observation experiences;
- lecturer and peer assessment to evaluate problem-solving activities in class;
- collaborative activities with music education teachers in schools.

The data analysis also indicates that students multitask to find the time to complete all tasks during the day. Angelo (2013:96) comments that students' time is limited and valuable to them, and for this reason the curriculum should be structured to help students to be competent and efficient learners. He recommends that to achieve the intended learning outcomes, the 'constructive alignment' should link teaching and learning activities as well as assessment tasks. The ME course learning outcomes emphasise the active engagement of music students in their own learning through real-life, problem-solving situations that are holistic in nature (MPE170); the provision of detailed knowledge to prepare music students to become successful music educators (MPE270); and building up integrated knowledge to prepare students to be successful music educators (MPE370).

Many of the teaching and learning activities that are included in the UP ME curriculum require group work in face-to-face and online environments. Face-to-face group work involves listening, creating and performing problem-solving activities. Online group work includes designing wikis with creative incorporation of media-sharing tools (video, podcasts and images). The merits and shortcomings of group work were discussed during the interviews. Some

students realise the advantages of working in groups but there are students who struggle with personality clashes and also with the problem of group members who do not do their share. Students feel that group members need to be individually accountable for work done. ClickUP assists the instructor in grading online group assignments in various ways (§ 6.3.2). Group assignments are managed in the clickUP Grade Centre. Individual entries as well as group efforts can be marked. [Armstrong](#) (2011:3) mentions that when people work in groups they lose a sense of responsibility and focus so much on things they are accountable for that they forget what they have learned and how they have learned it. These group members allow the skilled individuals to do most of the work.

[Oakley et al.](#) (2004:9) guide instructors to design and manage team assignments efficiently. Effective collaborative learning results in: learning at a deeper level; students remembering the information longer; higher grades being obtained; students acquiring better communication and teamwork skills; and improving their understanding of the professional working environment ([Oakley et al.](#), 2004:9). Music students mentioned that they want to choose their own group members, but [Oakley et al.](#) (2004:11) argue that instructors should compile groups to avoid losing the value of cooperative learning. Groups that choose only the stronger students leave the weaker ones to work together. Group work motivates depth of understanding and promotes growth of teamwork skills. Resolving conflict and comparing alternative solutions are generated in well-functioning teams and the weak students have the advantage of being tutored “while the strong students who do the tutoring may benefit even more” ([Oakley et al.](#), 2004:11). To support structured team work it is crucial for instructors to build cooperative interdependence among the students. The basic elements of cooperative teams discussed by [Johnson and Johnson](#) (2008:1:31) indicate ways to structure effective group work: “positive interdependence, individual accountability, face-to-face interaction, interpersonal and small group skills, and group processing”.

South Africa is a country of diversity and the lived musical experiences of students enrolling in the UP music programme are varied. South African HE has its own challenges in preparing the diverse HE student population for the

realities of the working environment (Luckett, 2001a:50). Students come from underprivileged as well as from privileged educational backgrounds (Howie & Pietersen, 2001:7-9; Jaffer *et al.*, 2007:134) and also from high- and low-income groups. Although the school-leaving examination standard required for access to first-year university studies applies nationally, there are many differences in standards of basic education in schools (Modisaotsile, 2012:1-7). The students' schooling backgrounds means that some music students enter the academic music programme underprepared. Some students enrol with only private teaching experience and have not studied music as a subject at school. Luckett (2001a:31) proposes four ways of knowing and learning (§ 2.5) in an undergraduate HE curriculum to develop fundamental knowledge in the discipline into effective reflexive competence:

1. Propositional knowledge focuses on foundational competence;
2. Practical knowledge focuses on knowing how and learning by doing;
3. Experiential knowledge learning takes place through engaging personally and thinking reflectively;
4. Epistemic knowledge develops meta-cognition, thinking epistemically, contextually and systemically (Luckett, 2001a:55).

These four ways of knowing and learning are congruent with a pedagogy that focuses on learning and learner-centred strategies. All four ways of knowing can be accommodated in the ideal ME curriculum over the three years that students study ME. Students use foundational competence to do challenging new learning activities in their first year. Creating, performing and listening adhere to the principles of knowing how and learning by doing. Experiential knowledge develops when music students take responsibility for their own learning. They start to engage personally with course outcomes and are able to reflect on music and its significance using music as an approach to giving meaning to life experiences. This is the level at which music students start to bridge the gap between just knowing and becoming successful music educators. Epistemic knowledge engages music students in deep, critical thinking about their future as musicians and music teachers. On this level they start to apply the constructivist learning theory to plan music lessons and to understand the teaching and learning process in a musical cognitive apprenticeship approach.

6.2.3 Picciano's Blending with Purpose Multimodal Model

Reeves (2013:113) mentions that several research-based models for online teaching have been developed in recent years. The research for this thesis is based on the integration of the *Blending with Purpose Multimodal Model* of Picciano (2009:4) in the ME curriculum, through the six basic pedagogical objectives/activities and approaches (§ Figure 1) to support blended learning in ME at UP. Figure 3 illustrates that as part of the theory-first approach the existing theory, *Blending with Purpose Multimodal Model*, will be modified in the context of ME. The study developed into the enhancement of the multimodal model as part of curriculum design for ME. The ME course goals and objectives determine when and where the six pedagogical objectives/activities can be integrated into the course using clickUP as the learning management system.

Table 8: Picciano's Blending with Purpose Multimodal Model — theme, categories and literature related

THEME and CATEGORIES	LITERATURE RELATED TO THEME
3. PICCIANO'S MULTIMODAL MODEL 3.1. Content 3.2. Social/emotional support 3.3. Dialectic/questioning 3.4. Synthesis/evaluation 3.5. Collaboration/wiki 3.6. Reflection 3.7. clickUP	Picciano (2009): article explains the <i>Blending with Purpose Multimodal Model</i>; Campbell (2008): content; Campbell and Scott-Kassner (2014): content; Elliott and Silverman (2015): content; Wiggins (2015): content; Boyce-Tillman (2014:16): emotional support; Elliott and Silverman (2014:57-72): musical abilities and personal skills; Sternbach (2008:42-48): musical personalities; LaRusso et al. (2008:386-398): positive classroom environment; Roig and Rosales (2012:137-149): dialectics & communication activities; Nandi (2012:667): online asynchronous discussion board;

	Robinson and Stubberud (2012:14): online asynchronous DB; Granville and Dison (2005:101): reflective thinking De Wever et al. (2011:201-206): collaboration/wiki; Young and Pérez (2012:3): share knowledge in music education; Biggs (2003): learning activities to achieve learning outcomes; Gikandi et al. (2011:2334): assessment; Ginns and Ellis (2009:660): student learning experience in e-learning; Garrison and Kanuka (2004:97): effective online integration with face-to- face activities; Nagel and Kotze (2011:155): online learning; Graham et al. (2013:333): blended learning in higher education; University of Pretoria (2015): clickUP Reeves (2013:113): design online BL.
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Anderson (2008:68) explains the task of the online course designer as follows:

The task of the online course designer and teacher now, therefor, is to choose, adapt and perfect, through feedback, assessment, and reflection, educational activities that maximise the affordance of the Web. In doing so, they will create learning, knowledge, assessment, and community-centred educational experiences that will result in high levels of learning by all participants.

This comment explains the development of this research accurately. Appropriate course materials were chosen, adapted and implemented through experimenting with face-to-face and online activities and assignments. The researcher assessed the activities through formative and summative assessment and was able to reflect on the progress and success of the learning process. The informal interviews affirmed students' ideas and attitudes through the reflective comments captured in the data set. The research assisted in collecting educational activities that accommodate the

course goals and objectives and make best use of innovative online technologies. Further activities such as incorporating community-centred educational experiences (not part of this study) will be an idea for further research and will expose ME students to network within professional environments.

Jaffer *et al.* (2007:135) recommend that lecturers convert their teaching practices by simulating 'real-world' problems to provide students with accurate learning experiences. Because of the real-life, problem-solving learning approach of creating, listening and performing in music education (Wiggins, 2015:57-89), multimodal tools are more appropriate for text-based research, collaborative learning, dialectics/questioning and reflective assignments. Jaffer *et al.* (2007:136) explain that the challenge is to decide when to use which educational technologies in appropriate learning situations. An example of choosing the appropriate technology for a learning situation can be seen in Bond's (2002) project (§ 2.6.4) where distance instrumental education had negative effects on the quality of the students' instrumental performances. A flipped classroom instructional strategy can change the outcome of such a course, where tutorial videos of instrumental teaching and learning substitute in-class tuition and valuable class time can be used for solving technical problems and comprehensive practical support.

Vignette: Blended learning

On a summer's day in 2012 Annami called me: "Sonja, I think you must attend this workshop in Bloemfontein. I know you are interested in using technology in your lesson activities and this workshop will open your mind to new ways of thinking about teaching and learning". So it happened that I drove all the way from Pretoria to find a new way of thinking ...

The technology introduced to me that day was something I thought I knew nothing about. As a digital immigrant I use the internet for sending emails, browsing to find interesting pictures to transform in Photoshop, watching videos on YouTube, finding music to listen to, search for answers to fuel my inquisitive nature and guide myself to unknown places on Google maps. Suddenly these activities got a name: online technology (Figure 48). Now I learned that these online technology activities can enhance teaching and learning. I left Bloemfontein enthusiastic and full of new ideas to enrich ME and transform it to a new level with multimodal teaching and learning.



Figure 48: Interdisciplinary connections of blended learning ⁴³

The data collected from the interviews illustrated that the majority of music students make comprehensive use of mobile technologies and computing facilities to visit websites and applications that allow them to create and share content or to participate in social networking. However, during the interviews music students at UP indicated that they are not used to having access to course materials and resources online. There are two more music courses that do use clickUP to communicate with students and provide online course material and lesson plans. ME courses are the only modules that utilise online teaching and learning tools to facilitate reflection, collaboration and dialectics or questioning to help refine students' knowledge. Observations of the sometimes irregular submissions and problems with creating some elements of online assignments (e.g. incorporation of media-sharing tools and constructing tables in wikis) showed that creating assignments for online learning was a new experience for the majority of ME students. This inability corresponds with the research findings of Margaryan *et al.* (2011:429) (§ 2.3.1), who found that students used a restricted range of recognised technologies for learning.

I designed Figure 49 to illustrate suitable computer-mediated tools and instructional technologies that support the construction of musical knowledge. This figure also includes tools that music students utilise for personal online activities as stated during interviews.

⁴³Image copied from <https://storify.com/ProfKarim/blended-learning>



Figure 49: Web 2.0 technologies suitable for music students' online activities — adapted from Bower (2015:2) and Franklin and Van Harmelen (2007:1-27)

From the data collected it seems that music students are not ready to accept that online technologies can play a significant role in their teaching and learning

environment. A few students are reluctant to use clickUP but these are students who have an overall lack of interest in the subject. They do not do their part in group work and this attitude leads to unfinished wikis, sloppy contributions and lack of collaboration in online discussion boards. For me as an instructor and lecturer it is a time-consuming process to structure the ME courses to be available online, but knowing that all communication, information, content, assignments and grade marks are available in one learning management system is reassuring.

ClickUP assists the instructor in grading online assignments in various ways. All the grading activities can be found on the clickUP help site. Some examples are:

- Anonymous grading that eliminates grading bias for high-stake assignments;
- marking functionalities: easy marking, point comment, area comment and text comment;
- the instructor can create rubrics in clickUP to assist in marking assignments;
- from the Grade Centre the instructor can grade tests question by question;
- the Grade Centre can help to create a column, create a calculated column, do column organisation, create reports and view grade history; the Needs Grading page organises one's grading tasks.

The music students are on different levels of proficiency in using online tools as indicated through the level of competencies in submitting online assignments. Although UP provides information technology services for students and academic staff, and supports the development of students' technical and information literacy, there are still music students who are unsure of how to use the technologies for the first time in the learning environment. As a result some of the students still need guidance and support from the lecturer. Lecturers also receive instruction design support from the Department for Education Innovation. A challenge for the Department of Music is to use a uniform design in BL. Only selected music courses can use online environments to improve cognitive skills because of the practical challenges of understanding music through activities.

UP introduced a variety of models for curriculum decisions and the model that can be adapted by the Department of Music is *Status Quo* (§ 3.2).

Vignette: Sharing teaching experiences

2013. With newly acquired knowledge on different pedagogical approaches, I started to experiment with the constructivist teaching and learning approach. Did I mention earlier that self-directed learning and learner-centred pedagogical approaches make me happy? Yes. But did self-learning in fact create contentedness for the students?

2014. When I thought I knew exactly how constructivism works, I decided it was time to present an entire 'constructivist' lesson. Up to then I had experimented with short activities where students could construct their own understanding through experiences and from time to time I detected growth in the learning process. To prepare this lesson took an entire day of planning and research to find appropriate lesson material. I thought about the questions that would hopefully lead the MPE370 students to self-learning and the need to explore and to know more about the topic. On a mild autumn Tuesday afternoon I presented the lesson. The students listened to music, answered questions, discussed new issues, arranged and assessed their own performances and discovered new ways of understanding their musical experiences. I concluded the lesson with a sense of accomplishment and respect for this pedagogical approach.

2015. I started the year more confidently, using constructivism in the teaching and learning process. The first-year group was 'bombarded' with new ideas, new musical experiences, making their own decisions and taking responsibility for their own learning. I felt confident that finally I could move forward to experiment with more interactive activities. At the end of the first semester the students evaluated my teaching performance (a practice at UP). Of the first-year group of twenty-two students, three evaluated my performance with a value of 0. From later discussions I realised that this assessment outcome was the result of their need for a lecturer who stands in front of the class with lengthy PowerPoint presentations, thick notebooks and doing all the teaching that the lecturer thought was necessary. For these students attending class is supposed to be a no-brainer that requires little or no mental effort. This evaluation opportunity convinced me that the constructivist teaching and learning approach is the future for the survival of music education.

6.3 Answering research questions for different audiences

This research may be of value and interest to different scholars and students. The following are examples of people I considered part of my putative audience while writing this thesis.

The first sub-question could be of special interest to future **music education students**. Students should be curious to investigate new avenues that are different from their school experiences. Hence the question, *How can Music Education at UP be explained?* could challenge music students to be involved in teaching and learning and also stimulate their creativity.

At the 2014 ISME conference in Porte Alegre (Brazil) I met colleagues from different countries who shared their experience and expertise in teaching and learning methods with me. The second sub-question might be of interest to **international and national tertiary music educators**. I plan to share my exploration of the *Blending with Purpose Multimodal Model* with them and Figure 51 could be a stimulus for interesting debate.

The usefulness of the *Blending with Purpose Multimodal Model* in relation to teaching and learning (third sub-question) could also be of value to **heads of music departments, colleagues in different subjects of music, faculty instructional designers and programme advisors**. ClickUP as learning management system is the backbone of any UP module. The six objectives/activities of the *Blending with Purpose Multimodal Model* and the approaches for achieving them matches all the options available in clickUP (§ 3.2). ClickUP channels communication with students and lecturers and provides many useful online activities to connect with the course goals and objectives. Deciding on a uniform structure to facilitate multimodal teaching and learning is essential. Making decisions about designing a structure must include taking into account that the expectations of students regarding clickUP differ from those of the facilitators. Both the lecturers and the students use the system with the purpose of making students' learning experiences meaningful. It took a bold step to initiate this journey in a discipline that focuses primarily on performance skills. Attending clickUP courses, planning the structure, going through trial-and-error experiences are time consuming. Throughout the process the instructor must take into consideration that this change is not implemented merely as an add-on but as support to reach module outcomes.

The main research question can be of significance to **a broad spectrum of scholars of in ME research**.

How can the *Blending with Purpose Multimodal Model* be understood to facilitate teaching and learning in Music Education at UP?

I have (§ 4.2.1) compared ME at UP with the CoI researched by Garrison *et al.* (2000:88) and Vaughan (2010:61) (§ Figure 20). The *Blending with Purpose Multimodal Model* embodies the social, cognitive and teaching presence of the CoI. The course goals and objectives of ME at UP determine how the multimodal model will be used to accommodate the effective integration of Internet communication technology with the educational learning experience. Based in a cooperative constructivist perspective, the MECoI focuses the social presence on interrelations in group work (§ 5.2.2.3) and the social and emotional support of the educator as objective in the *Blending with Purpose Multimodal Model*. The inquiry process moves discussion from exploration to resolution. The analysis of course content generates activities of interactive (dialectic) questioning and discussion, as well as activities of student collaboration and individual reflection on new learning experiences. The educator as teaching presence will mentor and monitor the educational experience which suggests teaching for musical understanding. Although the purpose of this research is to understand teaching and learning in tertiary ME through multimodal learning for BMus. and BA Mus. undergraduate students at UP, more research is needed to investigate the importance of the MECoI.

The research commissions for ISME (§ 3.3.1.2) offer researchers opportunities to explore a specialised area in greater depth (<http://www.isme.org/>). The following music fields of study can be explored to grow and support the MECoI (§4.2.1) (Figure 50):

- The Research Commission endorses the growth of “an inquiry-based approach to the theory and practice of music education that draws on a range of research methods and techniques” (<http://www.isme.org/our-work/commissions-forum/research-commission>);
- Music in Schools and Teacher Education Commission (MISTEC) considers the accessibility of music education to all students in all schools at all levels by professional music educators. MISTEC endorses the promotion of theoretical and practical improvement, research practices and programme development to accommodate the challenges that music educators

worldwide have to cope with (<http://www.isme.org/our-work/commissions-forum/music-schools-and-teacher-education-commission-mistec>);

- The Commission on Policy: Culture, Education and Media encourages international partnerships through developing shared research projects across different geographic constituencies (<http://www.isme.org/our-work/commissions-forum/commission-policy-culture-education-and-media>);
- The Community Music Activity Commission (CMA) encourages discourse on diverse international viewpoints on community music, international cooperation and collaboration with musicians and music educators in interrelated fields (<http://www.isme.org/our-work/commissions-forum/community-music-activity-commission-cma>).

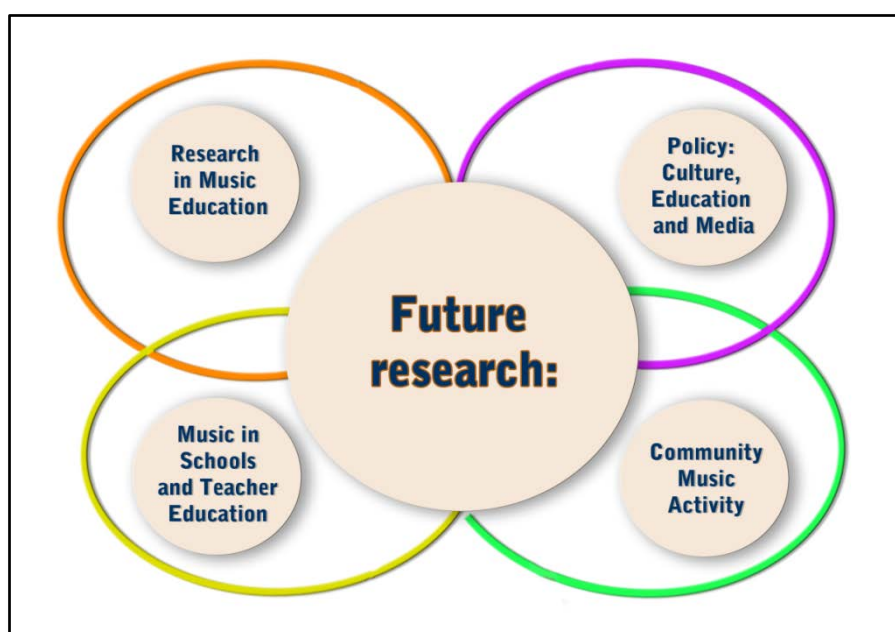


Figure 50: Future research fields of study

Further research areas may include the following:

- A multiple case study to compare the multimodal experiences of different HE institutions;
- an investigation over a longer period to establish a sustained practical and effective curriculum;

- the incorporation of online technologies to facilitate learning in post graduate modules;
- flipped classroom methodology as BL approach in practical instrumental tuition;
- possibilities of introducing applications of BL in schools that are located in disadvantaged settlement/rural areas;
- integrating community-centred educational experiences that will expose ME students to network with professional music educators;
- investigating the importance of the MECol;
- multimodality that add value to practical music subjects in which both educators and students will benefit.

A discussion on the limitations and implications of the study, suggestions for further possible research and concluding remarks will follow.

6.4 Limitations and implications of this study

This research study is a single case study and is limited to experiences at UP. Constructing a music education curriculum with goals and objectives that can be used at more HE music departments can create greater uniformity in the standard of preparing future music educators all over the country.

To remain objective throughout the research process and not devoting attention to *why* I used specifically Picciano's multimodal modal was at one stage a limitation to my progress. There are multiple research models on blended learning, hybrid learning, multimodal learning *per se*, but Picciano's model was the most relevant and applicable for the ME curriculum. There were a few BL specialists who challenged my decision to use Picciano as the foundation for my research. I decided to adhere to my original choice.

In view of the limitations it was a challenge to find research that describes the structuring of a music curriculum that benefits from multimodal teaching and learning in its entirety. Most research referenced in the theoretical framework focused on online activities, student perceptions on the use of online tools, online music education projects and professional development in using online modalities.

The study initiates the process of restructuring the ME curriculum. This process encouraged revising the course goals and objectives to choose the most appropriate pedagogical approaches and technologies to enhance multimodal learning.

Although music students were challenged by getting to know online modalities to support their learning experiences, they did find gratification and experienced growth in using new approaches to construct new understandings in a holistic context enhanced by multimodality in music education.

6.5 Contribution to knowledge

To understand how the *Blending with Purpose Multimodal Model* can facilitate teaching and learning in ME at UP several dynamics were taken into consideration. Picciano (2009:4, 6, 13) proposes that when examining an academic course to determine which components of the model best fit the curriculum, the course goals and objectives determine which pedagogical approaches and technologies should be used. The *Blending with Purpose Multimodal Model* recognises that the learning needs of a wide spectrum of students should be addressed (Picciano, 2009:4, 9, 13).

My responsibility as a music educator is to design a ME curriculum that educates future music teachers to form their own identities as musicians and music educators. Before I started to restructure the ME at UP curriculum, the approaches to instruction were not designed to incorporate any online teaching and learning experiences. The contents of the module were also focused on the practice of musical activities based on musical concepts for teaching in elementary schools. My teaching philosophy (§ 3.2) guided me to equip these future music teachers to make a difference in South African communities through a lifelong engagement with music, bringing together course learning experiences and musical experiences outside of university and finding their own teaching paths to take them into teaching music (Figure 51). The pedagogical approaches that validate this philosophy focus on learning and learner-centred strategies. Learning is a constructive process (Duffy & Cunningham, 1996:5) and is experiential, rooted in students' own prior life experiences (Wiggins, 2015:21). The point of departure for the ME curriculum is students' individual personal

musical understanding formed through diverse lived musical experiences. Motive-based problem solving define students' learning approaches (§ 2.5.2) (Biggs, 1987:1-145). Pedagogical approaches that complement the ME curriculum (§ 2.5.2) focus on the students taking responsibility for their own learning. Constructivism, IBL and PBL turn *teaching* and *learning* into *learning* and *teaching* in a social constructivist learning community (§ 6.3).

The above-mentioned dynamics accommodate the *Blending with Purpose Multimodal Model* to facilitate teaching and learning in ME at UP. Figure 51 (§ p 160) explains the new model that has emerged from these dynamics.

2016. My vision is to prepare new music teachers by giving them time to learn from one another, to perform, create and appreciate music together. These students arrive in their first year with different lived musical experiences. In three years' time they should leave my course to teach children to read, write and play music or to serve the community to become artistic citizens. Is this all there is to music? Don't we want to share musical experiences with others, support skilled performers and songwriters, enjoy the 'more' of music to make a difference in the lives of people around us? Should we not create opportunities for students to make knowledgeable choices about the styles and musical experiences they will pursue through their lives? Or teach them about philosophical and intellectual reflection on music? [Upitis](#) (2012:692) explains it all ...

The learning that can occur through music and the arts — in all of their forms — can help us find new ways of being, and new levels of mindfulness that we need to heal the planet. When we give students time to play and learn from one another, in both formal and informal ways, and time to create, to perform, to argue, to wonder, to appreciate — then we also give them ways to question the ubiquitous and to become aware of the impact of their daily choices.

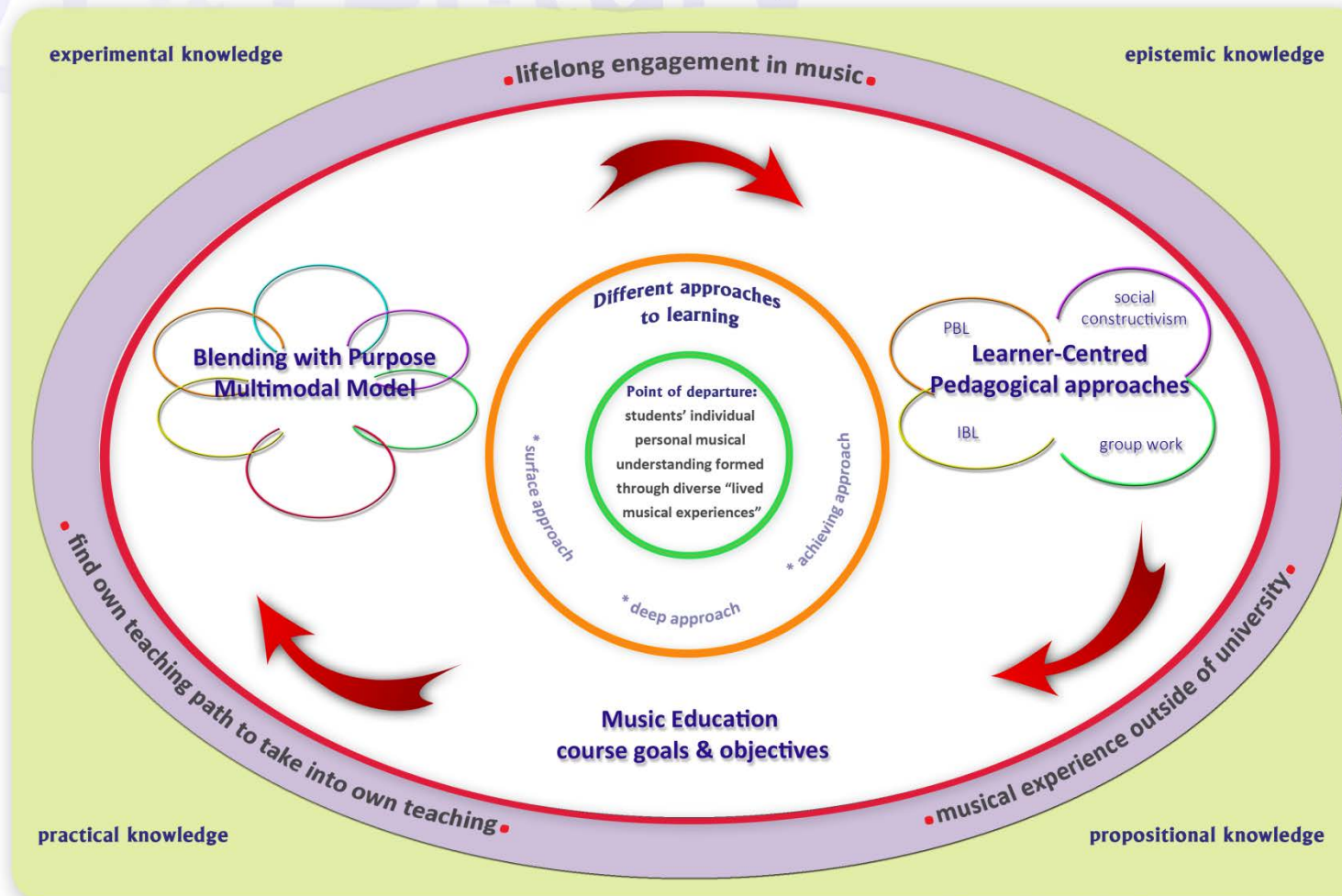


Figure 51: The diversity of considerations when planning the Music Education curriculum at UP

BIBLIOGRAPHY

Adileh, M. 2012. Teaching music as a university elective course through e-learning. *Australian Journal of Music Education*, 1:71-79.

Adler, P.A. & Adler, P. 1987. Membership roles in field research. Vol. 6: Sage.

Akyol, Z. & Garrison, D.R. 2011. Understanding cognitive presence in an online and blended community of inquiry: Assessing outcomes and processes for deep approaches to learning. *British Journal of Educational Technology*, 42 (2):233–250.

Allen, I.E., Seaman, J. & Garrett, R. 2007. Blending in. The Extent and Promise of Blended Education in the United States. (*In* Proceedings of The Sloan Consortium organised by Sloan Consortium).

Anderson, T. 2008. Toward a theory of online learning. (*In* Anderson, T., ed. Theory and practice of online learning. Canada: Athabasca University Press. p. 45-74).

Angelo, T. 2013. Designing subjects for learning: practical research-based principles and guidelines. (*In* Hunt, L. & Chalmers D., eds. University teaching in focus: A learning-centred approach. Routledge. p. 93-111).

Armstrong, J.S. 2011. Natural learning in higher education. (*In* Encyclopedia of the Sciences of Learning. Springer. p. 2426-2433).

Ash, S.L. & Clayton, P.H. 2004. The articulated learning: An approach to guided reflection and assessment. *Innovative Higher Education*, 29 (2):137-154.

Asynchronous E-Learning Vs. Synchronous E-Learning. 2015. <https://www.mindflash.com/elearning/asynchronous-synchronous> Date of access: 18 May 2015.

Augar, N., Raitman, R. & Zhou, W. 2004. Teaching and learning online with wikis. Paper presented at the Beyond the comfort zone: Proceedings of the 21st ASCILITE Conference. Retrieved from <http://www.ascilite.org.au/conferences/perth04/procs/augar.html>.

Ballantyne, J. 2007. Documenting praxis shock in early-career Australian music teachers: the impact of pre-service teacher education. *International Journal of Music Education*, 25 (3):181-191.

Barell, J. 2010. Problem-Based Learning: The Foundation for 21st Century Skills. (*In* Bellanca, J.A., Brandt, R.S., ed. 21st century skills: Rethinking how students learn. Thousand Oaks. CA: Corwin Press. p. 174-199).

Barrett, J.R. 2005. Planning for Understanding: A Reconceptualized View of the Music Curriculum. *Music Educators Journal*, 91 (4):21-25.

Barrett, J.R. 2009. Graduate music education as a site for reconfiguring curriculum development. *Research Studies in Music Education*, 31 (1):6-19.

Bates, R. & Khasawneh, S. 2007. Self-efficacy and college students' perceptions and use of online learning systems. *Computers in Human Behavior*, 23:175–191.

Bauer, W.I. & Moehle, M.R. 2008. A Content Analysis of the MENC Discussion Forums. *Bulletin of the Council for Research in Music Education*, 175:71-84.

Bennett, S., Maton, K. & Kervin, L. 2008. The 'digital natives' debate: A critical review of the evidence. *British Journal of Educational Technology*, 39 (5):775–786.

Bergtrom, G. 2009. On offering a blended cell biology course. *Journal of the Research Center for Educational Technology*, 5 (1):15-21.

Beyer, B. 1998. Improving student thinking. *The Clearing House*, 71 (5):262-267.

Biasutti, M. 2011. The student experience of a collaborative e-learning university module. *Computers & Education*, 57:1865–1875.

Biggs, J. 2003. Aligning teaching for constructing learning [Electronic Version]. *Higher Education Academy*.

Biggs, J.B. 1987. *Student Approaches to Learning and Studying*. Research Monograph. Hawthorn: Australian Council for Educational Research Ltd.

Biggs, J.B. 1991. Approaches to Learning in Secondary and Tertiary Students in Hong Kong: Some Comparative Studies *Educational Research Journal*, 6:27-39.

Blacking, J. 1969. The value of music in human experience. (*In Yearbook of the International Folk Music Council*. p. 33-71).

Bliuc, A., Ellis, R., Goodyear, P. & Piggott, L. 2010. Learning through face-to-face and online discussions: Associations between students' conceptions, approaches and academic performance in political science. *British Journal of Educational Technology*, 41 (3):512–524.

Bond, A. 2002. *Learning Music Online: An Accessible Learning Program for Isolated Students* (No. 1740960963): ERIC.

Boulos, M.N., Maramba, I. & Wheeler, S. 2006. Wikis, blogs and podcasts: a new generation of Web-based tools for virtual collaborative clinical practice and

education [Electronic Version]. *BMC medical education*, 6 from <http://0-www.biomedcentral.com.innopac.up.ac.za/1472-6920/6/41>

Bower, M. 2015. A Typology of Web 2.0 Learning Technologies [Electronic Version]. Retrieved 25 May 2015 from <http://www.educause.edu/library/instructional-technologies>.

Boyce-Tillman, J. 2014. Music and well-being. *The Journal for transdisciplinary research in Southern Africa*, 10 (2):12-33.

Bransford, J.D., Brown, A.L. & Cocking, R.R. 2000. How people learn: brain, mind, experience, and school (expanded ed.). Washington D.C.: National Academy Press. p.319.

Broughan, C. & Hunt, L. 2013. Inclusive teaching. (In Hunt, L. & Chalmers D., eds. *University teaching in focus: A learning-centred approach*. Routledge. p. 182-198).

Brown, J.S. 2000. Growing up: Digital: How the web changes work, education, and the ways people learn. *Change: The Magazine of Higher Learning*, 32 (2):11-20.

Bruner, J.S. 1996. The culture of education. Harvard University Press. p.224.

Busato, V.V., Prins, F.J., Elshout, J.J. & Hamaker, C. 1999. The relation between learning styles, the Big Five personality traits and achievement motivation in higher education. *Personality and individual differences*, 26 (1):129-140.

Busato, V.V., Prins, F.J., Elshout, J.J. & Hamaker, C. 2000. Intellectual ability, learning style, personality, achievement motivation and academic success of psychology students in higher education. *Personality and individual differences*, 29 (6):1057-1068.

Campbell, P.S. 2008. *Musician & Teacher. An orientation to music education*. New York: W.W. Norton & Company.

Campbell, P.S. & Scott-Kassner, C. 2014. *Music in childhood: From preschool through the elementary grades*. Boston: Cengage Learning.

Capraro, R.M. & Capraro, M.M. 2002. Myers-Briggs type indicator score reliability across studies: a meta-analytic reliability generalization study. *Educational and Psychological Measurement*, 62 (4):590-602.

Carney, R.D. 2010. Using web-based instruction to teach music theory in the piano studio: defining, designing, and implementing an integrative approach. University of North Texas.

Carpenter, J.P. & Pease, J.S. 2012. Sharing the learning. *Phi Delta Kappan*, 94 (2):36-41.

Carvalho, A.A., Aguiar, C., Santos, H., Oliveira, L., Marques, A. & Maciel, R. 2009. Podcasts in higher education: students' and lecturers' perspectives. (In Tatnall, A. & Jones A., eds. *Education and technology for a better world*. Heidelberg: Springer Berlin p. 417-426).

Cooper, S., Dale, C. & Spencer, S. 2009. A tutor in your back pocket: reflections on the use of iPods and podcasting in an undergraduate popular music programme. *British Journal of Music Education*, 26 (1):85-97.

Crawford, R. 2009a. An Australian perspective: Technology in secondary school music. *Journal of Historical Research in Music Education*, 30 (2):147-167.

Crawford, R. 2009b. Secondary school music education: A case study in adapting to ICT resource limitations. *Australasian Journal of Educational Technology & Society*, 25 (4):471-488.

Crawford, R. 2013. Evolving technologies require educational policy change: Music education for the 21st century. *Australasian Journal of Educational Technology*, 29 (5):717-734.

Creswell, J.W. 2007. *Qualitative enquiry and research design: Choosing among five approaches*. California: Sage.

Creswell, J.W. 2009. *Research design: Qualitative, quantitative, and mixed methods approaches [Kindle ed.]*.

Creswell, J.W. 2013. *Qualitative inquiry & Research design [Kindle ed.]*.

Cronin, P., Ryan, F. & Coughlan, M. 2008. Undertaking a literature review: a step-by-step approach. *British Journal of Nursing*, 17 (1):38-43.

Crosling, G., Heagney, M. & Thomas, L. 2009. Improving student retention in higher education: Improving teaching and learning. *Australian universities review*, 51 (2):9-18.

Crotty, M. 1998. *The Foundations of Social Research*.

Cruywagen, S. (Artist). 1991a. *3 short videos: Aspekte van Popmusiek, Die opneem van 'n klankbaan and Tema en variasie in styl*

Cruywagen, S. 1991b. *Klasmusiek in Standerd 5,6 en 7: 'n Handleiding*. Unpublished Masters dissertation

Cruywagen, S. 1992. Transparencies for Music Education: creative aid to understanding the dimensions of music.

Cruywagen, S. 1996. A Music style for every day: the origin of jazz and pop music.

Cruywagen, S. & Schoeman, S. 1996. Music Styles in Practice.

Davis, N.E. 2010. CINZS goes into virtual schooling. *Computers in New Zealand Schools: Learning, Teaching, Technology*, 22 (3):1-6.

De León, L.P. & Castro, P.L. 2014. ICT in career guidance. A Case Study of a “Blended Learning” Career Guidance Programme for Music Students. *Procedia - Social and Behavioral Sciences*, 116:2049 – 2058.

De Wever, B., Van Keer, H., Schellens, T. & Valcke, M. 2011. Assessing collaboration in a wiki: The reliability of university students' peer assessment. *Internet and Higher Education*, (14):201–206.

Dengler, M. 2008. Classroom Active Learning Complemented by an Online Discussion Forum to Teach Sustainability. *Journal of Geography in Higher Education*, 32 (3):481–494.

Derntl, M. & Motschnig-Pitrik, R. 2005. The role of structure, patterns, and people in blended learning. *The Internet and Higher Education*, 8 (2):111-130.

Dewey, J. 1933. How we think. New York: D.C. Heath.

Dewey, J. 2001. Democracy and education. A Penn State Electronic Classics Series Publication.

Donnelly, R. 2010. Harmonizing technology with interaction in blended problem-based learning. *Computers & Education*, 54 (2):350-359.

Draper, P. 2008. Music two-point-zero: music, technology and digital independence. *Journal of Music, Technology & Education*, 1 (2-3):137-152.

Draper, P. & Hitchcock, M. 2008. The hidden music curriculum: Utilising blended learning to enable a participatory culture. (*In* Sims, W.L., redakteur. International Society for Music Education World Conference organised by Bologna, Italy.

Duffy, T.M. & Cunningham, D.J. 1996. Constructivism: Implications for the design and delivery of instruction. (*In* Handbook of research for educational communications and technology. p. 170-198).

Dunbar-Hall, P. 2011. Children's learning of music and dance in Bali: An ethnomusicological view of the cultural psychology of music education. (In Barrett, M.S., ed. *A Cultural Psychology of Music Education*. New York: Oxford. p. 14).

Ebner, M., Kickmeier-Rust, M. & Holzinger, A. 2008. Utilizing Wiki-Systems in higher education classes: a chance for universal access? *Universal Access in the Information Society*, 7:199-207.

Ellingson, L. 2009. *Engaging Crystallization in Qualitative Research: An Introduction*. London: Sage.

Elliott, D. 1995. *Music Matters. A New Philosophy of Music Education*. Oxford: Oxford University Press.

Elliott, D. 2012. Another Perspective: Music Education as/for Artistic Citizenship. *Music Educators Journal*, 99 (21):21-27.

Elliott, D.J. & Silverman, M. 2014. Music, personhood, and eudaimonia: Implications for educative and ethical music education. *The Journal for transdisciplinary research in Southern Africa*, 10 (2):57-72.

Elliott, D.J. & Silverman, M. 2015. *Music Matters: A Philosophy of Music Education*. New York: Oxford University Press.

Felder, R.M. & Spurlin, J. 2005. Applications, reliability and validity of the index of learning styles. *International journal of engineering education*, 21 (1):103-112.

Feuerstein, R. 1990. *The theory of structural cognitive modifiability*. National Education Association.

Fogarty, R. & McTighe, J. 1993. Educating teachers for higher order thinking: The three-story intellect. *Theory into practice*, 32 (2):161-169.

Folio, C. & Kreinberg, S. 2009/2010. Blackboard and Wikis and Blogs, Oh My: Collaborative Learning Tools for Enriching Music History and Music Theory Courses. *College Music Symposium*, 49/50:164-175.

Fosnot, C.T. 2005. *Constructivism: Theory, perspectives, and practice*. Teachers College Press. p. 1-17.

Frاند, J.L. 2000. The information-age mindset changes in students and implications for higher education. *Educause review*, 35 (14-25).

Franklin, T. & Van Harmelen, M. 2007. *Web 2.0 for content for learning and teaching in higher education*.

Gardner, H. 2011. *Frames of mind: The theory of multiple intelligences*. New York: Basic books.

Garrison, D.R. 2007. Online Community of Inquiry Review: Social, Cognitive, and Teaching Presence Issues. *Journal of Asynchronous Learning Networks (JALN)*, 11 (1):61-72.

Garrison, D.R., Anderson, T. & Archer, W. 2000. Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2 (2-3):87-105.

Garrison, D.R. & Kanuka, H. 2004. Blended learning: Uncovering its transformative potential in higher education *Internet and Higher Education*, 7:95-105.

Gaughan, J.E. 2014. The flipped classroom in world history. *History Teacher*, 47 (2):221-244.

Geertsen, H.R. 2003. Rethinking thinking about higher-level thinking. *Teaching Sociology*, 31 (1):1-19.

Gibbons, C.F. 1990. The personality of the performing musician as measured by the Myers-Briggs Type Indicator and the reported presence of musical performance anxiety. University of Arkansas) p. 69.

Gikandi, J.W., Morrow, D. & Davis, N.E. 2011. Online formative assessment in higher education: A review of the literature. *Computers & Education*, 57 (4):2333-2351.

Ginns, P. & Ellis, R.A. 2007. Quality in blended learning: Exploring the relationships between on-line and face-to-face teaching and learning. *The Internet and Higher Education*, 10 (1):53-64.

Ginns, P. & Ellis, R.A. 2009. Evaluating the quality of e-learning at the degree level in the student experience of blended learning. *British Journal of Educational Technology*, 40 (4):652-663.

Goodloe, J.E. 2015. Promoting Critical Thinking and Reflection in a Capstone Course for Adult Learners. Walden University) p. 119.

Graham, C.R. 2005. Blended learning systems: definition, current trends, and future directions. (In Bonk, C.J. & Graham C.R., eds. *The handbook of blended learning: Global perspectives, local designs*. San Francisco: Pfeiffer. p. 624).

Graham, C.R. 2013. Emerging practice and research in blended learning. (In Moore, M.G., ed. *Handbook of distance education*. New York: Routledge. p. 333-350).

Graham, C.R. & Dziuban, C. 2008. Blended learning environments. (In Spector, J.M., Merrill M.D., Van Merriënboer J. & Driscoll M.P., eds. Handbook of research on educational communications and technology. New York: Taylor & Francis. p. 269-276).

Graham, C.R., Woodfield, W. & Harrison, J.B. 2013. A framework for institutional adoption and implementation of blended learning in higher education. *Internet and Higher Education*, 18:4-14.

Granville, S. & Dison, L. 2005. Thinking about thinking: Integrating self-reflection into an academic literacy course. *Journal of English for Academic Purposes*, 4 (2):99-118.

Haddon, L. 2004. Information and Communication Technologies in Everyday Life: A Concise Introduction and Research Guide (New Technologies / New Cultures). London: Bloomsbury p. 192.

Hanley, B. & Montgomery, J. 2002. Contemporary curriculum practices and their theoretical bases. (In Colwell, R. & Richardson C., eds. New handbook of research on music teaching and learning. p. 113-143).

Harasim, L. 2000. Shift happens: Online education as a new paradigm in learning. *The Internet and Higher Education*, 3 (1):41-61.

Hargreaves, D.J., Marshall, N.A. & North, A.C. 2003. Music education in the twenty-first century: a psychological perspective. *British Journal of Music Education*, 20 (20):147-163.

Harper-Scott, J.P.E. & Samson, J. 2009. An introduction to music studies. New York: Cambridge University Press.

Hebert, D.G. 2008. Reflections on teaching the aesthetics and sociology of music online. *International Review of the Aesthetics and Sociology of Music*:93-103.

Henning, E., Van Rensburg, W. & Smit, B. 2004. Finding your way in qualitative research. Pretoria: Van Schaik.

Hitchcock, M. 2009. Vertical Integration through blended learning: a whole of program case study. Paper presented at the proceedings of CreateWorld. Retrieved 5 April 2015.

Ho, W.C. 2004. Use of information technology and music learning in the search for quality education. *British Journal of Educational Technology*, 35 (1):57-67.

Hosein, A., Ramanau, R. & Jones, C. 2010. Are all Net Generation students the same? The frequency of technology use at university. Paper presented at the IADIS E-Learning Conference,. Retrieved

Howe, N. & Strauss, W. 2000. Millennials rising: The next great generation. New York: Vintage.

Howie, S.J. & Pietersen, J.J. 2001. Mathematics literacy of final year students: South African realities. *Studies in Educational Evaluation*, 27 (1):7-25.

Hrastinski, S. 2008. Asynchronous and Synchronous E-Learning. *EDUCAUSE Quarterly*, 31 (4):51-55.

Hung, D. 2010. Theories of learning and computer-mediated instructional technologies. *Educational Media International*, 38 (4):281-287.

Jaffer, S., Ng'ambi, D. & Czerniewicz, L. 2007. The role of ICTs in higher education in South Africa: One strategy for addressing teaching and learning challenges. *International journal of Education and Development using ICT*, 3 (4):131-142.

Jessee, S.A., O'Neill, P.N. & Dosch, R.O. 2006. Matching student personality types and learning preferences to teaching methodologies. *Journal of Dental Education*, 70 (6):644-651.

Jewitt, C. 2008. Multimodality and Literacy in School Classrooms. *Review of Research in Education*, 32:241-267.

Johnson, D.W. & Johnson, R.T. 2008. Cooperation in the classroom. Interacton Book Company.

Jonassen, D.H. 1999. Designing constructivist learning environments. (In Reigeluth, C.M., ed. Instructional design theories and models: A new paradigm of instructional theory. Mahwah: Erlbaum. p. 215-239).

Jones, C., Ramanau, R., Cross, S. & Healing, G. 2010. Net generation or Digital Natives: Is there a distinct new generation entering university? . *Computers & Education*, 54 (3):722–732.

Jones, N. 2006. E-College Wales, a case study of blended learning. (In Bonk, C.J.G., C. R., ed. The handbook of blended learning: Global perspectives, local designs. San Francisco: Pfeiffer. p. 182-194).

Jorgenson, E.R. 2008. Questions for music education research. *Music Education Research*, 10 (3):331-346.

Jukes, I. & Dosaj, A. 2003. The differences between digital native learners and digital immigrant teachers. *educational origami*
<http://edorigami.wikispaces.com/Understanding+Digital+Children+-+Ian+Jukes>
Date of access: 30 March 2015.

Jung, C.G. 1923. Psychological types. London: Kegan Paul.

Jung, C.G. 1971. Psychological types: The collected works. London: Routledge and Kegan Paul.

Justice, C., Warry, W., Cuneo, C., Inglis, S., Miller, S., Rice, J., et al. 2002. A grammar for inquiry: Linking goals and methods in a collaboratively taught social sciences inquiry course. *The Alan Blizzard Award Paper: The Award Winning Papers. Special Publication of the Society for Teaching and Learning in Higher Education.*

Kassel, C. 1998. Music and the Theory of Multiple Intelligences. *Music Educators Journal*, 84 (5):29-32, 60.

Kemp, A.E. 1996. The musical temperament: Psychology and personality of musicians. New York: Oxford University Press.

Kennedy, G.E., Judd, T.S., Churchward, A., Gray, K. & Krause, K.L. 2008. First year students' experiences with technology: Are they really digital natives. *Australasian Journal of Educational Technology*, 24 (1):108-122.

Kerkovius, A. & Taljaard, W. 1999/2000. Sing, lees en luister.

Kimpton, J. 2005. What to do about music teacher education: Our profession at a crossroads. *Journal of Music Teacher Education*, 14 (2):8-21.

Kolbitsch, J. & Maurer, H.A. 2006. The Transformation of the Web: How Emerging Communities Shape the Information we Consume. *Journal of Universal Computer Science*, 12 (2):187-213.

Komarraju, M., Karau, S.J., Schmeck, R.R. & Avdic, A. 2011. The Big Five personality traits, learning styles, and academic achievement. *Personality and Individual Differences*, 51 (4):472-477.

Krätzig, G.P. & Arbuthnott, K.D. 2006. Perceptual learning style and learning proficiency: A test of the hypothesis. *Journal of Educational Psychology*, 98 (1):238.

Krause, K.L.D. 2007. Who is the e-generation and how are they faring in higher education. (In Lockard, J. & Pegrum M., eds. *Brave new classrooms: Educational democracy and the internet.* New York: Peter Lang. p. 125-140).

LaRusso, M.D., Romer, D. & Selman, R.L. 2008. Teachers as builders of respectful school climates: Implications for adolescent drug use norms and depressive symptoms in high school. *Journal of Youth and Adolescence*, 37 (4):386-398.

Laster, S., Otte, G., Picciano, A.G. & Sorg, S. 2005. Redefining Blended Learning. Paper presented at the 2005 Sloan-C Workshop on Blended Learning. Retrieved 9 May 2015.

Laumakis, M., Graham, C. & Dziuban, C. 2009. The Sloan-C Pillars and Boundary Objects As a Framework for Evaluating Blended Learning. *Journal of Asynchronous Learning Networks (JALN)*, 13 (1):75-87.

Le Rossignol, K. 2014. Designing Blended Learning-“Designing Blended Learning: Transformative Scenarios for the Millennial Learner”. (In *Engaging hybrid and blending learning in higher education*. Common Ground Publishing. p. 1-16).

Le Roux, A. 2006. Learning strategies. (In Schoeman, S. & Potgieter H., eds. *Musical Arts Education. Research & practice*. Pretoria. p. 3.1-3.17).

Leuf, B. & Cunningham, W. 2001. The Wiki way: quick collaboration on the Web. <http://www.citeulike.org/group/1136/article/114322> Date of access: 12 August 2015.

Liaw, S.S., Huang, H.M. & Chen, G.D. 2007. Surveying instructor and learner attitudes toward e-learning. *Computers & Education*, 49 (4):1066-1080.

Long, P.D. 2005. Learning space design in action. *Educause review*, 40 (4):60.

Lotriet, M., Jorissen, W. & Nagel, L. 2008. A diamond metaphor to promote a flexible blended teaching and learning model. *In World Conference on Educational Multimedia, Hypermedia and Telecommunications*, 2008 (1):3472-3481.

Luckett, K. 2001a. A proposal for an epistemically diverse curriculum for South African higher education in the 21st century. *South African Journal of Higher Education*, 15 (2):49-61.

Luckett, K. 2001b. Responding to Equity and Development Imperatives: Conceptualizing a Structurally and Epistemically Diverse Undergraduate Curriculum in Post-Apartheid South Africa. *Equity & Excellence in Education*, 34 (4):26-35.

MacLellan, C.R. 2011. Differences in Myers-Briggs personality types among high school band, orchestra, and choir members. *Journal of research in music education*, 59 (1):85-100.

Maier, P., White, S. & Barnet, E. 1997. Using Educational Development Strategies to Integrate Learning Technologies within an HE institution. *Active Learning*, 6:10-14.

Margaryan, A., Littlejohn, A. & Vojt, G. 2011. Are digital natives a myth or reality? University students' use of digital technologies. *Computers & Education*, 56:429-440.

Mark, M.L. 2003. A Philosophy of Music Education: Advancing the Vision. *Music Educators Journal*, 90 (1):63-64.

Markgraaff, M. 1995. Klasmusiek is Pret / Class Music is Fun.

Masie, E. 2003. Is E-Learning a Tool of the Present or a Fantasy for the Future? . *The Journal for Quality and Participation*, 26 (4):8-11.

McClellan, E.R. 2011. Socialization of undergraduate music education majors in a professional development partnership model. *Bulletin of the Council for Research in Music Education*, 190:35-49.

McKinney, K. 2007. Ethical Issues in the Scholarship of Teaching and Learning (pp. 2). Illinois: Scholarship of Teaching and Learning Illinois State University.

Meishar-Tal, H. & Gorsky, P. 2010. Wikis: what students do and do not do when writing collaboratively. *Open Learning*, 25 (1):25–35.

Merriam, S.B. 2009. Qualitative Research and Case Study Applications in Education. San Francisco: Jossey-Bass.

Merriam, S.B. 2016. Qualitative Research. A guide to design and implementation. San Francisco: Jossey-Bass.

Merritt, S. 2002. Learners of the future. Paper presented at the Paper presented at the Faculty Development Institute sponsored by Villanova University and the National League for Nursing. Retrieved from <http://www17.homepage.villanova.edu/stephen.merritt/VUNRLOF060902.htm>.

Meyer, K.A. 2003. Face-to-face versus threaded discussions: the role of time and higher-order thinking. *Journal of Asynchronous Learning Networks (JALN)*, 7 (3):55-65.

Miller, A. 1987. Cognitive styles: An integrated model. *Educational psychology review*, 7 (4):251-268.

Milman, N.B. 2012. The flipped classroom strategy: What is it and how can it best be used? *Distance learning*, 9 (3):85.

Modisaotsile, B.M. 2012. *The Failing Standard of Basic Education in South Africa* Retrieved 24 November 2015. from <http://www.ai.org.za/wp-content/uploads/downloads/2012/03/No.-72.The-Failing-Standard-of-Basic-Education-in-South-Africa1.pdf>.

Moon, J. 2001. PDP working paper 4 reflection in higher education learning [Electronic Version]. *Higher Education Academy* from [www. heacademy. ac. uk/resources. asp](http://www.heacademy.ac.uk/resources.asp).

Morford, J.B. 2007. Constructivism: Implications for Postsecondary Music Education and Beyond. *Journal of Music Teacher Education*, 16 (Spring):75-83.

NAfME. 1998. National Association for Music Education. A Research Agenda for Music Education: Thinking Ahead [Electronic Version]. Retrieved 30 April 2013 from <http://musiced.nafme.org/srme/a-research-agenda-for-music-education-thinking-ahead/>

Nagel, L. & Kotze, T.G. 2011. Choosing the best from blended and online e-learning. *Progressio*, 33 (2):151-173.

Naismith, L., Lee, B.H. & Pilkington, R.M. 2011. Collaborative learning with a wiki: Differences in perceived usefulness in two contexts of use. *Journal of Computer Assisted Learning*, 27 (3):228–242.

Nandi, D., Chang, S. & Balbo, S. 2009. A conceptual framework for assessing interaction quality in online discussion forums. *Same places, different spaces. Proceedings ascilite Auckland 2009*.:665-673.

Nandi, D., Hamilton, M. & Harland, J. 2012. Evaluating the quality of interaction in asynchronous discussion forums in fully online courses. *Distance Education*, 33 (1):5-30.

Ng, K.C., Weyde, T., Larkin, O., Neubarth, K., Koerselman, T., & Ong, B. 2007. 3d augmented mirror: a multimodal interface for string instrument learning and teaching with gesture support. (*In* 9th international conference on Multimodal interfaces organised by ACM.

Nieuwenhuis, J. 2010. Qualitative research designs and data gathering techniques. (*In* Maree, K., ed. First steps in research. Pretoria: Van Schaik. p. 69-122).

Oakley, B., Felder, R.M., Brent, R. & Elhadj, I. 2004. Turning student groups into effective teams. *Journal of student centered learning*, 2 (1):9-34.

Oblinger, D. & Oblinger, J. 2005. Is it age or IT: First steps toward understanding the net generation. In Oblinger, D., Oblinger, J. (Ed.), *Educating the net generation*. Boulder: Educause.

OnlineLearningConsortium. Online Learning Consortium.
<http://onlinelearningconsortium.org/> Date of access: 9 May 2015.

Orb, A., Eisenhauer, L. & Wynaden, D. 2000. Ethics in Qualitative Research. [Electronic Version]. *Journal of nursing scholarship*, 33, 93-96. Retrieved 8 April

2013 from <http://onlinelibrary.wiley.com/doi/10.1111/j.1547-5069.2001.00093.x/abstract>.

Paechter, M. & Maier, B. 2010. Online or face-to-face? Students' experiences and preferences in e-learning. *Internet and Higher Education*, 13:292–297.

Parker, K.R. & Chao, J.T. 2007. Wiki as a Teaching Tool. *Interdisciplinary Journal of Knowledge and Learning Objects*, 3:57-72.

Parkes, K.A. & Jones, B.D. 2012. Motivational constructs influencing undergraduate students' choices to become classroom music teachers or music performers. [Electronic Version]. *Journal of research in music education*, 0022429411435512.

Pearlman, B. 2006. New Skills for a New Century [Electronic Version].

Perani, D., Saccuman, M.C., Scifo, P., Spada, D., Andreolli, G., Rovelli, R., et al. 2010. Functional specializations for music processing in the human newborn brain [Electronic Version]. *Proceedings of the National Academy of Sciences of the United States of America*, 107, 4758–4763 from <http://0-www.pnas.org.innopac.up.ac.za/content/107/10/4758.long>.

Peretz, I. & Zatorre, R.J. 2005. Brain organization for music processing. *Annu. Rev. Psychol*, 56:89-114.

Picciano, A. 2014. A critical reflection of the current research in online and blended learning. *LLinE* <http://www.elmmagazine.eu/articles/a-critical-reflection-of-the-current-research-in-online-and-blended-learning>
Date of access: 7 June 2015.

Picciano, A.G. 2006. Blended learning: Implications for growth and access. *Journal of Asynchronous Learning Networks (JALN)*, 10 (3):95-102.

Picciano, A.G. 2009. Blending With Purpose: The Multimodal Model. *Journal of the Research Center for Educational Technology*, 5 (1):4-14.

Picciano, A.G. & Dziuban, C.D. 2007. Blended learning: Research perspectives. Vol. 1. United States of America: The Sloan Consortium.

Picciano, A.G., Dziuban, C.D. & Graham, C.R. 2013. Blended learning: Research perspectives. Vol. 2. New York: Routledge.

Prensky, M. 2001. Digital Natives, Digital Immigrants. Part I. *On the Horizon*, 9 (5).

Pretoria, U.o. 2015. Hybrid model, *Draft Discussion Document*, v4. Pretoria.

Raiber, M. & Teachout, D. 2014. The journey from music student to teacher: A professional approach. New York: Routledge.

Ramanau, R. & Geng, F. 2009. Researching the use of Wiki's to facilitate group work. *Procedia Social and Behavioral Sciences*, 1:2620–2626.

Randles, C. 2015. A theory of change in music education. (*In Randles, C., ed. Music education. Navigating the future. New York: Routledge. p. 323-339*).

Reeves, T.C., & Reeves, P.M. 2013. Designing online and blended learning. (*In Hunt, L. & Chalmers D., eds. University teaching in focus: a learning-centred approach. Melbourne: ACER Press. p. 112-127*).

Reeves, T.C., Herrington, J. & Oliver, R. 2002. Authentic activities and online learning. 562-567.

Registrar, U.o.P.O.o.t. Language policy, *R 16/10* (Vol. R 16/10, pp. 1-4): Governance Policy.

Reimer, B. 2003. A philosophy of music education: Advancing the vision. New Jersey: Prentice.

Reimer, B. 2007. Comprehensive Education, Comprehensive Music Education: A New Vision. *Music Education Research International*, 1.

Rennie, F. & Morrison, T. 2013. *e-Learning and Social Networking Handbook.*, from <http://www.amazon.com>.

Resnik, D.B. 2011. What is Ethics in Research & Why is it Important? [Electronic Version]. *National Institute of Environmental Health Sciences*. Retrieved 25 March 2013 from <http://www.niehs.nih.gov/research/resources/bioethics/whatis/>.

Robinson, J. 2011. Assessing the value of using an online discussion board for engaging students. *Journal of Hospitality, Leisure, Sport and Tourism Education*, 10 (1):13 – 22.

Robinson, S. & Stubberud, H.A. 2012. Communication preferences among university students *Academy of Educational Leadership Journal*, 16 (2):105-113.

Roig, R. & Rosales, S.E. 2012. Assessing participation in online discussion forums: A proposal for multidimensional analysis. *Píxel-Bit. Revista de Medios y Educación*, 40:137-149.

Rovai, A.P. 2004. A constructivist approach to online college learning. *The Internet and Higher Education*, 7 (2):79-93.

Rovai, A.P. & Jordan, H. 2004. Blended learning and sense of community: A comparative analysis with traditional and fully online graduate courses [Electronic Version]. *The International Review of Research in Open and Distributed Learning*, 5 from <http://0-www.irrodl.org.innopac.up.ac.za/index.php/irrodl/article/viewArticle/192/274.%20Accessed%2019th%20March%202006>.

Rule, P. & John, V. 2011. *Your Guide to Case Study Research*. Pretoria: Van Schaik.

Salajan, F.D., Schönwetter, D.J. & Cleghorn, B.M. 2010. Student and faculty inter-generational digital divide: Fact or fiction? *Computers & Education*, 55:1393–1403.

Salavuo, M. 2006. Open and informal online communities as forums of collaborative musical activities and learning. *British Journal of Music Education*, 20 (3):253-271.

Salavuo, M. 2008. Social media as an opportunity for pedagogical change in music education. *Journal of Music, Technology & Education*, 1 (2-3):121-136.

Saldaña, J. 2013. *The coding manual for qualitative researchers*.

Saldaña, J. 2015. *Thinking Qualitatively: Methods of Mind*. SAGE Publications.

Savage, J. 2007. Reconstructing music education through ICT. *Research in Education*, 78 (1):65-77.

Savery, J.R. & Duffy, T.M. 1995. Problem based learning: An instructional model and its constructivist framework. *Educational Technology & Society*, 35 (5):31-38.

Savery, J.R. & Duffy, T.M. 2001. *Problem based learning: An instructional model and its constructivist framework*. Bloomington: Center for Research on Learning and Technology, Indiana University.

Scott, S. 2007. Multiple perspectives for inquiry-based music education. *The Canadian Music Educator*, 49 (2):35-38.

Scott, S. 2011. Contemplating a Constructivist Stance for Active Learning within Music Education. *Arts Education Policy Review*, 112:191-198.

Scott, S.J. 2012. Constructivist Perspectives for Developing and Implementing Lesson Plans in General Music. *General Music Today*, 25 (2):24-30.

Sherbon, J.W. & Kish, D.L. 2005. Distance learning and the music teacher. *Music Educators Journal*:36-41.

Shulman, L.S. 1986. Those who understand: Knowledge growth in teaching. *Educational researcher*, 15 (2):4-14.

Siemens, G. 2005. Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*.

Skiba, D. & Barton, A. 2006. Adapting Your Teaching to Accommodate the Net Generation of Learners [Electronic Version]. *OJIN: The Online Journal of Issues in Nursing*, 11 from http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume112006/No2May06/tpc30_416076.aspx.

SouthAfrica.info. 2015. *South Africa's population*. Retrieved. from www.southafrica.info/about/people/population.htm

Southcott, J. & Crawford, R. 2011. The intersections of curriculum development: Music, ICT and Australian music education. *Australasian Journal of Educational Technology & Society*, 27 (1):122-136.

Spronken-Smith, R. 2007. *Experiencing the Process of Knowledge Creation: The Nature and Use of Inquiry-Based Learning in Higher Education*. Retrieved 4 August 2015. from <https://www.akoatearora.ac.nz/sites/default/files/u14/IBL%20-%20Report%20-%20Appendix%20A%20-%20Review.pdf>

Spronken-Smith, R., Angelo, T., Matthews, H., O'Steen, B. & Robertson, J. 2007. How effective is inquiry-based learning in linking teaching and research. Paper presented at the An international colloquium on international policies and practices for academic enquiry. Retrieved 4 August 2015.

Stålhammer, B.R. 2003. Music teaching and young people's own musical experience. *Music Education Research*, 5 (1):61-68.

Sternbach, D.J. 2008. Stress in the lives of music students. *Music Educators Journal*, 94 (3):42-48.

Stoney, S. & Oliver, R. 1999. Can Higher Order Thinking and Cognitive Engagement Be Enhanced with Multimedia? [Electronic Version]. *Interactive Multimedia Electronic Journal of Computer-Enhanced Learning* from <http://imej.wfu.edu/>

Strauss, A.L. & Corbin, J.M. 1990. Basics of qualitative research. Vol. 15. Newbury Park: Sage.

Swan, K., Garrison, D.R. & Richardson, J. 2009. A constructivist approach to online learning: the Community of Inquiry framework. (In Payne, C.R., ed. Information technology and constructivism in higher education: Progressive learning frameworks. Hershey: PA: IGI Global. p. 43-57).

Swan, K. & Ice, P. 2010. The community of inquiry framework ten years later: Introduction to the special issue. *The Internet and Higher Education*, 13 (1):1-4.

Tapscott, D. 1998. Growing up digital: the rise of the Net generation. New York: McGraw-Hill.

Trafford, V. & Leshem, S. 2008. Stepping Stones To Achieving Your Doctorate: By Focusing On Your Viva From The Start: Focusing on your viva from the start. UK: McGraw-Hill Education.

University, M. 2007. What is unique about inquiry courses?, *Historical Inquiry - Collectivization in Soviet Russia*. Canada.

University, N.-W. 2012. NWU Referencing guide. Potchefstroom: Library Services, Potchefstroom Campus.

Unver, A.O. & Arabaciouglu, S. 2011. Overviews on Inquiry Based and Problem Based Learning Methods. *Journal Pendidikan*:303-310.

Upitis, R.B. 2012. Music and the arts: as ubiquitous and fundamental as the air we breathe. (In Mcpherson, G.E. & Welch G.F., eds. The Oxford handbook of Music Education. New York: Oxford University Press. p. 689-693).

Vajoczki, S., Watt, S., Vine, M.M. & Liao, R. 2011. Inquiry learning: Level, discipline, class size, what matters? *International Journal for the Scholarship of Teaching and Learning*, 5 (1):10.

Valiathan, P. 2002. Blended learning models. [Electronic Version]. *Learning circuits*.

Vaughan, N.D. 2010. A blended community of inquiry approach: Linking student engagement and course redesign. *The Internet and Higher Education*, 13 (1):60-65.

Vermunt, J.D. 1996. Metacognitive, Cognitive and Affective Aspects of Learning Styles and Strategies: A Phenomenographic Analysis. *Higher Education*, 31 (1):25-50.

Vincent, A. & Ross, D. 2001. Personalize training: determine learning styles, personality types and multiple intelligences online. *The Learning Organization*, 8 (1):36-43.

Waldron, J. 2012. YouTube, fanvids, forums, vlogs and blogs: Informal music learning in a convergent on- and offline music community. *International Journal of Music Education Research*, 31 (1):91-105.

Walker, D. & Lambert, L. 1995. Learning and leading theory: A century in the making. (In Lambert, L., Walker D., Zimmerman D.P., Cooper J.E., Lambert M.D., Gardner M.E. & Ford Slack P.J., eds. *The constructivist leader*. p. 1-27).

Walser, N. 2008. Teaching 21st Century Skills, *Harvard Education Letter*.

Waycott, J., Bennett, S., Kennedy, G., Dalgarno, B. & Gray, K. 2010. Digital divides? Student and staff perceptions of information and communication technologies. *Computers & Education*, 54:1202–1211.

Webster, P.R. 2007a. Computer-based technology and music teaching and learning: 2000 - 2005. (In Bresler, L., ed. *International Handbook of Research in Arts Education*. Dordrecht: Springer. p. 1311–1328).

Webster, P.R. 2007b. Knowledge, skills, attitudes, and values: technology and its role in arts education. (In Bresler, L., ed. *International Handbook of Research in Arts Education*. Dordrecht: Springer. p. 1293–1296).

Webster, P.R. 2011. Construction of music learning. (In MENC handbook of research on music learning. p. 35-83).

Westerlund, H. 2003. Reconsidering aesthetic experience in praxial music education. *Reconsidering aesthetic experience in praxial music educational Media International*, 11 (1):45-62.

Wiggins, J. 2004. Letting go—Moving forward. *Mountain Lake Reader*, 3:81–91.

Wiggins, J. 2007. Authentic Practice and Process in Music Teacher Education. *Music Educators Journal*, 93 (3):36-42.

Wiggins, J. 2009. Teaching for Musical Understanding. Oakland: Center for Applied Research in Musical Understanding, Oakland University.

Wiggins, J. 2015. Teaching for Musical Understanding. Oxford University Press.

Wubbenhorst, T.M. 1994. Personality characteristics of music educators and performers. *Psychology of music*, 22 (1):63-74.

Yin, R.K. 2009. *Case Study Research [Kindle ed.]*.

Young, J.R. 2002. “Hybrid” teaching seeks to end the divide between traditional and online instruction. *The Chronicle of Higher Education*, 48 (28):A33–A34.

Young, S. & Pérez, J. 2012. 'We-research': Adopting a wiki to support the processes of collaborative research among a team of international researchers. *International Journal of Music Education*, 30 (1):3-17.

Zhang, L.F. & Sternberg, R.J. 2005. A threefold model of intellectual styles.
Educational psychology review, 17 (1):1-53.

ANNEXURES

Addendum A.1



NORTH-WEST UNIVERSITY
YUNIBESITHI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: (018) 299-4900
Faks: (018) 299-4910
Web: <http://www.nwu.ac.za>

ETHICS APPROVAL OF PROJECT

Ethics Committee

Tel +27 18 299 4850
Fax +27 18 293 5329
Email Ethics@nwu.ac.za
2013/11/15

This is to certify that the next project was approved by the NWU Ethics Committee:

Project title.

"Blending with purpose": a multimodal model for Music Education

Project leader: PROF. HM Potgieter **Student:** S Cruywagen

NWU Ethics approval no: NWU-00173-13-A7

The Ethics Committee would like to remain at your service as scientist and researcher, and wishes you well with your project. Please do not hesitate to contact the Ethics Committee for any further enquiries or requests for assistance.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Marietjie Halgryn'.

Me. Marietjie Halgryn
NWU Ethics Secretariate

Addendum A.2



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

2014/01

Faculty of Humanities
Research Ethics Committee

21 January 2014

Dear Ms Cruywagen

Project: "Blending with purpose": a multimodal model for Music Education
Researcher: S Cruywagen
Department: Music
Reference: External research

I have pleasure in informing you that the Registrar has formally given **approval** for the above study to be conducted at the University of Pretoria. Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should your actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

The Committee wishes you well in the completion of this research project.

Sincerely

Prof. Karen Harris
Acting Chair: Research Ethics Committee
Faculty of Humanities
UNIVERSITY OF PRETORIA
e-mail: Karen.harris@up.ac.za

Research Ethics Committee Members: Prof K Harris (Acting Chair); Dr L Blokland; Prof M-H Coetzee; Dr JEH Grobler; Ms H Klopper; Dr Sepetla Molapo; Dr C Panebianco-Warrens; Dr t Simpson; Prof GM Spies; Prof E Taljard ; Dr FG Wolmarans, Dr P Wood

Addendum A.3

INFORMED CONSENT FORM FOR RESEARCH PARTICIPANTS

Information Sheet

You are being asked to participate in my research study that is part of the requirements for a PhD in Music at North-West University (NWU) I am asking you to take part because the research is based on new ways of teaching and learning in Music Education. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

The purpose of this study is to explain teaching and learning in tertiary Music Education through multimodal learning for BMus. and BA Mus. undergraduate students at UP. The need for the incorporation of digital technologies led to the exploration of how to incorporate online teaching and learning into our current curriculum.

If you agree to be in this study, I will conduct interviews which focus directly on this case study, while direct observation will cover events in real time and participant observation covers the content of the case. Data of your input in the course module will also be collected through documents and audio-visual materials.

If you want to participate, please sign the attached consent form. You can keep the information sheet and will be provided with a copy of the consent form. You do have the option of withdrawing before the study commences or discontinuing after data collection has started.

I will ensure that no references to your identity appear in the thesis. The data will be kept confidential for the duration of the study. On completion of the thesis, they will be retained for a further six months and then destroyed.

The results will be presented in the thesis. They will be seen by my supervisor, a second marker and the external examiner. The thesis may be read by future students on the course. Aspects of the study may be published in a research journal.

I don't envisage any negative consequences for you in taking part.

If you need any further information, you can contact me:

email: Sonja.Cruywagen@up.ac.za

Phone number: 012 420 2600

If you agree to take part in the study, please sign the consent form overleaf.

Addendum A.4



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

FACULTY OF HUMANITIES
DEPARTMENT of MUSIC
TEL: +27 12 420 2600
Sonja.Cruywagen@up.ac.za

Informed consent

Title of study:

“Blending with Purpose”: a multimodal model for Music Education.

Name of Participant:.....

- I have read the attached information sheet on the research in which I have been asked to participate and have been given a copy to keep. I have had the opportunity to discuss the details and ask questions about this information.
- The Researcher has explained the nature and purpose of the research and I believe that I understand what is being proposed.
- I understand that my personal involvement and my particular data from this study will remain strictly confidential. Only researchers involved in the study will have access.
- I have been informed about what the data collected will be used for, to whom it may be disclosed, and how long it will be retained.
- I have received satisfactory answers to all of my questions
- I hereby fully and freely consent to participate in the study which has been fully explained to me.
- I understand that I am free to withdraw from the study at any time, without giving a reason for withdrawing.

Participant's Signature:

Researcher:

Sonja Cruywagen
Lecturer: Music Education

As the Researcher responsible for this study I confirm that I have explained to the participant named above the nature and purpose of the research to be undertaken.

Addendum A.5



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

FACULTY OF HUMANITIES
DEPARTMENT of MUSIC
TEL: +27 12 420 2600
Sonja.Cruywagen@up.ac.za

Parental consent

Title of study:

“Blending with Purpose”: a multimodal model for Music Education.

Name of Participant:

- I have read the attached information sheet on the research in which I have been asked to participate and have been given a copy to keep. I have had the opportunity to discuss the details and ask questions about this information.
- The Researcher has explained the nature and purpose of the research and I believe that I understand what is being proposed.
- I understand that my personal involvement and my particular data from this study will remain strictly confidential. Only researchers involved in the study will have access.
- I have been informed about what the data collected will be used for, to whom it may be disclosed, and how long it will be retained.
- I have received satisfactory answers to all of my questions
- I hereby fully and freely consent to participate in the study which has been fully explained to me.
- I understand that I am free to withdraw from the study at any time, without giving a reason for withdrawing.

I have read the attached informed consent form and agree to have my youngster participate in the study entitled **“Blending with Purpose”: a multimodal model for Music Education**

Parent's or Guardian's Name (please print):

Parent's or Guardian's Signature:

As the Researcher responsible for this study I confirm that I have explained to the participant named above the nature and purpose of the research to be undertaken.

Addendum B.1

PROTOCOL — clickUP support MPE170

“Blending with purpose”: a multimodal model for Music Education

Interview session:
Place:
Date:
Time:
Participants:
Background of students: BA Mus. and BMus. 1 st year students Age: Ethnic group: Home language: How many of your courses are on clickUP:
Semi-structured questions:
• Show me how to go onto clickUP (students have to open a browser, open clickUP homepage, log in with user name and password) • Which browser do you use? • Where do you get access to internet and do you experience problems?
clickUP navigation
• Where do you find your weekly programme on clickUP? How will you find out what you are going to do next week/homework? • Will you go onto clickUP without receiving announcements? • The way that the menus are structured -is it easy to use the navigation panel?

clickUP as a tool
• Why do we use clickUP in the MPE module? • How do you use clickUP as a learning tool in MPE? • Are there ways to learn more about the subject through using clickUP? • Did you learn more about the topic given through the discussion board? - o Are there more topics in MPE where DB will work? • Later in year we are compiling a wiki. Why do you think this way of submitting an assignment will be better than on paper? - o What can you put on paper? - o What can you put on a wiki? Thus enhancing the research — do you agree
Problems:
• Do you have problems submitting assignments on clickUP • Do you need more support in how to submit an assignment?
Students and Lecturer behaviour:
Students' suggestions/comments:
Lecturer wants to change:

Addendum B.2

PROTOCOL for participant interviews MPE170

"Blending with purpose": a multimodal model for Music Education

Interview session:

Place:

Date:

Time:

Participants:

Diversity of students:

Age:

Ethnic groups:

Home language:

Background questions:

This is the characteristics of a digital native (neo-millennial learner). Please give your opinion if you feel this is applicable to you

The Net Generation perceives:

- **computers not as technology**
- **internet as better than television**
- **"unreal" realities**
Live in virtual worlds?
- **a mind-set that 'do' rather than 'know'**
Your generations is also called just-in- time generation
- **chooses 'trial and error' experimentation over logic**
- **multitasking as a way of life**
- **typing instead of handwriting**
- **staying connected to the internet**
- **immediate gratification of information needs**

Which online activities do you mostly use? For storing data? For what purpose?
Opinions and values:
How will you describe an effective learning environment? When do we learn? Literature says: “A higher level of interaction is experienced in online activities than in traditional f2f activities”. What did learning about using technology contribute to your view on music and music education? Example of making a video on the views of people: did you learn more about the views of people than making a video than on a chapter of a book in class Literature says: “Cooperation and support generated by online group work increase students’ understanding of the subject matter in a safe learning environment” e.g. work in the DB as a group How do you think should online work groups be organised?
Is the outlay of the course easy to use? What changes do you want to make?

Addendum B.3

PROTOCOL for participant interviews MPE270

“Blending with purpose”: a multimodal model for Music Education

Interview session:

Place:

Date:

Time:

Participants:

Diversity of students:

Age:

Ethnic groups:

Background questions:

This is the characteristics of a digital native (neo-millennial learner):

The Net Generation perceives:

- “unreal” realities
Live in virtual worlds?
- a mind-set that ‘do’ rather than ‘know’
- chooses ‘trial and error’ experimentation over logic
- multitasking as a way of life
- typing instead of handwriting
- staying connected to the internet
- immediate gratification of information needs

Opinions and values:

Literature says:

“A higher level of interaction is experienced in online activities than in traditional f2f activities”.

Do you think there is a place for online learning in Music Education

- **Who used YouTube videos to teach yourself an instrument?**

Literature says:

“Cooperation and support generated by online group work increase students’ understanding of the subject matter in a safe learning environment”

Do you agree with this statement?

How do you think should online work groups be organised?

How do you think the instructor must organise groups

In what kind of group will you be comfortable?

Is the outlay of the course easy to use? What changes do you want to make?

- **What about your provisional programme**

Online activities:

Announcements: do you get the emails that are automatically sent by clickUP

How many times do you go onto clickUP per week?

Do you get enough support from the university?

Do you want to be able to use online technology in your course?

Addendum B.4

PROTOCOL for participant interviews MPE370

"Blending with purpose": a multimodal model for Music Education

Interview session:

Place:

Date:

Time:

Participants:

Diversity of students:

Age:

Ethnic groups:

Background questions:

This is the characteristics of a digital native (neo-millennial learner):

The Net Generation perceives:

- "unreal" realities
Live in virtual worlds?
- a mind-set that 'do' rather than 'know'
- chooses 'trial and error' experimentation over logic
- multitasking as a way of life
- typing instead of handwriting
- staying connected to the internet
- immediate gratification of information needs

Do you agree with these characteristics?

What are your computer skills?

Which online activities do you mostly use?

Opinions and values:

How will you describe an effective learning environment? When do you learn the best, classes, prefer doing research, homework

Do you think that this learning environment should include web technology activities?

- **Did you adapt quickly at UP using online technology?**
- **Can music education become totally online?**
- **What activities can be used online?**

**Do you know why we use online technology in our MPE module?
(transparency)**

- **What differs from an online discussion to a classroom discussion?**
- **Did you read previous posts?**

How much time do you want to spend to an online activity?

- **What about information to research and read — how will you take the responsibility to learn this material?**

Literature says:

“Cooperation and support generated by online group work increase students’ understanding of the subject matter in a safe learning environment”

Do you agree with this statement?

The instructor is sometimes frustrated if group members do not work well together. Especially if there is a group member that does not do his part?

How do you think should online work groups be organised?

Which activities did you enjoyed the most?

Do you go onto any other blogs and discussion boards at all?

Online activities:

Announcements: do you get the emails that are automatically sent by clickUP

How many times per week do you go onto clickUP

What time of day:

Addendum B.5

PROTOCOL for participant reflections on constructing wiki's

"Blending with purpose": a multimodal model for Music Education

Reflection on constructing their wiki's :
Place: Date: Time:
Participants:
Diversity of students: Age: Ethnic groups:
Group:
Semi structured questions: • How did you experience working in the wiki? • Why do you think we used a wiki for this project instead of submitting it on paper?
Lecturer reflection:

Addendum B.6

PROTOCOL for User acceptance of the integration of information and communication technologies in Music Education

“Blending with purpose”: a multimodal model for Music Education

User acceptance of the integration of information and communication technologies in Music Education.
Participants:
Diversity of students: Age: Ethnic groups:
Group:
Semi structured questions: • Did you find the wiki as a RESEARCH tool useful? Yes/No and explain why • What do you feel is the lecturer's role in creating the wiki? • What do you like most about your experience in using the wiki for research? • What kind of problems did you experience in creating the wiki? • Would you also like to use the wiki for other assignments?
Lecturer reflection:

Addendum C.1

PROTOCOL — Temperament Inventory

“Blending with purpose”: a multimodal model for Music Education

Temperament Inventory

The following is based on the Myers-Briggs Temperament Inventory (MBTI).

1. Do you feel you are more inclined: (a) to be sociable (b) to prefer your own company	2. Do you tend to: (a) trust your experience (b) trust your intuition
3. Is your behaviour more likely to be: (a) governed by your head (b) governed by your heart	4. Are you more comfortable when events: (a) are settled and decided (b) are less definite and open to change
5. In your social life are you more likely: (a) to enquire about other people's affairs (b) to wait to be told about other people's affairs	6. Are you more likely to be: (a) more realistic than inventive (b) more inventive than realistic
7. In judging a set of circumstances are you inclined to: (a) be just and firm (b) be humane	8. Do you prefer: (a) to be in charge of your life (b) to let life happen
9. Are you inclined to be: (a) more outgoing (b) more reserved	10. When approaching a situation are you more likely: (a) to notice the details (b) to notice the whole

11. Are you more attracted to: (a) the convincing account (b) the moving account	12 Do you feel happier if your work: (a) is fixed by a formal contract (b) is open to change in an informal manner
13. Do you tend to have: (a) a large number of friends (b) a limited number of friends	14 Are you more attracted: (a) to what is actual (b) to what might be possible
15. When making decisions are you more likely: (a) to use cool judgment (b) to be persuaded by emotion	16. When you have an appointment do you tend to: (a) be early or on time (b) arrive at the last minute, or at your leisure
17. Do you usually: (a) speak openly about your thoughts and feelings (b) tend to keep your thoughts and feelings for yourself	18. Are you someone who is more likely: (a) to acquire facts and retain them (b) to be hazy on facts and possibly forget them
19. When considering a person's qualities, are you inclined to: (a) use your critical faculties (b) use your understanding faculties	20. Do you prefer to: (a) work towards specific goals (b) work with more open options
21. When using the phone do you generally: (a) find you speak easily and at length to people (b) find conversation difficult	22. Which of these is stronger in you: (a) a sense of realism (b) the ability to exercise imagination

23. Are you inclined to be: (a) hard-hearted (b) soft-hearted	24. When working on a project are you more at ease if: (a) you make definite decisions at an early date (b) you can put off decisions until you have gathered more data
25. At a party are you more likely: (a) to speak easily and at length to many people, including strangers (b) to talk to a few people, and find little to say to strangers	26. Are you more at ease when you can base choices and decisions: (a) on using past facts (b) on using new ideas
27. Do you feel you are more likely to be: (a) someone who is logical (b) someone who has depth of feeling	28. Are you at ease with: (a) planned events, which have specific dates and times (b) events which are unplanned, and happen spontaneously