

Music production in Swedish higher education

History and future challenges

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Music production is a relatively new and emerging subject within academia (Frith and Zagorski-Thomas, 2012; Ternhag and Wingstedt, 2012). We argue that music production, in many ways, may still be considered a blind spot in the field of music research. Admittedly, we have observed a growing interest in music production, not only in higher education, where many students today study music production, but also media coverage of music production has notably increased in recent years (Norberg and Wiberg, 2019; Seabrook, 2015). Despite this, music production in general, and music production education in particular, are still understudied research subjects: music production has not been investigated to any great extent, neither within Sweden nor internationally. The aim of this article is to present an overview of music production in higher education and in research.

Several internationally successful Swedish songwriters, musicians, and music producers have more of an informal background than a formal scholastic education (Folkestad, 2006; Gullö and Gardemar, 2019) and many of them show well-developed entrepreneurial skills. The successful Swedish music producer Dag Volle (1963–1998), also known as Denniz PoP, was one of these. Volle lacked formal music education, but he had some unique music-producer skills and also developed new innovative music-production methods (Norberg and Wiberg, 2019). Previous research has largely ignored his work, despite his role in the success of Swedish music exports (Björnberg and Bossius, 2017). Volle is described in popular literature as an unusual kind of musician:

He didn't play an instrument, he couldn't sing, and he didn't write music. He was a pop pioneer in a whole new way of making music – electronically programmed sounds, tracks, and beats. He mixed machine-generated sounds with samples of existing music. He was a prototype of a new kind of producer, one that would change the way songs are made, and how they sound. (Seabrook 2015, p. 34)

Volle is also remembered as a mentor of Martin Sandberg, known as Max Martin, and in one study within an ongoing project we analyse how Volle's leadership style may have influenced the creative process of Sandberg and other successful Swedish music

producers.¹ The empirical material includes published sources of various kinds such as interviews, conversations, and written communications with some of Volle's closest associates who are still internationally active as music producers. The results indicate that several of the most important aspects of Volle's strategy as a music producer have been crucial for his apprentices, including his use of intrinsic motivation as a primary driving force, and the way that he implemented music productions through collaborative processes. Despite this, developing an education that is sustainable and transparent and that upholds satisfactory European educational standards (SUHF, 2000) presents a real challenge.

As previous research clearly shows, a variety of skills are used and needed among musicians, music producers, and others active in the art of music production (Burgess, 2013 and 2014; Frith and Zagorski-Thomas, 2012; Gullö, et al., 2015; Gullö, et al., 2019; Harding, 2020; Howlett, 2009; Zagorski-Thomas, 2014). Here we focus on how music production skills linked to entrepreneurial skills – including creativity, innovation, and motivation – are expressed in higher music education, and how they may be developed in the future. We have chosen not to examine various audio-technological aspects that admittedly are highly relevant to the study. These aspects are probably better reported on in other contexts. We also aim to give some background as to how music production emerged as a field of interest within research and education, primarily in Sweden.

Swedish education in music production

The first university courses in music-producer training in Sweden were launched in 1983 when a group of eight students started the two-year music-producer's education at the Academy of Music in Malmö, Lund University, in the south of Sweden. The German *Tonmeister* education at The Erich Thienhaus Institute at Detmold University of Music was an important model for the education in Malmö. However, the courses were adapted to Swedish conditions and focused mainly on music, unlike the German *Tonmeister* education, which is also an engineering programme. To be admitted to the programme, at least two years of previous music studies in higher education were required. The music-producer training programme in Malmö included both theoretical and practical studies. The students had one well-equipped control room and studio at their disposal and the focus was placed on recording various ensemble types such as string quartet, choir, big band and symphony orchestra.

1 For several years, we have been running the research project *Searching for Sophia in music production* where we study how various aspects linked to music production have contributed to the Swedish music industry's international achievements. The term 'Sophia' (wisdom) refers to an ancient Greek knowledge typology (Aristotle, 2011) and is used to summarise the theoretical framework of the project. In the project a team of researchers study various formal and informal learning processes connected to education in music production in higher education. Another team has focused more on various artistic aspects.

A few years later, in 1986, in the north of Sweden, the School of Music at Luleå University of Technology started educating audio engineers. Unlike the training programme for music producers in Malmö, the education programme in Piteå had a technical profile, aiming to provide public-service broadcasters and theatre companies with skilful sound engineers. Since the education was located at the School of Music, the students cooperated extensively with music students of various kinds and were introduced to recording different kinds of music. In the last twenty years many new university and college programmes in music production have been added, including three-year bachelor's programmes as well as shorter courses.² The Royal College of Music (KMH) in Stockholm has a two-year master's programme in music production, but, so far, there is no Swedish postgraduate doctoral education in music production. Many academics teaching music production in higher education are doing music production research and several of them hold PhD degrees in musicology, music education, or media technology. Several private non-university education organisations and folk high schools offer courses with music production as an important theme, and, in upper secondary school, music production has been a subject within the aesthetic programme since the 1994 upper secondary school reform (Lpf 94).

Thus, in recent decades, music production has been established as a subject in both higher education and in upper secondary school. This development can be seen as a direct echo of the development of society at large, where new ways for young people to produce their own music have also resulted in an increasing number of students who want to study music production. Therefore, it is inevitable that music production is highly relevant in music education and, as a consequence, is an expanding academic field. In recent years, more and more academics have devoted themselves to research in music production. Some examples of Swedish dissertations with direct relevance for music production are Burlin (2008), Wingstedt (2008), Florén (2010), Gullö (2010), Einarsson (2017), Elowsson (2018), Leijonhufvud (2018), and Allan (2019). Also, many handbooks, as well as textbooks on music production meant for use in higher education, have been published. Most of them have American and English authors, but there are also a few by Swedish authors, such as Ternhag and Wingstedt (2012), Gullö (2017), and Gullö, et al. (2019).

2 Three-year bachelor programmes in music production are offered by Dalarna University; Linnaeus University; Royal College of Music, Stockholm; University of Gothenburg; and Örebro University. Short music production courses and other study programmes including music production are offered by Blekinge Institute of Technology; Dalarna University; Karlstad University; KTH Royal Institute of Technology; Linnaeus University; Luleå University of Technology; Lund University; Mid Sweden University; Royal College of Music, Stockholm; Umeå University; University of Gothenburg; University of Skövde; and Örebro University.

The concept of music production

Music production is difficult to define precisely as a concept. Terms such as production, producer, and music production have different meanings in different contexts. The concept 'music production' has two parts: music and production. We have chosen not to define what music is, even though it is an interesting discussion in itself, further than to understand music as organised sound that people can perceive as music. The second part comes from the Latin word *produco* and means bringing, moving, generating, or creating (Charlton, 1891). A production is supposed to lead to a product that is the result of work done, but a product does not have to be a physical thing. It can also have an immaterial character such as an idea or a brand. In this text, we henceforth will use the term music production.

Until quite recently, music production has probably been fairly unknown to most people. The history of record production goes back to the 1880s, when a meaningful commercial market for recorded music began to grow. At that time, and for many years that followed, the music producer's job mainly focused on making live recordings with skilful performers who were able to act as recording artists, accompanied by orchestras suitable for the purpose. And in most cases the people who produced the music were more or less unknown, except for those who had professional insights into the music industry. For many years the technical equipment used for music production was very expensive and also required a good deal of technical expertise.

New creative technical tools for music production were developed as a result of technical developments in the years after the Second World War. The music production tools available today allow music producers to focus on the creative composition of 'the sonic end result heard by the listener' (Burgess, 2014, p. 43). Furthermore, such tools allow music producers to manipulate many of the musical parameters, for example rhythm, tempo, harmony, melody, instrumentation and dynamics. Therefore, the creative and artistic focus in today's music industry is sometimes more directed towards the music producer than the composers and artists (Frith and Zagorski-Thomas, 2012; Zagorski-Thomas, 2014). Since the equipment needed for producing music over the years has become more and more accessible there are simply many more now who devote themselves to producing music. At the end of 2019, the Swedish Performing Rights Society (STIM) had more than 90000 affiliated composers, lyricists, arrangers, and publishers. Thus, a little less than one percent of the total Swedish population can be said to have a personal economic interest in music production as copyright holders (STIM, 2019). Many Swedish music producers and songwriters compose and produce songs for international artists. The extensive export of Swedish music, which has increased over many years

(Musiksverige, 2018), has contributed to an increasing interest in music production, including more students pursuing music production in higher education.

The different phases of a music production

Traditionally, a production, such as a television, film or music production, is divided into different stages (Millerson, 1999; Gibson and Curtis, 2005; Burgess, 2013). During the first stage, *pre-production*, the recording work is planned. Traditionally this is when preparation and decision-making occur. During the second stage, the actual *production* work is carried out. When all recordings are edited and compiled, it is time for *post-production*. During this third stage, the original tracks that will later be published, for example on YouTube, Spotify, or other web services, are mastered. In practice, however, music production often involves an overlap between the three different stages. The pre-production may include work with recordings whose primary purpose is to be a test for the coming production, such as testing out the appropriate key for a singer, testing different arrangement ideas or preparing score material. If such preparatory recordings are made musically, artistically, and technically well, they can be retained and used in production. Overlapping between the three stages can also take place at the end of the process because parts of editing and mixing, which are traditionally regarded as part of the production stage, can equally well be moved to the post-processing that takes place during the mastering process (Burgess, 2013; Gullö, 2010).

The role of the music producer

In today's music world, music producers work in a wide variety of ways. Many prefer to work in teams (Norberg and Wiberg, 2019). For an outsider who visits an ongoing recording session, it can be difficult to understand who is doing what: who is the artist, producer, or technician? Tasks and roles are often interwoven in contemporary music production and it is common to share responsibilities. Also, many music producers are multi-talented and work with music productions completely on their own. Either way, music producers have many responsibilities, such as taking artistic decisions or managing administrative tasks. A key responsibility is, of course, to ensure that the recording is finished, and, if the client is external such as a record label or publisher, that it is finished within a specified time frame and within a given budget. But even if financial and administrative responsibilities are part of the music producer's work, their primary and overarching responsibility is to control and monitor the various creative aspects involved in making a music recording.

As outlined above, modern music production can include many different tasks, which were previously performed by specialists such as songwriters, arrangers, sound engineers

and, not least, instrumentalists and singers. Today's information and communication technologies provide extraordinarily useful tools for music production and sound recording, as well as for editing and reproduction with outstanding precision. Consequently, 'music production' and 'music producer' are concepts that can have different meanings depending on the contexts in which they are used (ESDA, 2004; Gibson and Curtis, 2005; Moorefield, 2005; Burgess, 2014; Gullö, et al., 2019).

Research results and handbooks published in recent decades define various aspects of music production with different levels of significance. Although the various roles undertaken by producers are discussed in several studies, such as Burgess (2013), Howlett (2009) and Moorefield (2005), the student perspective on education in music production seems not to have been studied as thoroughly. Howlett (2009) shows that the music producer's role encompasses many different aspects: arranger, interpreter and visualiser; engineer; creative director and performance director; logistical facilitator and project manager; psychologist, counsellor and priest (!); and, perhaps most importantly in many productions, mediator between the objectives and aspirations of the record company and the artist. A slightly different presentation is done by Burgess (2013) when he describes the producer credit in the field of recorded music as a catch-all term, encompassing a range of skills, responsibilities, and functions: 'Different genres and sub-genres of recorded music have their own production requirements, and the relationship between producer and artist varies accordingly.' (Burgess, 2013, p. 7) Burgess identifies production typologies or production roles such as songwriter/producer, engineer/producer, musician/producer, music lover/producer, arranger/producer and absentee producer, but also states that there are functional and subset typologies, and that poly-functional producers span the described categories. Burgess outlines eight core routes to becoming a producer: 1) musician or artist; 2) audio engineer; 3) songwriter; 4) DJ; 5) self-taught/school-trained; 6) discoverer; 7) entrepreneur; 8) multi-path (Burgess, 2013, p. 29). Burgess stresses that these eight core pathways to becoming a music producer should be understood as centres of abilities rather than as clear demarcations. Furthermore, Burgess describes producing as a 'complex combination of science, art, and interpersonal skills' (Burgess, 2013, p. 50) and particularly highlights 'communication skills, negotiation, and diplomacy' (p. 138) as important aspects for producers because it is the producer's role to 'realize the vision for the artist, manager and label' (p. 60).

It is clear that the music producer's assignment has changed a great deal over the past few decades:

Over the last fifty years, the philosophy and technique of music production have undergone a major transformation. As the activity of recording has widened in scope from a primarily technical matter to a conceptual and artistic one as well, it has assumed a central role in areas such

as instrumental arrangement and the sculpting and placement of audio samples. (Moorefield, 2005, p. xiii)

The essence of Moorefield's claim is that music production has gone from being a technical matter to one primarily concerned with artistic creation. The goal of music production is no longer to recreate reality by capturing musical performances based on a documentation production principle (Gullö, 2010, p. 200). Instead, Moorefield emphasises that modern music production is primarily about creating an illusion of reality. This is possible in the virtual world that characterises our contemporary technology for the production and distribution of music. With this approach, music producers can be considered equal to composers. This is a view that Moorefield clearly emphasises: 'At the top of the current charts, one increasingly finds cases in which the producer is the artist is the composer is the producer, and technology is what has driven the change.' (Moorefield, 2005, p. 111)

It is also possible to view the music producer as a 'satellite system', as discussed by Ternhag (2012, pp. 12–14). The music producer becomes a sort of metaphorical hub at the centre of a system of satellite nodes of special skills. Ternhag sees the nodes as skills that are important for the music producer, such as musicianship, music theory, acoustics, electronics, programming, and business economics. The nodes in Ternhag's model indicate that entrepreneurship and the business side of music-making are essential in music production. However, it is reasonable to believe that a good balance between the artistic and commercial aspects is of the utmost importance for a successful and satisfying music production. After all, the music producer's greatest commodity is people, and the public is not easily fooled into spending their hard-earned cash on music that lacks too much artistic value (Hepworth-Sawyer and Golding, 2011).

Descriptions of the music producer in Howlett (2009), Burgess (2013), Moorefield (2005), and Ternhag (2012) match well with other research, such as our own previous studies (Gullö, 2010; Gullö, 2017; Gullö and Gardemar, 2019). However, since we live in a changing world, it is reasonable first to examine the validity of such results and then examine whether new aspects might have arisen. For example, the models above do not illustrate how creativity, innovation, motivation, and entrepreneurship in music production are understood and executed by music producers and how music producers' understanding of these aspects may change over time.

Creativity in music production

In music production in general, and especially in sub-genres such as songwriting, creativity is a valued concept that is often referred to as a quality marker or an authenticity

indicator. Artistic creativity has become synonymous with a sense of exploration and expressive power (Negus and Pickering, 2004, p. 4).

Research on what really characterises creative ability and creative competence has evolved extensively since Guilford (1950) presented his pioneering study on creativity and can be divided into three different waves. In the first wave, researchers focused on studying the personalities of exceptional creators. Researchers in the second wave mainly investigated internal, mental processes when people were engaged in creative activities. The third wave had a socio-cultural and interdisciplinary approach. Today's research focuses more on creative social systems and how groups of people are creative in social and cultural contexts (Sawyer, 2011). As emphasised by Deliège and Richelle, in contemporary research it is 'preferable to speak of creative behaviour or acts rather than of creativity' (2006, p. 3). We have also noted that recent research on creativity includes professional-level expertise in creative areas such as music production (Kaufman and Beghetto, 2009).

The romantic ideal of creative activity as primarily self-expressive and 'independent from any perceptible constraint' (McIntyre, 2012, p. 149) appears to be a widespread tenet within the music industry. However, this belief is based on myths and not on appropriate theories or empirical academic research. McIntyre pictures an alternative background to creative activity in music production, based on recent research, that gives possible explanations to the creative activity of audio engineers, songwriters, performers, and, not least, music producers during the music production process. Creativity in music production occurs in a social field where those who are creative are familiar with the valid cultural symbols and use their own mental flexibility to create new variations of the musical content. And, as Csikszentmihalyi (1997, p. 41) states: 'creativity does not take place in an individual's head but in the interaction between individual thinking and a socio-cultural context'.

In recent research, creative ability has sometimes been described as the willingness to take risks, collective intelligence and collaboration, visualisation, imagination, idea development and initiative. Creative skill can be defined as specialisation or expertise, and creative ability in music can be seen as preparatory for creative competence in many varied and optional areas (Linge, 2013). An important issue is consequently how students can develop such abilities or skills in the higher education of music production.

Innovation and motivation in music production

Innovation is a concept that 'can refer to something new or to a change made to an existing product, idea, or field' (Merriam-Webster, 2020). It relates to the question about what motivates people to be innovative in music production. Tschmuck (2006) points out

that creative paths in music industry can be wider or narrower. The shape of such creative pathways can be of great importance to how the creativity that arises in a certain context survives and develops. Whether creative pathways are wide or narrow depends on the degree of control wielded by the institutions or contexts where a music production is conducted. According to Tschmuck, wide paths welcome more unpredictable synopses than narrow ones and lead to creativity. And: 'creativity is the precondition for innovation to emerge' (Tschmuck, 2006, p. 229).

At an overall level, motivation is related to the reasons for people's actions, willingness, and goals, but can also be understood as someone's needs that require satisfaction. Therefore, motivation has an impact on how people act, towards themselves and in collaboration with others. Humans appear to have basic needs for autonomy, competence, and affinity in order to be motivated (Deci and Ryan, 2000). When the three needs are met, auto-motivation develops, and when the needs are frustrated motivation is reduced. The intrinsic motivation that is a result of auto-motivation is often more effective than extrinsic motivation, simply because when people initiate an activity for its own sake it becomes interesting and satisfying in itself. All in all, this contributes to a perceived increased sense of independent control. When an individual is in control of a situation or a choice, s/he tends to be more motivated. In turn, this affects the will to take part in a collective activity like music production, or to act individually in situations where it is about making choices. One key question for educators in higher education is, consequently, how to increase students' sense of independent control.

Entrepreneurship and music production

Over the last decade, many Swedish higher education initiatives have focused on entrepreneurship and how to encourage students to develop entrepreneurial skills. Some such initiatives have been more successful than others and some academic areas, like artistic higher education including music, have seen resistance to focusing on entrepreneurship. The link between entrepreneurship and commercialism is sometimes a sensitive issue, and entrepreneurship as a theme for future development in higher education may be perceived as a threat. However, as a rule, entrepreneurship training is included in music production education since music producers are mostly self-employed and primarily active in project-based assignments and contexts where entrepreneurship skills are particularly valuable.

Entrepreneurship can be defined in terms of risk-taking (Hsieh, Parker and van Praag, 2017; Östman, 2018), and we have chosen to focus especially on how risk-taking aspects are valid in a music production context. However, although previous research clearly shows that entrepreneurs are often more risk-taking than non-entrepreneurs, this is not

a general skill or ability. Instead entrepreneurs tend to have a greater willingness to take risks when it comes to skill-related risk. However, when it is a question about purely chance-related risks, such as tossing a coin, it is not at all clear that entrepreneurs are more risk-taking than non-entrepreneurs. Instead, entrepreneurs' risk propensity is directly related to how skilled they are within their specific areas of activity (Macko and Tyszka, 2009).

An entrepreneurial skill concerns the leadership conducted in music production, that is, how different aspects of leadership result in teamwork, and how groups interact and strive towards goals. We have chosen five factors, proposed by Edmondson (2012), that can be distinguished in a strong team: 1) *psychological security*, where members dare to ask 'stupid' questions and present ideas, and know their mistakes will be accepted; 2) *reliability*, where members trust each other because they know that everyone delivers a qualitative effort; 3) *structure and clarity*, where the goals, roles and planning are clear in the team; 4) *meaningfulness*, where all members of the group feel that their contributions are important to the result; 5) *make a difference*, where the members feel that their work contributes to the common good of the team. Individuals who belong to good teams are inclined to stay in the group. They listen to other people's ideas and the team usually gains a good response from managers and other people.

As illustrated above, previous research emphasises entrepreneurship as a collective process. In line with this, music production education should not primarily have an individual-based perspective on entrepreneurship. Instead, focus should be on how networks, culture, and teamwork are important explanatory factors for successful music production.

From music production to consumption

Changes in how music is composed and produced, marketed, distributed, and – perhaps most importantly – consumed are important to those active in the music industry, and, consequently, to students who plan to work as music producers in the future. Therefore, we consider it important to highlight questions about how music production education can be designed and what the education should best contain.

As in all musical areas, music production holds traditions and practices which may change quickly. Many active in the sphere of international recording were shocked when Sony BMG in June 2007 decided to close their flagship Manhattan recording facility Sony Music Studios:

One engineer, more than a little dismayed by the news, remarked in an online forum: 'the world is coming to an end'. On the surface, the closure of Sony Music Studios was just the latest in an ongoing history of such closures: the studio had fallen victim to changes in record industry fortunes, on the one hand, and the voracious New York real estate market, on the other. The Hit

Factory had suffered a similar fate just a few years earlier (the building that housed the studio is now a condominium complex) as did numerous other studios in New York, such as Columbia's famous 30th St Studio, decades earlier. (Théberge, 2012, p. 77)

The example of Sony Music Studios clearly shows that worked-up traditions and practices that are perceived as solid can change very quickly, and since music cultures are regional, it is often difficult to compare results and experiences between production cultures. This means that historical experience, of which there are plenty of anecdotal descriptions, also in academic publications (Burgess, 2014; Chanan, 1995; Culshaw, 1982; Emerick and Massey, 2007; Frith and Zagorski-Thomas, 2012; Harding, 2010; Massey, 2000 and 2009; Swedien, 2003), are sometimes not perceived as relevant by students, simply because their own production culture is so distant from the culture described in the literature. Undoubtedly, it can be both interesting and instructive to read about what happened earlier in other cultures. However, the constant technical and musical development in today's culture offers great challenges for those who want to be up to date and it is possible that students deselect non-mandatory reading of such historical events in music production culture. Thereby, they miss out on valuable opportunities to influence and shape their own future by learning from the past.

In Sweden, music production is important in many ways, not least since Swedish music as an export product has grown over the years (Burnett and Wikström, 2006; Portnoff, 2015; Musiksverige, 2018). Swedish music producers and songwriters compose and produce songs for many international artists. Furthermore, many Swedish artists have made a strong impact on the global music scene ever since the first Swedish number one on the American Billboard, *Hooked on a feeling* (1974) performed by Björn Skifs and produced by Bengt Palmers. Following ABBA's international breakthrough in the mid-seventies, several Swedish artists and producers succeeded internationally, for example Roxette, First Aid Kit, Swedish House Mafia, Avicii and Max Martin (Norberg and Wiberg, 2019).

All of these artists, musicians, and producers inspire young people in Sweden to create music, and, over the past twenty years, the teaching of music production has become an increasingly important part of music education in Sweden. Today's pupils and students are online. They don't listen to the radio much or watch television. They use the internet as their main source of information and entertainment, and many produce music independently (Davidsson and Thoresson, 2017; Gullö, et al., 2015; Gullö, et al., 2019). A large portion of internet users in Sweden listen to music online and more than half of them regularly listen to Spotify, at least weekly. In 2018, the proportion of Swedish internet users who paid to listen to music passed fifty per cent. Nine years earlier, in 2009, almost no one paid. Among the sixteen- to twenty-five-year-olds, eighty-five per cent of

the population listen to music on the internet daily. In the twelve-to-fifteen age group, daily listening is almost as large, seventy-eight per cent (Davidsson, Palm and Mandre, 2018, pp. 80–85).

The research presented in this article points to overwhelming changes in music consumption for today's pupils and students as compared to earlier generations. Such changes appear to have been important for how music production has developed, both in society and as a subject within higher education. Since both youth culture and production and distribution techniques for music and other media content have obviously changed rapidly in recent years, it is reasonable to assume that also the future will offer major changes. Therefore, in future research, it is important to actively monitor the contemporary development in this emerging field. Although music production, in many ways, may still be considered a blind spot in the field of music research, the situation is about to change.

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Abstract

Although there is a growing interest for music production in Swedish higher education, where many students today study the subject, we argue that music production may in many ways still be noticed as a blind spot in research. This paper explores how research and education in music production has emerged, in Sweden but also internationally, against the background of the ongoing research project *Searching for Sophia in music production*. This project investigates how various aspects linked to music production and music education have contributed to the Swedish music industry's international achievements. First, the development of music production courses and programmes in higher education is described, from the pioneering years in the 1980s until present. Next, we

discuss key concepts in music production including the different phases of a music production and the role of the music producer. Thereafter we focus on four selected aspects of music production: creativity, innovation, motivation, and entrepreneurship. Further, future implications are discussed concerning the changes in how music is composed and produced, marketed, distributed, and how music is consumed today.

Keywords

Music production education; higher education; creativity; innovation; motivation; entrepreneurship.

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