

Countering inequality in Nepali music education

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Abstract

Music Technology (MT) has been an effective tool in music education by providing helpful means that can guide students to develop a better understanding of music. MT is mostly used in notating, arranging and composing music which in turn lets students understand how music is created.

The new high school music course in Technical and Vocational Stream of Education implemented in 2016 in Nepal, has put MT as a compulsory subject and this study was carried out in Nepal's first music school of this kind.

The overall aim of this study was to investigate how music teachers can promote equality in their classrooms. This was investigated through two research questions:

1. How have these two girls experienced inequality in the music technology class?
2. How can the teacher work to enhance equality in the music technology classroom?

The findings of this study indicated that the access to technology is the most important factor which influences how students learn and use technology in their music studies.

Keywords: Equality, Music Education, Music Technology, Nepal, Practitioner Research

CHAPTER 1: Introduction

Nepal is a country that strives to progress. Since we first had a democratic system in the 90's, a number of important decisions by the ruling Government has been made to insure equality. Education for all, woman's property rights, recognition of LGBTI in constitution of Nepal to name just a few. However, society's attitude towards equality issues still has a lot to change, lacking mostly due to traditional and religious reasons. It is still common in Nepal especially in villages that the parents enroll boys in private schools with good facilities and girls to government schools. They see education for boys as an investment; he will take care of the family later in life but education for girls are a liability because they will go away from home when they marry. Most cases girls are taken out of schools after they finish high school. At the same time, these kinds of discrimination do not exist in families where the parents have good educational and socioeconomic background.

Nepal is a country landlocked by two of the largest economies of the world, India (East, West and South) and China (North). This factor has influenced the development of Nepal's information technology sector. Both India and China has been able to successfully place their business in the IT sector. The Government of Nepal is also aware and recognizes the importance technology for growth and economic possibilities. When the Government of Nepal implemented Music in technical and vocational stream of educational (TVSE), Music Technology was chosen as a compulsory subject for the students enrolled in this stream.

This study looks particularly at two girls who are enrolled in the first TVSE music school in Nepal and studying music technology, who may have experienced inequality in a number of different ways for a number of different reasons (age, gender, caste and socioeconomic background).

1.1 Context

The Nepali Primary Education Curriculum (English edition 2008) states that,

Nepal as a member of the global community has made commitments to the Dakar Framework of Action (2000) for the attainment of Education for All by 2015. One of the

Millennium Development Goals is to achieve universal primary education. Following this goal, Nepal has made the provision for implementing the Education for All programs and has emphasized the need for developing institutional, managerial capacity and physical infrastructure to achieve Education for All. (p. 1)

To reform school education it has been pointed out that the curriculum needs to be updated to the new demands,

The curriculum is seen as the foundation of school education, leading to changes in other aspects of education as well. Similarly, from different interaction programs, discussions, research studies and expert opinions it became obvious that curricula needs to change, to respond to the needs and demand of the nation. (The Nepali Primary Education Curriculum, English edition 2008, p. 2)

Nepali school system had four stages, class 1-5 Primary, 6- 8 Lower secondary, 9-10 Secondary and 11-12 higher secondary. In 2010, the Ministry of Education (MoE) introduced School Sector Reform Program (SSRP) in five development regions (Dadeldhura, Banke, Bhairawa, Rasuwa and Dhankuta) and under this program schools will only be divided into two levels 1-8 primary and 9-12 high school. Gov. also introduced Technical and Vocational School (9-12) and adopted music as one of the major subjects for these schools.

1.2 Technology Education in Nepal

The history of Technology education in Nepal can be traced back to the 1930s, with the establishment of the Technical Training Institute. In 1972 it was reformed as the current Institute of Engineering under Tribhuvan University. TU has also been offering computer related education in various degrees through the Institute of Science and Technology. Since then there has been lots of progress in Technical education. Currently there are six universities providing education in variety of disciplines in Nepal.

In 1994 TU started Bachelor in Electronics Engineering and Kathmandu University launched its Computer Science and Engineering programs. In addition Pokhara University and Purbanchal University has been offering computer education through the Faculty of Science and Technology in various disciplines.

Currently the students can enroll on the following disciplines offered by the aforementioned Universities of Nepal.

- Bachelor of Business Information System
- Bachelor of Computer Application
- Bachelor in Computer Engineering
- Bachelor of Computer Information System
- Bachelor of Engineering in Information Technology
- Bachelor of Science in Information Technology
- Bachelor in Information Technology
- Bachelor of Information Management
- Bachelor of Computer Science

With the growth of technological advancements worldwide the market dynamics have changed. Although many Nepali government agencies rely on hand written filing system of yesteryears, they have started to move towards Electronic filing system. Almost all private organizations rely on computers leading to more job opportunities.

1.3 Music Technology in Schools

Despite the fact that music and film has been using some sort of technology from the early ages, people often still have a hard time placing music and technology together. The first music program was written by Max Mathews in the early 1960s, the Musical Instrument Data Interface (MIDI) was created in the 80's, there were recording and editing softwares like Protools and Cubase before Google, Youtube and the likes of Facebook came into existence.

Although there are universities offering a variety of Music Technology related degrees outside Nepal, here the Gov. of Nepal is still trying to reform school education which has resulted in the introduction of Music as a major subject in Technical and Vocational Stream of Education (TVSE). The difference between regular schools and vocational schools is that general schools have eight subjects, five compulsory and three optional chosen by the school (one can be music) whereas Technical and Vocational schools have ten subjects, four compulsory and six discipline specific.

Comparison Chart

General Stream of Education	Technical and Vocational Stream of Education
<p>Compulsory Subjects Nepali Language -100 Mark English Language-100 Mark Mathematics-100 Mark Science-100 Mark Social Studies-100 Mark</p>	<p>Compulsory Subjects Nepali Language -100 Mark English Language-100 Mark Mathematics-100 Mark Science-100 Mark</p>
<p>Optional Subjects (School can choose from a variety of disciplines) e.g. Accounting-100 Mark Computer-100 Mark Music-100 Mark</p>	<p>Core Subjects Music of Nepal-100 Mark Fundamental of Music-100 Mark Instrument Keyboard-100 Mark Music Technology-100 Mark Music Business and Event Management-100 Mark</p>
	<p>Elective (choose one) -100 Mark Vocal Instrumental Studies Dance</p>
<p>Total-800 Mark</p>	<p>Total : 1000 Mark</p>

In most schools (outside Nepal) music technology is integrated within the other disciplines of music. Here music technology is an entirely different subject on its own.

CHAPTER 2: Music, Technology, and Inequality

Disparity in access is omnipresent in socioeconomic backgrounds and in our Nepali context; it is deeply embedded in cultural practices. Music has always been an experience that encompasses mere enjoyment or virtuosity but one that intermingles with religious, spiritual, and traditional factors in life. The oral tradition and Guru Sishya (Teacher Disciple) tradition in music has existed for centuries and continues to have an influence albeit in a much evolved manner. This evolution is just one in many that has occurred with the move for musical apprenticeship, from homes to institutes and universities, being a natural transition.

Currently in Nepal, there are two universities that offer raga-based music and ethnomusicology. However, with demand, there are lots of private institute catering to popular forms including electronic music. In 2016, Music technology has been introduced in TVES high schools as an acknowledgement of the growing demand in academics and more so for the employment opportunities in the Nepali and global music and entertainment industries. As a discipline itself, as Born and Devine (2015) states,

Music technology is a constantly developing area requiring up-to-date equipment for creative work and recording. This directs us to the educational reverberations of the growth of the digital consumer music technology industry – an industry in which ‘the incursion of capitalist [and consumerist] relations’ into musical practice has long been wedded to sunny discourses of opportunity and promise. (p. 145)

At best, it offers a plethora of opportunities however as history has shown, it does not come without its share of inequality in various forms as has been observed in Britain, there existed a less favorable environment for women pursuing MT due to various factors (Born and Devine 2015).

In sum, the cumulative insights from feminist science and technology studies and the sociology of music education suggest that while girls and women are no longer formally excluded from scientific and (music) technological pursuits, they are subject to observable processes of gendered exclusion – occupationally, discursively, spatially, and practically. (Born & Devine 2015, p. 150)

Gender differences in technology, can be said to be a sign of broader gender discrepancies. A girl having low self-confidence in her mastery of the subject could be a result of unseen gender issues. In Nepal, this may well be the situation depending on the overall circumstances of the pupil. Given our country's unstable political situation to lack of basic necessities, the problems might be more deep seated than we know.

CHAPTER 3: Theoretical Framework

Broadly music technology means the use of any device or tool which helps musicians to play, create, compose and record a piece of music/song. We can trace back the origins of technology used to the pre-historical time when people started to drill holes on bones and use them to produce music. Invention of gramophones, radio, tape to digital means all have contributed to music and is ever changing how we create music. With the affordable access to computer Digital Audio Workstation (DAW) and Mobile Audio Workstation (MAW), the term Music Technology is often synonymous with Computer Music. However for a majority world like Nepal buying a decent computer with installed DAW can take a chunk out of one's one or two years salaries. In Nepal, upper middle class families can buy hardware and software for their children while the lower middle class and people under poverty line cannot afford. Even for schools, to buy a few music computers for students is a costly business. This socioeconomic status has created what Robert Putnam (2015) calls an 'opportunity gap'. According to Putnam (2015), the opportunity gap is created more by what happens to the kids before they get to schools, by things that happen outside of schools, and by what the kids bring or don't bring to the schools, some bring resources and others bring challenges (p. 182). This is perhaps particularly relevant for music technology classes which are often conditional to having particular equipments or resources at home. This can create

inequality in broader society, with students who are already disadvantaged continuing to have fewer opportunities to better lives through education.

CHAPTER 4: Methods

4.1 Research Aim and Questions

The overall aim of this study was to investigate how music teachers can promote equality in their classrooms. This was investigated through two research questions:

1. How have these two girls experienced inequality in the music technology class?
2. How can the teacher work to enhance equality in the music technology classroom?

4.2 A Case study of my own classroom

This research was designed as a case study. Researcher Robert K. Yin (1984) defines the case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (p. 23). Case study research aims to understand a complex issue and add to what is already known through previous research. Researchers have used the case study research method for years across a variety of disciplines.

Though the issues for female artists and gender imbalance in the music industry have been examined by music scholars, the particular impact of such imbalance within the field of music technology/production has been under-researched. Especially in developing countries like Nepal, the area which women are expected to occupy in music is that of a singer. The woman artist is still assumed to be, 'just the singer' and is seen as requiring none of the skill associated with mastering an instrument while the male singer are not judged even if they 'just sing' in the band. There has not been any celebrated woman music producers in Nepal. In direct contrast, audio engineers and music producers, dwell in areas of expertise and power clearly marked as male.

The case being investigated in this particular study was my own classroom where there are five grade nine students, three males and two females. Socioeconomic background of three boys are very good while these two girls are rescued children and living in an INGO. Male students have access to technology at their homes as opposed to these two girls who can access technology only in classroom. Their lack of interest in music technology slowly changed as school installed/assigned dedicated computer for each student.

4.3 Data Collection

The data for this study was collected through interviews. Interviews were selected as an appropriate method because it is easier to collect data since I'm working with only two girls in my classroom. It allows me to adapt as well as stay within the bounds of designed interview questions. I have chosen semi-structured interview as some of the questions and sequence were determined in advance, while others evolve as the interview proceeded. Following an interview guide included in Appendix A. These questions addressed topics such as their individual backgrounds, their involvement and participation in the music technology classroom, and their hopes for the future.

I took one interview with both students together as they felt comfortable that way. The interview was conducted in Nepali language as they can express it better in their mother tongue. Later I used the recorded interview to analyze and find themes.

4.3.1. Research participants

PUSPA

Puspa is 15 year old; she was enrolled in Music School (MS) in 2016, now she is in Grade 10. She also participated in Nepal Idol, a reality TV show in which she made it up to top 30. Puspa is from marginalized community group mostly engaged as laborers, service providers like tailoring and also musicians who play traditional music during wedding processions.

Puspa unfortunately lost both her parents in a road accident when she was very little, as she recalls, leaving behind her little brother to herself. Shortly after the accident, her uncle took her away from her brother to New Delhi, India to work as a household support in a muslim community where she

was tortured and kept brutally in a store room for years forcing her to act as one of them. She remembers she was just about the age of six or seven then. After years of torment, with many failed attempts of escaping, she finally made it to the police station pleading to help her go back to Nepal. She then was sent to an orphanage in India until she was rescued by an NGO working for the betterment of girls in need. Since her rescue, she got the chance of living as a normal child attending a normal school.

Puspa remembers how she used to love and enjoy music even in those desperate days in India. Singing and dancing alone, remembering how her brother used to enjoy listening to her songs which has always inspired her to keep going no matter the circumstances. While she was perusing her education in a normal school, soon enough a Music School (MS) in search for extraordinary talent in music, discovered Puspa with her strong and potential voice. MS being a first formal music school in technical and vocational stream, Puspa feels she finally found the right path to reach her destination.

BINU

Binu is 15 year old; she was enrolled in MS in 2016, now she is in Grade 10. Binu came from the community where education is not even an option for girls. With the living standard below poverty line, her parents send her away from Makwanpur district to an orphanage from where NGO rescued her as an infant.

MS with the help from NGO discovered Binu with sweet and potential voice for singing. She is very happy being admitted to the school that can give her a secure future, the future where she aims to become not only a complete musician but also to become a professional music teacher.

4.4 Data analysis

For this study I used Thematic Analysis. According to Braun and Clarke (2006), Thematic analysis is a method for identifying, analyzing, and reporting patterns (themes) within data (p.6). Case study research can benefit if we can identify patterns and come up with several theme. In this case study, I identified two broad themes:

1 Socio background

2 Classroom environments

4.5 Researcher Position

I have been taking music technology classes since the beginning of Technical and Vocational stream of education started at Music School (Name changed). I'm also the principal of this school and one of the key members who developed music curriculum for this stream of education. As a result I personally have put in much time and effort and have developed an attachment with the curriculum and classes.

In most parts of South Asia, a principal of a school is seen as an authoritarian figure, students actually try to avoid principals however with the nature of this music school, MS's teachers and staff has successfully established trust and a comfort zone with the students. Before approaching with the interview questions I started engaging in informal discussions prior to the data collection to try and establish a more open, trusting relationship, which included some activities like watching YouTube videos of their favorite artists, reality TV's musical programs (Nepali Idol, Nepali Tara etc), discussing about genre, movie sound and score etc. Now whenever they have free time they come to my class for internet access to check out some artists.

4.6 Ethical Considerations

First I had explained to the participants what this research is about, why I am doing this and that this is a part of my study and if they are willing to participate to which they agreed. Both participants' names have been changed to ensure anonymity.

CHAPTER 5: Findings

Data analysis identified two main themes in the interview material: the socio background of the students and classroom environment.

5.1 Socio background

Here **Socio background** refers to **resource limitations**. Yet there can be other elements such as income, food security, education, health, transportation mobility that can influence an individual's, families or communities social behavior. All these factors can be advantageous or disadvantageous to an entire group or class of people. Other factors in this study, might include social acceptance or isolation by a dominant group especially towards rescued children who are sharing the same roof with rescued trafficked sex workers but these are beyond the limitation of this research.

Access to information

Growing technological advancements have required a shift in thinking and acting in education settings. The society's awareness of growing technology and its affect in every part of our lives has been recognized also by the Nepali government. Finance Minister set aside Rs one billion to hook 7,000 government schools to the internet in the coming year. If the new budget is actually implemented, 20 percent of the schools in Nepal may soon have computers and internet connections. The growing impact of internet accesses to the two most popular social media sites in Nepal, Facebook (8 million active users each month) and Youtube (5 million registered users). It is very evident that the youth of Nepal are accustomed to the new digital age and access to computers at cyber stations, smart phones and tablets has become a household thing. Yet for these two girls, their living conditions involve a different kind of access to technology where they have to follow rules and regulations of their residency. As Puspa explains,

We use our house computer sometimes but we have to wait for our turn we are not allowed to use social media like facebook and youtube. But we do have computer class (Puspa)

Although the organization where these girls are living has good music program with in-house music teachers and some of the renowned faces of music/film industry visiting the center for concerts/talk having a very positive impact on the children. (Tracy Chapman, Demi Moore, Suniti Chauhan to name a few). Puspa mentioned,

Suniti Chauhan had visited our home and when I sang for her she said you have a beautiful voice, you should be a singer, that is when I started learning music seriously. (Puspa)

Without the access to technology these girls lacked firsthand experience/ information how and where about of the technology involved in music (programming and recording etc). Binu mentioned,

We did not know we can use computer to create music, after our first music technology class we asked our computer teacher at home, he knew about it but did not know how to. (Binu)

Knowledge is power

The knowledge of technology has boosted the confidence of these girls. They feel that they know more and have a sense of control. This was described by Puspa as a learning process,

I used to wonder how come such good singers sound horrible during live performance, now I know in studio computer can make my voice sound different, I can even tune it to pitch and add echo and make it sound professional. (Puspa)

The technology gives an access to world of instruments and music. It will take years off from practice to master an instrument but with the use of sample library it is just a click away. As Puspa said,

I like music technology because I don't have to spend hours practicing the instrument then record, I don't have that much time to learn all the instrument and record, here I can just write notes and have computer play the sound of any instrument I want and hear it right then and there. (Puspa)

However, Binu noted that this was not totally separate from other musical skills,

But of course we need the background of music theory and writing skills, it is just easy to create perfect sounds from different instrument...I mean without mastering the instrument. We are taking Keyboard, Guitar, Percussion and other instrument classes along with vocal and dance. (Binu)

Rather, the music technology class was seen by the students to synthesize their knowledge and skills, and put it into practice in a different way,

In this class everything comes together we use the knowledge from other classes and transfer it to computer, and it plays it back for us, I can decide if I like it or not then change.
(Puspa)

Binu expressed a sense of pride in her skills, and considered herself and the other students in a position of advantage,

We are the first batch in Nepal, when we graduate we will know so much more than other music students, this will put us in comparative advantage to create our own music and share it to the world (Binu).

Peer learning and inspiring

Being the first batch of Technical and Vocational School of Music and sharing the same space has led to communal bonding and a sense of belonging. Puspa confirmed Binu's comment,

Yes we are the first batch, five of us, guys helps us too especially Subash (name changed) has all these fancy gadgets at home and he can already create nice songs in his laptop, we don't have that but in school I have my computer and I create beats using FL Studio, I like creating beats. (Puspa).

She extended this sense of pride in a way that also challenged traditional hierarchies between more and less experienced students,

Sometimes even our seniors come and ask us how to do certain things, we like to help them as they did not get what we have, Subash and we have been telling our seniors that they need to learn technology to be a complete musician. (Puspa)

5.2 Classroom environment

When we first started the MT class for students I as a teacher had one computer installed with music softwares, I was using the same computer for my administrative work which contained information like curriculum drafts, student's information, schools financial documents and other important data which is limited to upper level management. I could not risk giving access to my computer to novice hands. At this time the classes was limited to observations. It was during this time when the pupils who had access to technology at home could go to their home and practice what the lesson required. Both Puspa and Binu rather lacked required facility at their home. However they are very good in theory (40%) but fall short in practical (60%) of the required marks for grading. After the school installed computers for each (five) students the level of these girls interest and performance increased. As Puspa explained,

I have my computer now, I can use my earphone and make music in it, I can come back and add more ideas and it is always there in my folder.

A dedicated computer has given these girls the access to MT but it is limited to five class hours a week. According to the nature of Nepali school system there is a division between theory and practical class a ratio of 40:60, which means in actual academic year 51 class hours are for theory and 77 class hours for practical. Roughly this translates to three practical hours per week. However, the students expressed a desire to spend more time learning and working on their music,

I wish there was more time to use computer, we can't go back home and practice. (Binu)

We can come to school on Saturday (public holiday) also to use computer if school allows.

(Puspa)

CHAPTER 6: Discussion

Although computers have been around for many years, if we look back to the '90s, having a personal computer (PC) was very rare even in developed countries in America and Europe. Most of the research work conducted during these decades (80's 90's) has pointed out that MT is something of a male domain and is still looked upon like it is something that males do. As Volman

and van Eck (2001) describe, access to computers and at home have a significant impact on equality,

When computers were first introduced in the 1980s, gender differences in the use of computers at home and participation in computer activities at school were soon identified. Often the differences were not large, but they were certainly consistent. More boys had a computer at home and used it more often in their leisure time. Girls and women attended computer clubs, camps, and courses in their leisure time less often than boys did and spent less time reading computer magazines. Boys also spent more time at school in front of the computer, during, before, and after lessons. (p. 616)

In Nepal owning a PC is still rare but in urban city and metropolitan cities like Kathmandu it started during 2010. It is safe to say that Nepal entering a digital world in later time has provided these students an advantage of technological leap. These students don't have to learn the complex language of computer to function software, although all software does have a learning curve, software companies are spending billions to make their program user friendly and has been the pitch for sales.

I believe that if we give access to MT as early as possible, students will have better performance regardless of gender. The most of the research has been conducted in higher education for MT degrees where MT is a career choice. How my study differs from other researches is that I'm doing a case study of my own class, only two girls and MT is not a choice for them but a compulsory subject. The potentials of technology to improve access to music learning and music making have been noted by Comber, Hargreaves and Colley (1994), and this may be true in Nepal as well. They write that "the years of arduous practice needed to develop proficiency on an instrument, or the ability to learn and read staff notation spring immediately to mind" (p. 125) though MT may also overcome other barriers, such as social class or gender. The two girls interviewed for this study believed that if they have more access their work will improve. Compared to other male students in class, Subash is the one with access of latest technology at his home while there are other two boys Manish and Shyam (Names changed) who has their own PC but lacks the setup for MT at

home but still can practice with limitation of sophisticated gears and MIDI setup. Under the circumstances the girls have performed better than the later boys.

New batch 2017 grade nine of MS consists of one girl and seven boys where the situation of socio background has been reversed here girl has access to computer at home while rest of the boys are recruited as MS carried out a talent hunt through seven provenance of Nepal and are provided with scholarship. Coming from the villages of Nepal, some of the students are using computer for the first time. They are also struggling with the jargon that comes with technology as their proficiency of English language is rather poor.

In this case study with two girls, it is very clear that they did not experienced gender biasness towards MT being male domain as it has been suggested in other research but have experienced inequality in the music technology class because of the lack of resources available to them. As a teacher or academic institution we can turn things around if we can provide the right tools and access to students, access to Music Technology.

CHAPTER 7: Conclusion

This case study has looked at the experiences of two girls enrolled in MT class, first aim of this study is to identify if they have experienced inequality in the music technology class. In our conversation the main issues for these girls were "access" and it was brought up frequently. For a country with low GDP, a subject like MT is very ambitious but achievable. According to the latest data of Nepal Telecommunications Authority, the internet access in Nepal has reached to 44% which means out of total of 28 million; 11 million of the population has access to internet. Compared to previous year, the increase of internet users is more than 10 percent. Even though this is a promising growth rate, access to music technology is not insured which comes with software and hardware. It will take many years for all pupils to have an access to MT at home. School running these programs should insure that all the required infrastructure and equipments are in place, always updated and available for the students. Student should have an access to these facilities all the time.

Secondly it was to reflect on my own teaching and build strategies to enhance the equality in MT classroom. A school can be seen as a melting pot of different culture, religion and in this case socioeconomic background. It is always the teacher's responsibility to respect pluralism in classroom. What students can bring to class is directly reflected by the socio background of the student. In my MT class Subash's project always sounds better for the fact that he has information access and watches Youtube reviews/tutorials of different warez and third party plugins which he downloads to use while other students are limited to plugins that come with the software. As a teacher we need to understand these differences and look at the learning outcome, which is supposed to be the goal of the class rather than what the students bring to class.

In this part of the world it was only 30 years ago when people used to think Mathematics and Science were subjects for males and females were expected to pursue home economics, interior designs and other forms of humanities. I feel that it is labeled by the job market what to be expected from all gender. In music as discussed, women are expected to sing; even for us teaching artists, when we see a Nepali female with an instrument on stage, there is definitely an "oh" moment as usually we are not anticipating it and takes us by surprise. In finance or banking we see male accountants/auditors and female tellers. In medicine it is mostly male doctors and female nurses. In fashion we see lots of females but when we see a male, the first thought that crosses our mind is if he is gay. We have been accustomed to stereotypical views that have been fed by the society which in turn has been heavily influenced by the job market of the yesteryears. Presently adding social media in the mix, especially in music, we are strongly moving towards a DIY approach, made famous by the punk and metal bands. Now the world is at our disposal and we don't need record labels to reach out to the world (this statement is only true in terms of distributing via internet for promotional purposes and when huge personal finances are not involved). It seems that MT is going to be a necessity for the new digital age. Gender is not an issue per se here but rather it is imperative to ensure access regardless of gender or other barriers.

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Appendix A: Interview Guide

Part A: Student and technology: background

Can you tell me a bit about your music background?

How long have you been using some kind of technology to listen to or make music?

Do you have access to this kind of technology at home/where you live?

How would you compare making music with technology to making music with an instrument?

What do you think is particularly good about making music with technology for you?

What do you think are the main challenges to making music with technology for you?

Part B: In the classroom

Did you want to be in the music technology course when you first started? Why/why not?

How have you found the music technology course?

Have your thoughts about the class changed over time? In what ways?

What has been the most rewarding thing about the class for you?

What has been the most challenging thing about the class for you?

What about the equipment you use in class, or at home? Has that been easy/hard? Can you tell me more about your own experiences with the equipment?

Do you think anything about the class is unfair? Anything even out of class time that affects your participation and ability to join in or achieve?

Part C: Hopes for the future

If you could change anything in our class, or your home life in order for you to succeed in class, what would it be?

Is there anything else you would like me to know about that could make your experiences in class better?