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Department of Music, Education, and Society

Supervisor: Karl Asp

Examiner: Erkki Huovinen

Hamilton Eklöf

Collaborative Music Production for a TV Series

A Case Study

KMH Kungl. Musikhögskolan

Abstract

In this thesis, the focus is to enhance our understanding of the collaboration process within film music production, with the intention of applying this knowledge to music education. Data were collected through video observations and analyzed using Biasutti's (2018) theory and thematic analysis. The results reveal that collaborative film music production comprises five key themes, initially derived from Biasutti (2018). However, modifications to these themes emerged as a result of the study's application in a music production scenario rather than a compositional scenario. The identified themes are experimenting, listening/evaluating, constructing, recording, and sound design/mixing. The results show that these various themes are interwoven in different ways. Together, they intricately shape the collaborative process of music production. The interplay between experimentation, listening/evaluating, constructing, recording, and sound design/mixing underscores the depth and complexity of collaborative music production.

Keywords: Collaboration, Music production, Film music production.

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1 Introduction

In this case study, I delve into the realm of music production collaboration, with a specific focus on analysing its application within the context of music production education. The case study explores the collaborative music production process between myself and my collaborator, Gustav. This process spans various stages, including writing, arranging, recording, producing, mixing, and mastering music for a South African television series.

The field of music production, defined as the art of crafting music to complete recorded pieces (Gullö, 2010), is integral to our study. However, teaching music production comes with its own set of challenges. Gullö (2010) sheds light on issues such as the absence of established teaching traditions and specific educational resources for this subject. Both music production and music production education remain relatively understudied, presenting difficulties for educators, students, and those eager to delve deeper into the field (Gullö & Thyrén, 2019). Despite commendable efforts, a persistent lack of clarity surrounds the development of ideal pedagogical frameworks for music production in higher education (Anthony, 2020). This study aims to contribute insights into the collaborative music production process and, in turn, offer valuable perspectives for addressing the challenges associated with teaching music production.

In Sweden, collaboration is a significant objective for music production in high schools, as emphasized by Skolverket (2011). Collaboration provides students with the capacity to perpetuate their learning through the development of communities of practice within collaborative relationships (Williamson & Luebbers, 2023). Hence, I contend that it is essential for music production teachers to acquire further knowledge about collaboration in music production.

There are several motives for engaging in the collaborative process: including generating new ideas, leveraging complementary skills, fostering collaboration, and enhancing the overall success through team synergy (Wilsmore, 2019). Research findings further support the notion that music production is a collaborative effort involving specialists in acoustics, emotion, and musicality who draw upon their expertise and practical knowledge to blend their resources and create a musical expression of a cognitive vision (Lefford, 2015). Increased collaboration between producers and songwriters is noticeable in songs entering the US music charts, specifically the US Billboard Top 100 (Sutherland, 2017). For instance, in 2016 only five songs written solely by individual songwriters entered the

US Billboard Top 100 chart (Sutherland, 2017). This contrasts with the period spanning from 1950 to 2009 when approximately 50% of 'hits' in the US and UK were composed by individual songwriters (Pettijohn & Ahmed, 2010). Given the potential benefits for music producers who excel in collaboration (Wilsmore, 2019), I argue that music production teachers must enhance their students' collaborative skills in music production. Drawing from my practicum internship experiences at the Royal College of Music in Stockholm, I have observed that collaboration in music production is often necessitated by time constraints and limited studio availability. Consequently, teachers frequently opt for assigning group projects rather than individual tasks.

When I have been involved in music production collaboration, I have encountered challenges within the collaborative process, often struggling with a lack of clear strategies for resolution. Through this thesis, I aim to contribute to a deeper understanding of collaboration within the realm of music production, ultimately offering insights that can benefit future educators in this field.

According to Gullö (2010), *music production* refers to the intricate process of crafting music. In this context, music is characterized as structured sound that is perceptible and comprehensible to humans, while production signifies the act of generating something that results in a tangible output – in this case, recorded music. Hepworth-Sawyer and Hodgson (2017) contend that music production is frequently defined too broadly, diminishing its utility. They assert that irrespective of genre or circumstances, pre-production, engineering, mixing, mastering, and some forms of distribution are essential for any record creation. In this thesis, I will employ the term music production to describe the process of composing or modifying music with the ultimate objective of completing a recorded piece of music.

There is a significant difference in the roles that *music producers* play in a production, but the role encompasses both artistic and administrative responsibilities (Gullö, 2010). The outcome of a music producer's work is recorded music. A music producer should be creative, trust in their abilities, be able to collaborate and act as a leader. The music producer has a crucial influence on the final auditory result (Gullö, 2010). The role of a music producer has expanded with technological advancements, and there is no longer a clear distinction between sound engineers, music producers, arrangers, mixers, and musicians. The producer's role encompasses all tasks involved in creating a music recording (Wilsmore & Johnson, 2022). I

define a music producer as someone who orchestrates and oversees the entire process of capturing organized sound to finalize a recorded song.

The computer-based programs used for music production are called *Digital Audio Workstations* (DAWs) (Gullö, 2010). In a DAW, all the tools necessary for music production are available, allowing the entire music creation process to take place within the software. This means that recording, editing, mixing, and mastering music can all be done in a DAW.

2 Literature Review

The chapter provides an overview of previous research on collaboration in music production, collaborative practices, and music production itself.

2.1 Collaborative Practices

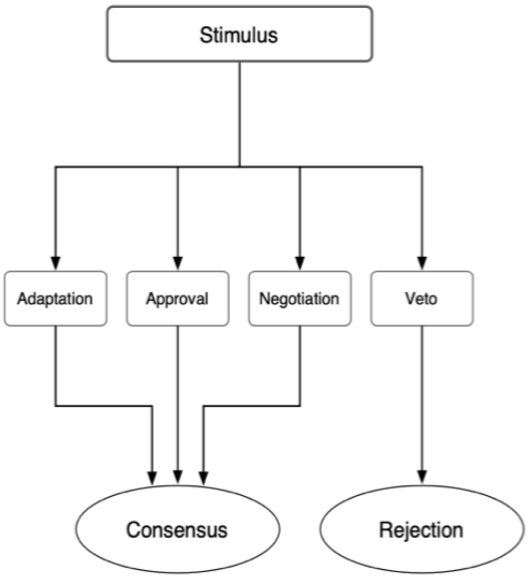
In a 2018 study, Biasutti examined how collaboration occurs in online music production through observation and semi-structured interviews, which were analyzed using the Constant Comparative Method. Biasutti (2018) states that the exploratory nature of the research does not allow for generalizing the collaborative processes to other contexts because only one music group was involved. According to Biasutti (2018), additional data is necessary. Therefore, it would be interesting to consider a study with more groups to strengthen the findings. The results show that experimenting was a common way to generate ideas in the beginning stages and ideas were generated to a backing track. Biasutti (2018) suggests that music production classes should emphasize the journey of music creation rather than fixating solely on the final product. This approach fosters the development of students' unique abilities and hone their critical thinking skills.

There are various phases in the collaboration within music production (Biasutti, 2018). Through semi-structured interviews, Biasutti identifies two overarching themes: activities and processes. In the theme *activities,* musicians engaged in listening to songs from other rock bands to derive inspiration and establish a general framework for their work, a finding reminiscent of Bennet's (2014) conclusion that external songs often influence songwriting teams, often acknowledged through verbal references to other music. The act of listening plays a crucial role in defining the working context (Biasutti, 2018). Experimentation emerged as a guiding activity throughout their creative process, providing the foundation for composition. This experimentation involved a deep exploration and examination of various musical ideas, with improvisation being a key component. Listening served the purpose of identifying material to be incorporated into the song. Analysis and selection of this material, aid musicians in pinpointing interesting elements for the construction of the song. Participants reported a gradual and careful construction process, utilizing the material they had produced. The arrangement of the music piece evolved through the refinement of ideas generated during the sessions, incorporating combinations of parts and adaptations of musical fragments. Due to the possibility of evaluation occurring both before and during

construction to monitor the building process, these phases may be repeated numerous times, and there may also be an overlap between them (Biasutti, 2018).

In the theme of *processes*, participants discussed their working methods and the dynamics of online activities, highlighting categories such as notation, method, meta-cognition, and collaboration (Biasutti, 2018). Notation practices varied among members, with each employing idiosyncratic systems, including tablature, sound-hearing notation, and computer-based MIDI sequencing. These individualized notations are aimed at remembering sounds rather than transmitting musical information to others. Regarding the composition method, participants emphasized a work-in-progress approach, working towards approximation guided by overarching ideas rather than adhering to predetermined methods. The collaborative process involved exploratory sound exploration, guided by improvisations and free productions. The participants demonstrated awareness of their informal and inductive approach, deducing principles from the characteristics of the produced material (Biasutti, 2018).

Bennett's (2014) work revolves around a comprehensive framework for collaborative songwriting, emphasizing six integral stages: stimulus, approval, adaptation, negotiation, veto, and consensus. These stages intricately shape the generation and refinement of ideas. When an idea is vetoed, the original contributor can opt to accept or engage in negotiation for further enhancement. This model’s applicability extends beyond songwriting to potential application in other collaborative art forms. It encompasses nuanced interactive behaviours, including improvisational elements in the testing of ideas. Below is Bennett's (2014) presented Stimulus model.



Mutual consensus plays a key role in the initial finalization of the song (Bennet, 2014). When a composition veers too close to replication, songwriting teams typically reject it. Prior exposure to a variety of music leads songwriters to form implicit assumptions about the structural definition of a song. Drawing on references allows songwriters to work more efficiently, streamlining their creative process. Among experienced songwriters who collaborate a verbal idea is seldom not tried, instead, they try the idea or suggest alternatives to it.

Taylor (2016) presents different categories of relationships that emerge when directly collaborating with others. Numerous activities that writers label as collaborative could be more accurately characterized as other modes of working together. Specifically, certain relationships termed collaborative may be better described as either cooperative or consultative. The meanings of these latter two terms are firmly established; in one instance, they denote shared decision-making, while in the other, they signify the shared process of generating imaginative inputs or suggestions. Taylor (2016) proposes that consultative and cooperative relationships are prevalent forms of collaboration in the arts, potentially being the most common. Additionally, he suggests that cooperative relationships can manifest in two distinct forms:

1. In instances where there is an agreed framework or scenario, perhaps produced collaboratively, and subsequently, partners contribute separately, this is referred to as pre-planned cooperation by Taylor (2016).

2. Conversely, when partners collaborate in making their distinct contributions while sharing decisions on the contributions as they evolve, Taylor (2016) terms this interactive cooperation.

Certainly, there will be instances where participants transition between various types of working relationships as they progress through different phases of the project, they are engaged in.

Dillon (2003) researched collaborative music composition, particularly exploring the dialogues and processes involved when young people (aged 11–17) used a pre-recorded sample software package. The study, conducted in both formal and non-formal settings, aimed to understand the collaborative and creative processes during open-ended music tasks facilitated by technology. Dillon (2003) suggests that problem formulation, rather than problem-solving, serves as the most accurate indicator of creative thinking. The acts of problem finding and problem definition, coupled with an orientation toward discovery, constitute essential aspects of creative work. Problem finding and problem definition differ from the procedures associated with well-defined problems, which have established methods and solution processes. The results reveal a continuous and cyclical process of searching for and selecting samples, followed by collaborative listening and evaluation, editing, and refinement. The evaluation and refinement processes serve a dual purpose for the participants: they provide an opportunity to reflect on their existing work and they spark the generation of new ideas. The participant's ideas were mainly generated by a shared understanding of the task. The emergence of new ideas led the participants to explore, transform, and the creation of additional plans and constraints, driving a continuous cycle of searching, selecting, listening, evaluating, editing, and refining (Dillon, 2003).

The findings indicate that while the participants listened to the composition, an evaluation of the structure took place, leading to refinements through diverse editing techniques (Dillon, 2003). This included tasks like removing redundant samples, rearranging, or seeking out new samples to add. The findings also demonstrate that ideas are expressed verbally and musically. The results also indicate that prolonged periods of explicit argumentation may not be favourable for collaborative efforts on creative tasks. This is attributed, at least in part, to the emphasis on discovery and exploration inherent in open-ended tasks, as opposed to the problem-solving conclusion typically associated with well-defined tasks. The results suggest that peer collaboration thrived in the study, as differing opinions were not in competition, but rather seen as equally valid perspectives, all contributing to the task at hand (Dillon, 2003).

Williamson and Luebbers (2023) delve into the collaborative composition process among jazz musicians, beginning with the researchers' meetings. It emphasizes joint compositional decision-making through an iterative cycle of listening, responding/offering and compromising, highlighting the importance of integrating the jazz improvisers' perspective into collaborative composition scenarios.

In tertiary music education, collaborative composition has far-reaching implications for teaching and learning, fostering peer learning opportunities and addressing challenges like writer's block (Williamson & Luebbers, 2023). It equips students with the ability to sustain ongoing learning through emerging communities of practice formed in collaborative relationships.

The results of the study reveal significant changes when incorporating a co-composer compared to the traditional sole-composer approach (Williamson & Luebbers, 2023). These changes include introducing a focal point for inspiration, providing immediate feedback leading to the validation of individual contributions, and expediting the composition process. Collaborative engagement fosters a unique form of reflexivity, encouraging continuous reflection and refinement through ongoing articulation of thoughts and reciprocal feedback. Notably, the collaborative elements of inspiration, immediate feedback, and validation streamline decision-making, mitigating challenges like hesitation, delay, and uncertainty often encountered in sole-composer work by the research participants.

The researchers observe that the collaborative approach acts as a catalyst, expanding individual compositional vocabularies and resulting in a final composition deemed unattainable individually. Collaborative discussions further serve as a mechanism for support, guidance, and encouragement, contributing to an ongoing cycle of inspiration and validation (Williamson & Luebbers, 2023).

There are many reasons for coproduction, such as generating ideas, the synergy of complementary skills, and the desire to work together for the potential of greater success through team effort (Wilsmore, 2022). For collaboration to work, it is necessary to allow a certain space for creativity on the part of both parties (Johnson, 2022). Co-producers develop a high level of familiarity with one another, becoming accustomed to each other's working methods and seamlessly transitioning between different roles (Johnson & Wilsmore, 2022). Producers who frequently collaborate tend to reproduce past problem-solving approaches without seeking approval from others (Johnson & Wilsmore, 2022). When something is outside of the familiar either good or bad, they interact, problem-solve solve and reach an agreement (or have team leader approval). In certain scenarios, having a

team leader can boost productivity. This means the collaborative process is not equal, resulting in less time spent on negotiating agreements. Instead, an executive makes the decisions, allowing the project to progress swiftly (Johnson & Wilsmore, 2022).

2.2 Music Production

In Gullö's (2010) dissertation the findings indicate that a music producer employs elements of leadership and psychology. A music producer is required to lead, make decisions, exhibit drive and creativity, possess social aptitude, and engage in collaborative efforts with others in a humble and personable manner.

Genuine interest in the learning process of the students is an essential quality for teachers who teach music production. Teachers' instructional abilities are as important as their in-depth topic knowledge. The relevance of personal musical production experience for educators in this discipline is significant. It can be difficult for instructors of music production to mentor students when they are presented with the software's tremendously broad range of options. Educators must be familiar with digital audio workstations. The absence of established teaching methods and course materials for music production presents another difficulty for educators.

Brendan (2020) agrees with Beilmeier (2021) in asserting that an effective approach to music production education involves simultaneously integrating both creative and technical aspects of the field. Brendan (2021) advocates for scenarios in which songwriting, performance, sound engineering, and production occur within holistic, collaborative environments. This approach not only benefits students in their pursuit of professionalism but also mirrors the way professionals often work.

There are several key aspects of the music production teacher's role in facilitating effective learning (Brendan, 2021). The educator should have practical experience in the music industry, serving as a valuable sounding board and resembling a colleague in the field. Additionally, the teacher should foster collaboration among students, enabling them to collectively gain experience and engage in reflective processes. Through collaboration, students gain insights into different approaches, enabling them to reflect on both their strengths and weaknesses as music producers.

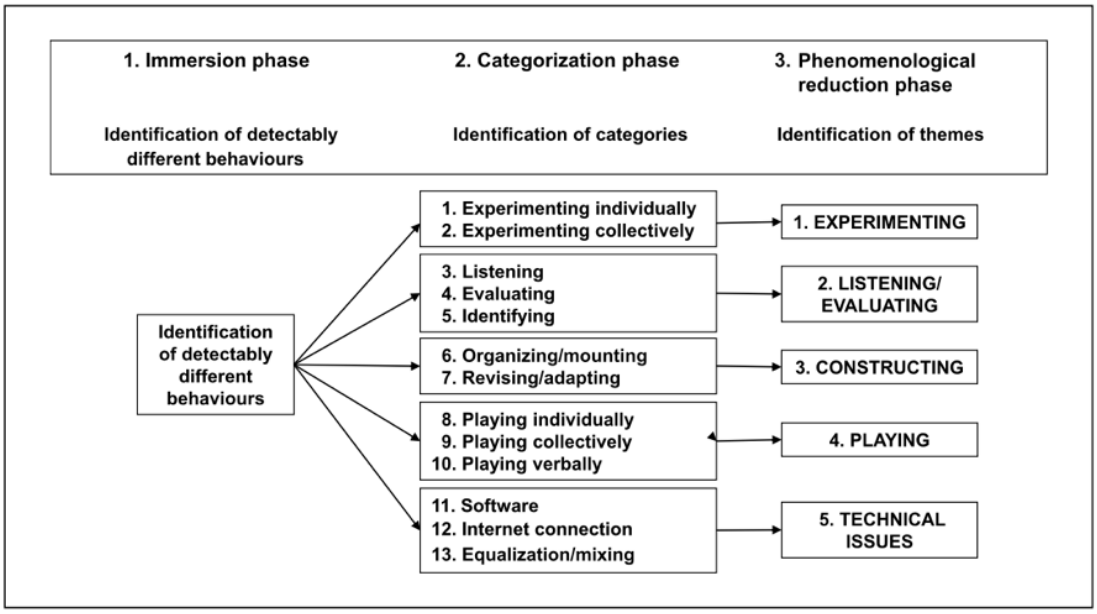
Arguing for the advantages, Bielmeier (2021) advocates for the blurring of lines between technical roles, such as sound engineers, and creative roles, such as composers. For example, when given the chance to write and record a song, a songwriter's interest in sound engineering may be awakened. This

approach emphasizes the importance of integrating creative activities such as songwriting and music composition into the classroom, fostering a more interactive and collaborative learning environment. The research underscores the potential advantages of adopting a comprehensive approach to music production education that seamlessly integrates both technical and creative elements.

3 Biasutti's Categories and Themes

Before commencing the recording of empirical data, I immersed myself in Biasutti's (2018) article, "Strategies Adopted During Collaborative Online Music Composition," wherein Biasutti delineates five key themes: (1) experimenting, (2) listening/evaluating, (3) constructing, (4) playing, and (5) technical issues. During my collaborative music production sessions with Gustav, the distinct categories outlined by Biasutti became conspicuously evident. For instance, as we recorded music for a track, I observed a dynamic interchange between playing, listening/evaluating, and constructing within a short period. Recognizing the practical value of Biasutti's categories and themes, I opted to employ it as the theoretical foundation for my study. Acknowledging the diverse array of categories, themes, and theories relevant to music production collaboration, Biasutti's categories and themes stood out to me.

In Strategies *Adopted During Collaborative Online Music Composition,* Biasutti (2018) identified 13 categories. The phenomenological reduction phase further distilled these into five themes. Biasutti (2018) construed these five themes as encompassing group composition activities: (1) *experimenting*, (2) *listening/evaluating*, (3) *constructing*, (4) *playing*, and (5) *technical issues*. The figure below outlines the 13 categories and 5 themes.



Experimenting encompassed both individual and collective actions, involving the exploration of musical elements (e.g., seeking distinctive

timbres) and spontaneous improvisation to generate novel musical phrases (Biasutti, 2018). For example, engaging in experimentation with a backing track prompted participants in the study to generate innovative ideas within the defined musical context. In collective experimenting, the participants in the study collaborated, creating new musical material in a challenging environment.

In individual experimenting, the participants in the study primarily focused on aspects such as developing a bassline or exploring new timbres with instruments like the guitar or bass. Communication during experimenting relied predominantly on musical expressions with only a few verbal utterances aimed at providing instructions (Biasutti, 2018).

Listening and *evaluating* occurred both during live sessions and on the online platform (Biasutti, 2018). In live sessions, the participants in the study listened to recordings of their improvisations, evaluating them to identify material suitable for the creation of a new musical piece. Dialogues and comments were more extensive compared to while experimenting. Various aspects were analyzed while listening, including the mood of the music and individual phrases. Furthermore, specific attention was given to instruments and timbres in particular fragments. By listening and evaluating the quality, the participants in the study could identify interesting musical passages (Biasutti, 2018).

In the process of *constructing*, participants in the study actively shaped the musical material through various actions, including organizing and mounting, as well as revising and adapting (Biasutti, 2018). While organizing, participants engaged in discussions to define general principles and the framework of the music piece. This included decisions on aspects such as the number of repetitions of fragments, which were subsequently assembled or mounted. Revising and adapting occurred when certain fragments or sounds did not harmonize, necessitating changes to the music material through actions like refining and rearranging the compositional structure. Throughout the construction process, participants alternated between musical and verbal communication, providing musical examples to illustrate their intentions for developing or modifying the piece (Biasutti, 2018).

While *playing*, the participants in the study engaged in individual practice, collective rehearsal, and verbal communication while rehearsing the musical piece (Biasutti, 2018). Participants in the study engaged in individual playing, involving the practice of small musical fragments independently to learn them. In collective playing, participants rehearsed the music piece together to develop a sense of it and build confidence. Verbal

communication during playing included participants confirming readiness and providing instructions on when to start playing or which fragment to perform (Biasutti, 2018).

Regarding *technical challenges*, the participants in the study encountered issues related to software, internet connectivity, equalization and mixing (Biasutti, 2018). Software problems included tasks such as saving files. Internet connection problems arose from the slowdown of the connection speed, resulting in poor audio and video signal transmission. Challenges in equalization and audio mixing required adjustments in balancing the frequency components of individual instruments and improving the volume balance of instruments or microphones (Biasutti, 2018).

4 Research Purpose and Question

The purpose of this case study is to contribute more knowledge about the collaboration process in contemporary commercial music production for application in music education. Empirical data will be gathered from video recordings documenting our collaborative music production sessions in music studios. This understanding will be beneficial for teaching music production. Empirical data will be collected through observations. My research question was formulated as follows:

How can the collaborative processes in music production, specifically focused on producing film music in this case study, be described using Biasutti's categories and themes?

5 Methodology

This chapter provides an overview of the chosen methodological framework for this study. Subsequently, it provides an in-depth exposition of the case study, data collection procedures, thematic analysis, data analysis, validation strategies, and ethical considerations.

5.1 Methodology

The specific findings of the study might not be readily reproducible by others (Bennet, 2014). However, this is a trait commonly found in numerous composition-related studies, and perhaps in all individual-conducted qualitative research within the arts and humanities. Bennet (2014) argues that no study of composers or songwriters can ever be entirely quantifiable or precisely reproducible. Therefore, I have chosen to conduct a qualitative study to delve deeper into the collaboration process within music production, aiming to gain a comprehensive understanding of collaboration in music production. This approach allows for a nuanced exploration that may not be achievable through a quantitative study alone (Creswell, 2018). Qualitative research enables the identification and interpretation of underlying issues, with data collection directly involving music producers. The collected data were analyzed by identifying and exploring different themes, allowing for the interpretation of their significance and underlying meaning by the researcher (Creswell, 2018). In this study, I consider social interaction around something socially determined as music production collaboration based on a specific context at a given moment. Therefore, collaborations and the processes surrounding these collaborations are also understood as socially constructed (Berger & Luckman, 1999).

5.2 The Case Study

In my exploration of the music production collaboration process with my collaborator, Gustav, for a South African Television Series, I have chosen to employ a case study approach. This method allows for a comprehensive understanding of a specific subject, exemplified by my focused examination of one music production collaboration between Gustav and myself (Merriam & Tisdell, 2015; Bryman, 2018). Case study research delves into the intricate and specific nature of a particular case, providing an intensive examination of the environment or scenario in question (Merriam & Tisdell, 2015; Bryman, 2018). Researchers often gravitate towards qualitative techniques like participant observation when utilizing a case study design, especially effective for in-depth analysis (Bryman, 2018). These studies

revolve around the case itself as the primary point of interest, with researchers seeking to illuminate its unique characteristics, a method commonly referred to as the ideographic approach. Generalizability is not a feasible goal in case studies, given their emphasis on a single, distinctive instance (Bryman, 2018).

5.2.1 Information About the Case Study

Gustav and I have undertaken the responsibility of composing and producing musical accompaniment for a television series produced by a production company, slated for broadcast on a streaming service in South Africa in December 2023. The series encompasses eight episodes, each with an approximate duration of 45 minutes. In May 2023, at an informal dinner in South Africa arranged through a mutual acquaintance, Gustav and I met one of the production company's executive producers. Throughout the evening, the executive shared a piece of music that sparked our proposal to produce the song. This pivotal encounter marked the inception of our professional collaboration.

When writing, arranging, recording, producing, mixing, and mastering music for the television series, I argue that we are propelled by strong motivations, including deadlines and financial incentives, which provide a powerful impetus to complete the musical score. During the conduct of this study, Gustav and I were both enrolled in a fifth-year music education program. We commenced our collaboration in May 2023, when we produced three songs for the international television series 'Shaka Ilembe'. In August, we were asked to make the music for this series. After we learned about the main themes and storyline of the series, Gustav and I started coming up with ideas and creating music that fit the project's needs. On September 15th, we convened for our inaugural meeting, presenting ten compositions for review and feedback. On October 12th, following the conclusion of filming and the initiation of the editing phase, we encountered our first critical deadline, necessitating the substantial completion of the musical accompaniment for the project.

5.3 Data collection

According to Esaiasson et al. (2007) observations are suitable when studying processes or structures that may be difficult to articulate in words for the parties involved, this way researchers do not need to rely on what others recount. Those directly involved in an event do not always have the clearest perspective on what is unfolding. Observational studies capture

non-verbal data, focusing on what people do rather than what they say about what they do, as in interviews. Observation is also useful for studying things that are so obvious that people don't think to mention them in an interview (Esaiasson et al., 2007). Considering the insights provided by Esaiasson et al. (2007) on observational methods, I have chosen to employ direct observations. This is because there may be a significant disparity in how music producers and songwriters discuss their collaboration compared to how they describe it in interviews.

Extensive recording for the observations was chosen, aligning with Esaiasson et al. (2007) guidance that once there is no additional pertinent information aiding the research objectives and questions, it is appropriate to conclude the observation. During video recording, continuous choices about what is being examined are made, and these decisions have implications for the conclusions that can be drawn (Esaiasson et al., 2007). An observer engages in transcription, repeated readings, and detailed categorizations, and systematically works towards uncovering the deeper patterns within their material (Esaiasson et al., 2007). A fundamental principle of participant observation is that only those things which can potentially be observed and perceived similarly by several individuals are considered valid data (Esaiasson et al., 2007).

With inspiration from Esaiasson et al. (2007), I documented seven videos with audio on my iPhone 11 between October 6th and October 17th, 2023. I chose this specific timeframe to document the diverse stages of our work on various songs. The videos showcase us engaging in writing, arranging, recording, producing, sound designing, and mixing. It is important to observe that these different stages often intertwine within the same session. The recorded sessions were primarily focused on generating as much music as possible, resulting in a process where we did not progress through one single song from start to finish.

The videos portray us facing the camera, excluding the computer screen from view. Despite our music production for the television series extending over several months, I have opted to concentrate on a specific segment of our collaborations within the scope of this thesis. The recorded videos span a total duration of 474 minutes. It is crucial to emphasize that I did not transcribe the entire content due to time constraints and the scope of this thesis. Instead, I chose to transcribe moments that I considered significant and relevant. When repeated themes occurred frequently, I ceased transcribing that specific theme.

5.4 Data analysis, Biasutti's theory

I utilized Biasutti's (2018) categories and themes as a starting point, but as I found certain categories and themes to be insufficient, I employed thematic analysis to enhance and refine the lacking aspects within Biasutti's categories and themes. I carefully reviewed video recordings multiple times, assigning distinct numbers to various scenes. I used Biasutti's (2018) categories and themes as a theory due to its comprehensive coverage of the collaboration process. While I was analyzing the recorded music production sessions with Gustav, I found these distinct categories and themes to be easily discernible. Nevertheless, I maintained an open-minded approach to the possibility of identifying additional themes and subthemes while I reviewed the collected video data, which led me to thematic analysis.

5.5 Thematic analysis

The data that was not analyzed through Biasutti's (2018) theory was analyzed with thematic analysis, a method for interpreting empirical data by identifying and exploring themes (Bryman, 2018). Recognizing themes stands as a cornerstone in qualitative research, yet it can be challenging to fully grasp, adding depth to this intriguing aspect of the process (Ryan & Bernard, 2003). There is no consensus on what constitutes a theme; some authors argue that a theme resembles a code, while others suggest that it represents a group of codes (Ryan & Bernard, 2003). "You know you have found a theme when you can answer the question, What is this expression an example of? "(Ryan & Bernard, 2003, p.4).

One should be attentive to local typologies or categories—expressions that may be either unfamiliar or employed in unconventional ways (Ryan & Bernard, 2003). Metaphors and analogies utilized by participants to convey their thoughts should also be noted. Observing how different themes evolve within transcripts and other materials provides valuable insights into transitions. Moreover, scrutinizing the use of causal language, such as "due to" or "because," enables the tracing of connections in participants' cognition. It is equally crucial to consider what is absent from the dataset, prompting reflections on missing data. Finally, grounding the identification of themes in established social science concepts can serve as a solid theoretical foundation for the analysis (Ryan & Bernard, 2003).

According to Bryman (2018), it is recommended to construct an index comprising essential themes and subthemes organized within a matrix that incorporates cases and variables. These identified themes and subthemes fundamentally embody recurrent motifs within the text applied to the data. They arise from a thorough, iterative examination of the collected dataset.

Following this, they are categorized into core themes, and subsequently, the data is represented in the matrix in relation to subthemes. In the process of identifying themes within qualitative data, it is essential to adopt a discerning approach. This involves recognizing recurring patterns, known as repetitions, that traverse the entirety of the dataset (Ryan & Bernard, 2003; Bryman, 2018). The higher the occurrence of the phenomenon representing a theme, the likelier it is for that theme to be accurately recognized. This could also explain why certain themes may take precedence over others when translating qualitative data analysis into written form (Ryan & Bernard, 2003). Consequently, there may be an underlying element of quantification at play, impacting the identification of different themes, with some being deemed more pivotal than others.

To enhance the depth of the analysis, I opted to employ Braun and Clarke's (2006) six-step guide for conducting thematic analysis. It is not necessary to follow the guide in a specific order (Braun & Clarke, 2006). Step one involves familiarizing oneself with all the empirical data. In step two, codes are identified by labelling interesting and related data. Step three involves organizing the codes into themes. Step four entails reviewing the relationships between the codes and themes or between the themes. In step five, codes, categories and are assigned meaningful and descriptive names to accurately represent their content and facilitate understanding. Finally, in step six, the themes and literature are connected to the research questions.

5.6 Validation strategies

Creswell (2018) suggests that while there is no specific, universally recommended number of observations for observational studies, he provides a general guideline of four to five observations. In my study, I will be focusing on observing only one group, a choice that may invite criticism. However, I will defend this decision based on the time constraints imposed on this thesis. The categorization for the analyses is rooted in Biasutti's (2018) model, where he exclusively examined a single group. He defended this approach by stating that the results do not readily allow for generalizations about collaborative processes in different contexts. I will employ this rationale in my thesis.

5.7 Ethics

By the guidelines set by the Swedish Research Council (2017), it is essential to provide participants with comprehensive information about the study, ensuring their right to withdraw at any stage and maintaining their

anonymity. During the observation, I focused on establishing a comfortable environment for Gustav and provided reassurance that he had the freedom to delete the video and decline to answer any sensitive questions. I have used the fictive name 'Gustav' for my music production collaborator to have an element of anonymity. However, given the clarity of the information in the case study, achieving true anonymity is challenging as my real name, along with the television series, might be easily identified. As highlighted by Esaiasson et al. (2007), choosing anonymity may result in limited information and the omission of specific details. Therefore, I inquired about Gustav's stance on anonymity. Since he did not express a preference for anonymity, I obtained Gustav's approval to openly discuss the project. Having the freedom to delve into the specifics of our project emphasizes the uniqueness of this thesis as a case study.

6 Results

This chapter is a product of the methodology outlined in the previous chapter. The empirical data underwent organization, and categorization, and was subsequently divided into the following five themes: experimenting, listening/evaluating, constructing, recording, and sound design/mixing. These themes will be addressed in detail below. In the transcription, 'G' represents Gustav, and 'H' denotes Hamilton. Verbal communication is written in regular text, while actions are formatted in italics.

6.1 Experimenting

In the theme of experimenting, the categories employed were individual experimentation and collective experimentation. Experimentation encompassed both individual and collective endeavors, involving improvisation regarding melodies, chords, rhythms, and the timbre of the instruments. In the initial stages of music composition, individual experimentation predominated. Both participants engaged in quiet instrumental play, exploring riffs, chords, and melodies. Furthermore, before recording music, one individual often dedicated their attention to configuring the DAW settings, ensuring everything was in place for a successful recording. Seizing this moment, the other individual often engaged in a brief period of individual experimentation. The example below illustrates that experimentation involves both individual and collective elements, with swift transitions between the categories. It also demonstrates that individual experimentation often occurred while the other person was engaged in preparing the recording.

> Video: 06/10-2023
>
> 31:*30 H and G are engaged in individual experimentation. G moves a cabasa through the room, accidentally producing a sound.*
>
> 31:31 *H exclaims*, yes! We could incorporate some of those little 'humming rhythms' with a bit of reverb.
>
> 31:33 *G strikes a snuffbox against a conga.*
>
> 31:40 *H is preparing for recording, and G is getting ready to play on the conga.*

31:55 *G experiments with hitting different parts of the conga to create different sounds, while H fixes the soundcard and headphones for the recording.*

32:02 *G strikes the conga, saying,* listen!

32:05 H: Yeah!

Gustav delves into the sonic possibilities of the conga by striking different parts, illustrating how experimentation encompasses listening and evaluating. Examining the timecode in the example reveals a rapid transition from individual experimentation to recording. It also illustrates that while H is engaged in individual experimentation with a sound in the DAW, he is receptive to hearing other sounds and imagining their potential sonic qualities. The example further illustrates the relevance of sound design/mixing while experimenting, as H suggests incorporating reverb on the cabasa.

6.2 Listening/Evaluating

In the theme of listening/evaluating, the categories encompass listening, evaluating, and identifying. Listening/evaluating took place during all themes in the music production collaboration. During experimentation, we engaged in selective listening, both to ourselves and each other, aiming to envision the potential sound of the finished idea. During experimentation, our listening/evaluating encompassed discussions about how the music resonated with our emotions. Additionally, we considered technical aspects, such as how a specific instrument sounded within a particular register.

While playing to the track, we actively listened and evaluated how the played elements integrated into the overall composition, assessing whether they served the song's purpose. In the playback of the newly recorded material, our listening/evaluation process honed in on aspects like timing, instrument timbre, and pitch. After recording an instrument, the findings suggested that feedback regarding the timing of the recorded instrument primarily came from the person who played that specific instrument.

While implementing changes in the music—adjusting chord progressions, altering sounds, adding new elements, or muting specific sounds or notes—the process of listening/evaluating actively involves observing these changes within the context. This is accomplished through listening/evaluating, spanning a few bars before and after the change occurs, as exemplified in the next example.

Video: 06/10-2023

1:27 *H: Editing virtual string ensemble.*
1:40 *Listening from 4 bars prior.*
1:56 *The chord change occurs.*
2:00 G: Wow.
/.../
2:43 *H: Entering virtual strings.*
3:02 *Strings play. C plays a long note on midi.*
3:10 *Plays track 2 bars before the strings play.*

The example further underscores a mutual understanding that verbal confirmation is unnecessary when it comes to listening to the preceding couple of bars before a change. The expectation is ingrained to attentively listen to changes within the context. In essence, this example illustrates a continuous process of listening and evaluating while editing music, with participants paying close attention to the sonic elements leading up to and following changes in the composition.

The next example illustrates the intertwining of listening/evaluating with the process of constructing. Furthermore, it highlights the influential role of emotions in guiding the evaluation process. In this instance, G is actively experimenting with an idea for the piece. Meanwhile, H is closely listening and evaluating.

Video: 06/10-2023
15:50 G: *Plays a fast violin riff against a slow background.*
16:18 G: Something like that.
16:20 G: *Stops the background.*
16:28 H: It gives a sense of urgency, like being chased. But it depends on whether this will be used every time the character appears; we probably don't want it to constantly evoke that feeling. But it was nice.
16:30 G: Yeah. *Tries playing it in a different way.*

My observation about the sense of urgency and its potential impact on the character's portrayal demonstrates the power of careful listening in providing valuable insights and constructive input. When I mention "like being chased," it highlights how the music elicits emotions that may not

align with the character of the TV series. This exchange vividly illustrates how listening plays a pivotal role in honing the creative direction of the composition. It also illustrates that listening/evaluating can generate thoughts and ideas to be shared among us, aligning seamlessly with the construction process. This is showcased by G playing differently after the evaluation made by me.

The next example further illustrates the intertwining of listening/evaluating with constructing.

> Video: 13/10-2023
> 39:20 *Listening from the beginning.*
> 39:38 G: I'm considering whether these notes should be long enough to overlap with the next set of strings, as it's currently very silent for a long time.
> 39:45 H: Yes. *Edits that change.*

In this instance, G astutely identifies a potential issue, noting the prolonged silence, and goes on to propose a solution. This further highlights the intertwining of listening/evaluating and constructing.

6.3 Constructing

In the constructing theme, the categories included organizing/mounting and revising/adapting. During the construction process, we actively shaped the musical material through various actions, including organizing and modifying. While organizing we established the overarching principles and framework of the music piece, engaging in discussions and decision-making.

The example demonstrates that organizing the placement of a part was prominent while constructing.

> Video: 17/10-2023
> 4:00 H: I think it's nice on those parts, but then maybe also add those tones you played as a fill.
> 4:07 G: Yeah. *Records.*

Constructing involves organization, particularly in determining the placement of different parts. While I approved the musical idea, it was recognized that it needed to be organized in a specific order. Through verbal communication and a shared understanding of terms like "fill", we were able to effectively communicate and record the newly constructed idea.

The following example illustrates that constructing and recording were two themes closely intertwined.

> Video: 17/10-2023
>
> 6:30 *G records the bassline*.
> 6:55 H: I want something like this. *Plays one note on the guitar and slides downward.*
> 7:00 G: Mmm. *Pauses the track.*
> 7:02 H: *Points.* There! Right where you were. I think it sounds beautiful.
> 7:10 *G records seven bars of bassline.*
> 7:24 *G while recording, asks,* now?
> 7:29 H: *Waits one bar. Then responds,* now and *sings the note.*
> *7:34 G misses the note, pauses track.* On the fourth beat?
> 7:38 H: Yes.
> 7:41 *G records.*

This illustrates a collaborative construction process where the creation of musical components is closely intertwined with recording. The collaborative exchange results in an agreement to introduce a new note, and as the recording progresses, careful consideration is given to where this note fits best within the composition. This underscores the importance of organizational aspects within the construction process, emphasizing that construction unfolds dynamically during the recording. The example further illustrates that during construction both of us occasionally employed singing and instruments as guiding elements for the person recording.

The subsequent example exemplifies a mutual understanding that one aspect of constructing involves removing recorded music, where verbal communication is not always necessary.

> Video: 06/10-2023
> 21:30 *G records long, atmospheric synth notes with a midi keyboard.*
> 22:40 *H stops recording. Deletes some of the recorded notes in the midi editor window.*
> 23:10 G: Remove those.
> 23:11 H: *Pauses the track.* Every other?
> 23:17 G: I am not sure.
> 23:20 H: *Listens to the track. Takes out some of the notes.*

The silent coordination demonstrates an intuitive understanding of construction, where actions can be taken without explicit discussion. It also highlights the mutual trust that underpins our collaborative process.

During construction, me and Gustav often sang or had an instrument such as a bass, guitar, percussion, or midi keyboard. While constructing, listening/evaluating was prevalent, as the individual not playing and providing feedback occurred frequently. In the next example, Gustav attempted to craft a bass pattern to accompany a track for which we had previously composed a marimba riff and percussion. It demonstrates that constructing, listening/evaluating, and recording are themes that intertwine.

> Video:17/10-2023
> Attempting to devise a bass loop that complements the musical track and visuals.
> 0:30 G: *Experimenting with Drop D tuning on the bass.*
> 0:43 G: *Starts the track.*
> 0:45 G: *Plays the bass gently against the track. Immediately identifies the root note and experiments with switching between the root and minor third.*
> 1:08 G: *Pauses the track and starts playing from the beginning.*
> 1:35 G: *Stops the track.* Yeah, I'm not sure.
> 1:40 G: *Plays the track and starts playing from the beginning.*
> 1:50 H: Wouldn't something similar be good? *Sings rhythm and two notes in a phrase.*
> 2:00 G: I'm really drawn to this other minor thing.
> 2:01 G: *Plays the other minor idea.*
> 2:02 H: Okay, but not changing chords, right?
> 2:05 G: No, no.
> /…./
> 3:14 H: *Plays a variation of the bassline on the guitar.*
> 3:15 H: *Plays with the track.*
> 3:20 H: Maybe right away. *Talks about a syncopated note.*
> 3:26 H*: Sings a note and rhythm.*

Often, one of us played the instrument about to be recorded while simultaneously attempting to create a part that fits with the track. During that time, the other person actively engaged in listening/evaluating and constructing, as demonstrated by providing instructions, playing, and singing different parts.

6.4 Recording

In the recording theme, the categories comprised recording, playing individually, playing collectively, and playing verbally. The findings indicate that while recording more notes and rhythms were played compared to the edited version of the recorded instrument. During recording sessions, one of us would handle the performance while the other managed the technical aspects of recording, simultaneously listening and providing evaluations. This process allowed for immediate feedback and adjustment. When we identified a segment worthy of recording, we often proceeded promptly, with exceptions made for particularly challenging passages. If the phrase was considered too difficult, we practised it a few times before recording it. It was a common occurrence for the recording to pause within the initial four bars of take one. This halt was prompted by various factors, including the intricacy of execution, potential mix discrepancies, or adjustments needed in instrument, sound card, or DAW settings. This is highlighted in the next example.

> Video: 2023-10-06
> 19:43: *Recording.*
> 19:53 H: No, wait, Oops. Can you lower the other one a bit so I can hear myself?

Within the initial 10 seconds of recording, I identified the necessity for a mix adjustment to enhance the volume of the instrument I recorded. This also highlights that interrupting mid-recording was a frequent occurrence, as well as not balancing the mix and settings before recording.

The next example illustrates that sometimes, before recording, the one of us who was not recording the instrument had the main idea of what to play.

> Video: 17/10-2023
>
> *H is about to record an electric guitar.*
> 17:58 *G plays the track.*
> 18:18 *G plays the track and sings the notes that should be played, simultaneously indicating the rhythms.*
> 18:21 *H mimics and G sings along while pointing.*

Before recording, providing instructions with sung notes to the track assisted one of us in understanding what to play. Playing alongside the track also made it easier to showcase the rhythm

within the appropriate context. This also demonstrates the process of learning what to play through listening while recording.

The next example showcases that recording could consist of improvisation.

> Video: 2023-10-06
> 34:30 H: Alright, let's go!
> 34:35 *G is recording. There's no specific agreement on what to play, except that it should serve as a background element, filling out the track with percussion sounds with* delay and reverb.
> 36:05 H: *Stops recording*. Really good sounds. Would you like to record more, or are you satisfied?

This underscores the absence of a predetermined agreement on the specific musical content, highlighting the prevalence of experimentation while recording. Moreover, it emphasizes that the process was guided by a vision of the desired musical outcome. The presence of listening/evaluating is evident through the feedback provided after the recording has stopped, indicating that while G is playing, he is also actively evaluating and listening to the played music. This scenario vividly illustrates that experimentation was not limited to pre-recording discussions; it was actively integrated into the recording process.

In the following example, it becomes evident that providing positive feedback to the one singing or playing was a common occurrence during recording.

> Video: 9/10-2023
> 3:10 C: I want high notes.
> 3:13 H: *Sings falsetto.*
> 3:15 G: Yes, that sounds beautiful.
> 3:20 H: *Sings.* It is quite hard.
> 3:25 G: Exactly like that! If you can hold it for four measures, which is difficult. Let's try. *Records.*
> 3:30 H: *Records one long note.*
> 3:48 G: Good, good! Let's try two measures. Take the craziest breath you've ever taken. *Pushes record.*
> 3:56 H: *Records one long note.*
> 4:09 G: Damn star! King! Let's do the same thing one more time.

This passage exemplifies our approach to handling challenges: by rehearsing and promptly recording the desired segment. Furthermore, it illustrates the individual not performing, taking on a supportive role by aiding and encouraging the performer in navigating musical challenges.

6.5 Sound Design/Mixing

In the sound design/mixing theme, the categories included both sound design and mixing. The findings suggest that sound design/mixing was intricately connected with all categories. We utilized sound design and mixing techniques to craft the sound to a point that resonated with both Gustav and me, aligning with our vision for the track. During sound design/mixing, we maintained ongoing verbal communication, played the instrument actively, and critically evaluated the sound to ensure its seamless integration with the track. The result also indicates that, during sound design/mixing, we implemented adjustments, engaged in listening/evaluation, and applied necessary changes.

Sound design/mixing was employed to refine the sound, preserving its inherent character while ensuring seamless integration within the overall mix. This process involved meticulous adjustments to parameters such as volume levels, stereo width, equalization, and compression, as well as the application of delays and reverberation.

Whenever possible, we prioritized designing a sound before recording the intended part. However, due to excessive latency, some sound design elements, such as specific reverbs, were omitted. The results also indicate that sound design/mixing was relevant while choosing the register for the instrument that was about to be recorded. The results indicate that we frequently make significant adjustments while designing sounds, for instance, making sounds "very reverberant" and applying a high-pass filter to 500 hertz.

The next example emphasizes the consideration of sound design/mixing ideas before determining the musical part, with adjustments made before and after listening/evaluating the applied effect's impact.

> 10:00 *G begins playing the synthesizer.*
> 10:15 G: I believe in saw tooth. *Proceeds to play.*
> 10:20 G: Then let's thicken it up in some way.
> 10:35 G: Let's also try adding a lot of reverb.
> 10:42 G: Yes! Exactly!
> 10:45 H: Adds distortion.

10:50 G: Nicely done! *Plays some notes.*
11:10 *G plays a riff.*
11:25 G: Slower attack.
11:32 G: Slower, 3000.
11:37 G: There we go.
11:45 G: And have it open up just a little bit more.
12:00 G: Well done!
12:05 G: Can you detune it a bit?
12:06 H: Yes.
12:10 G: *Plays.* Yes, Yes, Yes!
12:28 *H pushes record button. C experiment with notes.*
13:20 G: Oh no.
13:22 H: But it is good. *C keeps on playing.*
13:47 H *stops track and says* what happens if we layer it with a Sul Tasto phrased string sound.
14:00 G: Yes.

Gustav's extensive expertise in synthesizer sound design is evident, with a pre-existing idea and experience guiding the process before engaging with the synthesizer. Furthermore, this example emphasizes that sound refinement is an ongoing process. While we initially considered the sound complete, as we played it alongside the track, we re-evaluated, and I proposed an additional layer to enhance it. Like Gustav's approach, where he envisioned using the sawtooth oscillator, thickening it up, adding reverb, employing a slower attack, adjusting the cut-off filter, and detuning, I too had a specific sound in mind before execution. The sound is conceived, performed, and then honed to align with the envisioned sonic profile that best suits the track.

In the upcoming example, sound design/mixing is implemented through diverse microphone settings on the electric guitar before recording it onto a track.

Video 2023-10-17
Recording electric guitar.
16:13 G: Do you have the microphone switch in between now?
16:16 *H Looks down*. No. *Adjusts it to the in-between position.*
16:17 *H tests playing one note.*
16:19 G: Can you adjust the tone control a bit? A bit more mellow.

16:21 *H Adjusts the tone control.*
16:23 *H plays a couple of notes.*
16:25 G: Yes, exactly.

During recording, the timbre of the instrument becomes a crucial aspect for the music producer, as illustrated by the instance of changing the electric guitar microphone, emphasizing the role of sound design/mixing.

6.6 Results regarding Biasutti's theory

In my research, I incorporated 11 of Biasutti's (2018) 13 categories, excluding internet connection and software as I found them to be largely irrelevant due to their almost nonexistent presence in the empirical data. The results suggest that the theme of 'playing' is not as pertinent in this case study, given that playing activities were nearly exclusively concomitant with recording. Consequently, 'recording' emerges as a more accurate thematic descriptor. Meanwhile, the categories of playing individually, collectively, and verbally are deemed relevant and valid.

In my results, I determined that the theme of technical issues was irrelevant. Biasutti (2018) incorporated three categories—software, internet connection, and equalization/mixing—within the theme technical issues. My results suggest that mixing is a pertinent category, given its interconnection with all other themes. However, the findings reveal that designating mixing as a standalone category is more accurate in this case study. This distinction arises from the observation that equalization, although a component of the mixing process, did not receive disproportionate attention compared to other mixing tools in our approach. Furthermore, the results highlight the incorporation of sound design as a distinct category. While mixing, the findings reveal the intentional use of mixing techniques to enhance the overall sound quality, aiming for improvements we considered favorable. In contrast, sound design involved the creation and shaping of a unique sound. I opted for a separate categorization because, in the empirical data, I noticed that the given instrument might naturally sound pleasing in the mix. However, when we intentionally craft a sound to make it more distinctive, I interpreted it as sound design rather than a problem-solving necessity akin to mixing. Hence, sound design/mixing was deemed a more accurate theme in this case study.

The results show that all other categories and themes were deemed relevant. These are the final categories:

1. Experimenting individually
2. Experimenting collectively

3. Listening
4. Evaluating
5. Identifying
6. Organizing/mounting
7. Revising/adapting
8. Recording
9. Playing individually
10. Playing collectively
11. Playing verbally
12. Sound design
13. Mixing

These are the final themes:

1. Experimenting
2. Listening/evaluating
3. Constructing
4. Recording
5. Sound design/mixing.

The uniqueness in the results lies in the overlap of all themes. In experimentation, for instance, sound design/mixing is present as the way we play an instrument also determines its role in relation to the track.

The ideas generated during experimentation are then amplified through sound design/mixing. For instance, if Gustav plays long atmospheric tones, I may enhance the atmosphere by adding delay and reverb to those notes. This scenario can also be reversed; by programming a sound with atmospheric qualities, it influences our experimentation, leading to a specific construction of the instrument and a distinct approach to recording.

In the overall process, there is a tendency to initiate music composition primarily with a chordal instrument. In the data, there is often an overlap between experimentation and constructing, as experimentation quickly transitions into the construction. Construction is also occurring both before and during recording. During recording, evaluating/listening is evident as things are scrutinized and listened to multiple times. Construction comes into play by, for instance, adjusting a note, rhythm, or adding/removing elements. Subsequently, the altered elements are listened/evaluated again.

The general collaboration process involved experimenting to develop an idea, recording the idea, constructing the ide, and working with additional instruments against that initial idea. During the development of these additional voices and/or instruments against the original idea, all themes come into play. Typically, we spent time configuring a sound (sound design/mixing) and then experimented with it along with the track. Often, the experimentation swiftly transitioned into recording, and during

recording, experimentation continued. During the experimentation within recording, the construction of the instrument's part almost finalized into what it would eventually sound like. As experimentation, construction, and recording unfolded, listening/evaluating occurred, for example, through reflections on how it sounded against the track. This reflection could lead to changes in how it was constructed or if the sound design/mixing could be enhanced for the benefit of the track.

6.7 Summary

The collaborative music production process encompasses five key themes: experimenting, listening/evaluating, constructing, recording, and sound design/mixing. Each theme plays a crucial role in shaping the final musical composition. The results show that these various themes are interwoven in different ways. Together, they intricately shape the collaborative process of music production. The interplay between experimenting, listening/evaluating, constructing, recording, and sound design/mixing underscores the depth and complexity of collaborative music production. The results indicate swift transitions between themes, where all themes interwine in various ways, for instance sound design/mixing can be the starting point of a composition, since the uniquines of a sound influence the experimentation and recording, leading to the creation of music.

During *experimentation,* we delved into both individual and collective efforts, exploring improvised elements such as melodies, chords, rhythms, and instrument timbres. While composing, individual experimentation took precedence, with both contributors quietly exploring riffs, chords, and melodies.

Listening/Evaluating emerges as a pervasive element throughout the collaboration. It is a cornerstone of decision-making, occurring during various stages. Whether it's during experimentation, constructing, or recording, attentive listening allows for critical assessments and adjustments, ensuring alignment with the creative vision.

While *constructing*, we shaped the musical material through actions like organizing and modifying, defining overarching principles and the framework of the music piece through discussions and decision-making. Construction also involved removing instruments and notes.

During *recording* the played notes and rhythms they exceeded those in the edited version of the recorded instrument. The process involved one person playing the instrument while the other managed technical aspects, offering instant feedback.

In the realm of *sound design/mixing*, our collaborative approach involved continuous verbal communication, active instrument playing, and critical evaluation to seamlessly integrate the sound with the track. We frequently prioritized designing the sound before recording the intended part, leading to frequent significant adjustments throughout the sound design/mixing process.

7 Discussion

In this chapter, the results are discussed in relation to the literature review. The chapter also includes a discussion on theory and methodology, as well as the implications of the study for music educational practice.

7.1 Result Discussion

The results demonstrate an overlap between different themes, aligning with Biasutti's (2018) observations. Like in Biasutti (2018), experimentation was a common occurrence in the initial stages of music composition, contributing to the generation of new ideas through improvisation. In contrast to Biasutti (2018), who identifies distinct phases within music composition collaboration, I contend that in our collaboration, the themes are intricately interwoven, making the characterization as phases less relevant. This perspective may stem from the nature of our empirical data, collected during a specific phase of the process where we did not have a distinct goal, in contrast to the composition instructions in Biasutti's research where the task was to create one song. Our collaborative period involved creating as much music as possible within a larger timeframe, leading to the empirical data not distinctly reflecting a start-to-finish progression in one song.

Dillon's (2003) findings indicate that, like Biasutti's (2018) single theme for listening/evaluating, participants engaged in evaluating the structure of their compositions while listening. My results further highlight the interconnected nature of listening/evaluating. Echoing Dillon's (2003) findings, the process of evaluation and refinement serves a dual purpose for participants: it offers a chance to reflect on their existing work and stimulates the generation of new ideas. This was particularly evident in the results of sound design/mixing, where modifying one effect often sparked the exploration of a new effect.

In numerous instances of our collaboration, terms like cooperative or consultative might better characterize our collaboration (Taylor, 2016). As observed in the results, it is common for one person to generate ideas while the other contributes inputs or suggestions, as noted by Taylor (2016). The emergence of new ideas and the encouragement of complementary skills were prevalent in the results, aligning with the perspectives of Taylor (2016), Williamson and Luebbers (2023) and Wilsmore (2022).

Drawing on the influence of Biasutti (2018) and Bennett (2014) external songs played a significant role in shaping our work, evident in verbal references to other music. As Gullö (2010) highlights, a music producer must demonstrate leadership, decision-making skills, drive, creativity, social aptitude, and collaborative efforts with humility and personability. While I argue that these aspects are noticeable in our collaboration, it is important to acknowledge that they fall outside the scope of my case study.

The results demonstrate that we have blurred the lines between technical roles, such as music engineer and composer, aligning with the suggestions of Bielmier (2021) and Brendan (2020) as a means to enhance music production education.

7.2 Theory and Method Discussion

To answer the research questions, a qualitative method with observations proved effective. In contrast to Biasutti's (2018) emphasis on playing as a theme in his study, I argue that recording holds greater relevance for my research. This assertion is grounded in the distinct focus of my study, primarily on music production, diverging from Biasutti's primary emphasis on composition. In the empirical data, we primarily engaged in recording rather than playing. In contrast to Biasutti's final theme of technical issues, which encompassed mixing as a category, I chose to delve into sound design/mixing, considering it a more crucial theme in our music production collaborations. I also opted to include sound design as a category, given that many of the modifications we made to the sounds aim to shape the sound itself in a creative way rather than solely balancing the mix.

Active participation in the study may influence the results. Yet, in accordance with Creswell (2018), qualitative research entails interpretative inquiry, involving deep and prolonged engagement with participants, thereby introducing strategic, ethical, and personal factors into the research process. Conforming to Creswell (2018), qualitative research inherently carries some limitations. In this study one of the things to take into consideration is my own participation in the research, even though unduly influence between the participants and research is always something that may influence the research. When reviewing the video observations, I consciously detached myself from the notion that the videos depicted me. Instead, I adopted the perspective of two individuals engaged in music-making, with my interpretation focused on gaining a deeper understanding of the collaboration.

I contend that in my dual role as both a participant and researcher within the same thesis, I deliberately crafted the study with a focused lens, honing in on a meticulous and specific research question. Moreover, by employing Biasutti's (2018) theory, I strategically narrowed the scope of the study. While employing thematic analysis, Biasutti's theory served as a guiding framework for interpreting the collected data. It provided a structure that helped me maintain focus and direction throughout the process of data interpretation. Upon realizing that Biasutti's (2018) theory was not comprehensive, I turned to thematic analysis. Despite its limitations in Biasutti's theory, it served as a foundational perspective, aiding me in perceiving the data not as overwhelmingly unstructured. This decision was made deliberately to approach self-examination with greater caution and mindfulness.

While Biasutti's categories and themes are relevant, I encountered challenges in distinguishing between experimenting individually and experimenting collectively. This difficulty may stem from only doing observations. For instance, there were occasions when Gustav was experimenting with an instrument while I listened for 30 seconds. In the video, it appears that I am only listening, but there were numerous instances where, after 30 seconds, I provided instructions to Gustav. Deciding whether that was an individual or collective process proved challenging, as I do not directly influence Gustav when I do not sing or say anything. Nevertheless, I am actively engaged in listening/evaluating, and constructing in my own mind. Although this mental activity may not manifest in the empirical data, my self-awareness acknowledges that I frequently engage mentally with various melodies and rhythms, even though this internal process remains unobservable through video.

Listening/evaluating is a theme comprising two categories: listening and evaluating. Distinguishing between these two categories can be challenging, particularly through video observations. While we were listening to the track I observed that when no modifications were made to what we listened to, I categorized it as listening. When additional actions were taken, I placed it in both categories. I contend that while the theme is relevant, determining what constitutes listening versus evaluating can be challenging.

7.3 Musical Pedagogical Implications

The results of this independent study stem from one single case study, therefore the findings do not lead to any absolute truth. However, I believe that based on the results of this study, teachers may observe how the five themes manifest during music production collaboration. By categorizing collaboration with the themes, teachers might see music production collaboration from a different lens.

A key pedagogical implication in music production education is the recognition that multiple themes are happening at the same time. In my opinion, this implies that it could be beneficial not only to concentrate on one of the themes while teaching music production, but also to consider the broader aspects. I therefore believe that education should involve longer projects where students get to write, record, produce, and mix a song. This helps students integrate various skills simultaneously. For instance, they can practice sound design or mixing during recording, and construct as late as when they are sound designing/ mixing. By allowing students to write, record, produce, and mix multiple times during their study, I believe they can connect these processes more seamlessly. Leading for instance to recorded instruments where the students have made the finished sound for the musician, which might lead the musician to play or construct differently. In my personal experience, the diverse qualities of the sound of my instrument influence how I play it, ultimately contributing to a better fit with the rest of the music.

One implication for music production education is that, for instance, sound design/mixing can influence how an instrument is recorded. It would be advantageous for students, when for instance learning about synthesizers, not only to hear, see, or understand how to create a specific sound but also to actively engage in playing with various sounds. This hands-on approach can enhance their understanding of how various sounds may influence their approach to playing different instruments.

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