Facilitating enriched learning experience in instrumental classical music practice in the century of digitalization

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Abstract

Digital tools have started to play an increasingly important role in higher education. Much of studying can be done in online environments, which means that blended learning has a growing importance in higher education. However, there are studies that are dependent on present being and bodily learning which for example, is the predominant way of learning in performing arts studies. Utilization of digital tools in individual instrumental classical music practice is the main concern of this research. In particular, this study is looking for an answer to the question, how do digital tools facilitate enriched learning experience in individual practices among the instrumentalists in the classical music department at Codarts, Rotterdam? In order to have an 'umbrella' term for the three concepts: engagement, ownership and in- depth learning, the enriched learning experience term was created. Questionnaires (n=74) and interviews were used to answer this question. It was found that digital tools are used by many students in their individual learning and practice, but the correlation analysis showed that they are not completely facilitating the enriched learning experience. However, there were some other significant findings. The advancement in studies impacts students' engagement and owning a smartphone facilitates ownership and in depth- learning. Furthermore, being part of online study groups facilitates the study engagement and in- depth learning. In sum, I will demonstrate that students who own a smartphone, play a woodwind instrument, involve in online study groups, and are either on their last year of Bachelor's or the first year of Master's studies experience most likely the enriched learning experience.

Keywords: performing arts, enriched learning experience, blended learning, digital tools, classical music study

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Foreword

Already quite some time ago I found myself in a place where I feel I belong to- Rotterdam. Besides all the great memories that I have collected here, I have met many great people who have been really inspiring, supportive and encouraging throughout the thesis writing process. With all my heart, I would like to thank:

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Introduction

In the last fifty years digitalisation has played an important role in the field of education (Graham, 2004). Constant development of information and communication technologies (ICT) has decreased the face-to-face proportion of learning and facilitated different online studies. For example, Tapscott (1996) claims that already in 1996 over 2000 online courses were offered (in Radford, 1997). Universities are using more and more online solutions (online lectures, home assignments, literature etc.), and a large part of studies are carried out on web-based environments. In some cases, it is even possible to acquire a degree by doing online studies only (Sherbon & Kish, 2005). Besides that, in order "to facilitate, manage, and deliver platforms and content, which relate to particular course" (Salavuo, 2008, p. 124) Learning Management Systems (LMS) and Course Management Systems (CMS), such as Blackboard, Moodle, Asimut, etc., have become common tools to facilitate the learning process and to solve the problems regarding time and space. In general, with the development of ICT higher education seems to head towards more extensive use of technology in the future (Orton-Johnson, 2009; Attwell, 2007). Contrary to this, there are study programs like classical music that are attached to more conventional matters. Combining online and traditional learning methods is complicated because within the last hundred and fifty years many societies all over the world have developed music learning programs that derive from the traditions of Western classical music pedagogy (Green, 2002) where teachers are in control of the learning process, the curricula, feedback and assessment (Lebler, 2008). Moreover, Green (2003) argues that "the traditional methods of studying classical music may not be altogether suitable for that music" (p.11). Music education in general, but instrument study in particular, is predominantly related to bodily learning and "practical lessons, such as piano, violin or harp, that require continuous personal contact and interaction in order for the student to observe and assimilate various aspects of instrumental performance and technique" (Koutsoupidou, 2014, p. 249). From the group lesson's perspective Kokotsaki & Hallam (2007) have argued that it has many benefits on students' development, like confidence. To date, instrument study is seen as highly dependent on present being and real-time verbal and visual communication *(Ibid.)*. Moreover, progress and success as an artist is mostly associated with bodily learning.

Codarts is Rotterdam based university of the performing arts with a mission to "train talented and driven dancers, musicians and circus performers to become dedicated and inspiring artists, leaders and facilitators…" (Mission and vision, n.d.). Codarts is one of these educational institutions that is in some study programs constrained to present being, especially regarding

individual classes and practices. This is the main reason why the classical music department was chosen for this research because in the classical music realm there is a general tendency to conserve music and musical learning processes. Although, the importance of present being and in-person contact seems more conspicuous in the classical music department, Sherbon & Kish (2005) have found that regardless the improvements in technology that facilitate distance learning, in music education face- to-face method is the standard in all levels. The main reason for this is the impossibility to learn an instrument, or other forms of performing arts, without being bodily present (Koutsoupidou, 2014). Graham (2004) has argued that in general the technological progress has increased the range of options that could bear upon teaching and learning. Therefore, it is important to follow similar path in music education: broaden possible learning and teaching solutions for students and teachers, but moreover, diminish the technological gap that educational institutions of performing arts seem to face. Various technological solutions could facilitate enriched learning experience, where students are engaged, have ownership over their study and are experiencing in-depth learning. This in turn contributes to the success of an artists in the century of digitalization. Thus, this study tries to bring the two ends of a rope together: digital tools in the classical musicians' practice. More specifically, I will discover how bodily learning (practicing) in combination with digital tools influence students' engagement, ownership and in-depth learning experience that are collocated under the term 'enriched learning experience.

The aim of the study is twofold: practical and academic. Codarts strives for being an exemplary case for other educational institutions of performing arts to help them to keep up with the rapidly digitalising world. The main aim of the research is to find out how digital means facilitate enriched learning experience in personal practices among classical music students and consequently, take the result into account when gradually enhancing the curriculum of the classical music studies at Codarts. From academic perspective blended learning, also known as hybrid learning (Olapiriyakul & Scher, 2006), in higher education institutions is studied widely (e.g. Hua, Goodwin, & Weiss, 2013; Garrison & Kanuka, 2004; Holley & Oliver, 2010; Poon, 2013), but utilization of blended study in individualistic- natured music education is studied scantily and lacks of academic research. According to Koutsoupidou (2014), online distance music education studies appeared after 2000, and is still at the very beginning as a field of research. One of the reason for that is the complexity of predominantly bodily learning that is difficult to analyse comparing to cognitive output from theory classes. Moreover, the focus of blended learning research has been on different group lessons (e.g. Ginns & Ellis, 2007; Hua, Goodwin, & Weiss, 2013; Poon, 2013) and individual classes where

blended learning can be employed unplanned or without being aware of it, have not been studied although, it is a big part of music education. Thus, there is a need to improve academic relevance of blended learning in individualistic-natured instrumental classical music studies. Inclusion of bodily learning components to blended learning research would expand the understanding of hybrid learning in the field of performing arts. Also, it would fulfil the academic literature gap regarding student's engagement, ownership and in- depth learning (enriched learning experience), and blended learning in individual instrumental classical music studies.

This exploratory thesis mainly strives for finding an answer to the question: how do digital tools facilitate enriched learning experience in individual practices among the instrumentalists in the classical music department at Codarts, Rotterdam? Instrumentalist are chosen because they use their instrument as a medium to create sound and thus, music. Also, including digital tools into their practice is in some sense more complicated because in order to do that one has to put his/her instrument aside. For this reason singers and conductors were excluded from the study. They use their body as an instrument and utilizing digital tools simultaneously with bodily practice is less problematic comparing to instrumentalists. It is important to acknowledge the role of digital tools in practicing process- is it obstructive or constructive? Therefore, on the first stage of the study the importance, frequency, benefits and downsides of digital solutions were under focus, and in the second phase I explored from students' perspective how digital tools facilitate enriched their learning experience?

It was found that the year of study influences students' engagement; owning a smartphone is related to greater ownership and in- depth learning experience; participation in online study groups affects students' engagement and in- depth learning; and lastly, engagement varies between different instrument groups. The three concepts of enriched learning experience (engagement, ownership and in- depth learning) are not necessarily connected to each other, but each of them elaborates on the greater understanding of enriched learning experience. In sum, students who own a smartphone, play a woodwind instrument, involve in online study groups, and are either on their last year of Bachelor's (BA) or first year of Master's (MA) studies experience most likely the enriched learning experience.

1. Theoretical framework

In order to study blended learning in music education, it is important to look into more traditional music pedagogy, where learning is based on present being and teacher is in control of the learning process, the curricula, feedback and assessment (Lebler, 2008). Becoming a professional musician is a long journey and takes a lot of time and dedication. For example, Ericsson, Krampe, & Tesch-Römer (1993) argued that even for experts it takes more than 10 years of heavy practicing before they can reach the mastery level. Following a music education program requires the acquisition of many practical skills, such as tuning accuracy (Yarbrough, Karrick, & Morrison, 1995), listening, instrumental technique, conducting, participating in various ensembles, etc. (Koutsoupidou, 2014). Music education in general, but instrument study in particular, is predominantly related to bodily learning and "practical lessons, such as piano, violin or harp, require continuous personal contact and interaction in order for the student to observe and assimilate various aspects of instrumental performance and technique" (Koutsoupidou, 2014, p. 249). Therefore, instrument study is highly dependent on present being and real-time verbal and visual communication *(Ibid.)*.

Kokotsaki & Hallam (2007) have found in their explorative research about participative music making that group lessons contribute to players confidence and moreover, help them to develop the skills which are related to ensemble and solo performances. Besides that, they bring out that the participants of collaborative activity benefit from the group class because they have the opportunity to compare themselves to others that helps to motivate the students, gain more self-confidence, or to bear in mind that they have to put more effort into their practice. Even though, Kokotsaki & Hallam (2007) explored that group music making influences positively various aspect of music learning; Ericsson, Krampe, & Tesch-Römer (1993) refute the understanding that sufficient amount of practising or experience leads to maximal performance in different fields. Rather, right method and strategy will facilitate improved performance skills. From musician's perspective it means that many hours of practising might not always be the best way to achieve mastery skills. Instead, deploying right methods and strategy will help to achieve excellence. Bearing this aspect in mind, supplementing traditional bodily practice with more modern options, such as digital tools, might be the right path towards excellence. Hence, two concepts are going to be discussed: blended learning and enriched learning experience, the latter of which consists of three concepts: engagement, ownership and in-depth-learning.

Firstly, I will review the literature concerning blended learning because it is a combination of two environments: computer-mediated and face-to-face (Graham, 2004), or according to

Poon (2013): virtual and physical environments. Within the thesis my emphasis is on the technology-mediated part of blended learning: digital tools. This relates clearly to the aim of the study to explore how digital tools facilitate enriched learning experience but also, how they bear on individual practices. According to this, the benefits and challenges of digital tools in instrumental classical music practice will be explored.

Secondly, I will focus on enriched learning experience which is an overarching term for the three concepts: study engagement, ownership, and in-depth learning. The enriched learning experience idea was created just for this research to collocate, describe and operationalise aforementioned indicators (engagement, ownership, in-depth learning). *A student is having an enriched learning experience if he/she is engaged to the study, has ownership over his/her learning and strives to have an in-depth knowledge in topics that have been discussed in the class.* Study engagement is studied hand-in-hand with more widely researched work engagement concept. I will discover the similarities between them, and see how they relate to positive outcomes of either one's work or study. Moreover, study engagement is disentangled into smaller concepts, like dedication and active participation in online platforms respecting one's study. In order to become an outstanding artist, engaged student is dedicated to his/her study which translates in interest to combine formal bodily learning with digital solutions. Moreover, engaged student is active and participates in study-related discussions with fellow students and teachers on- site and also in online environments.

Rainer & Matthews (2002) have found that defining ownership is complicated and various authors have described it in different ways. I am going to define ownership through student's autonomy and freedom. Autonomy was chosen to describe ownership because according to Rainer & Matthews (2002), autonomy is one of the most common component of ownership. Also 'freedom' was chosen for assessing ownership because freedom gives students the opportunity to learn whenever and wherever. In-depth learning describes the willingness and curiosity to expand and deepen the knowledge on topics that have been discussed in the class with teacher, exploring something in a variety of ways and therefore, develop his/her research skills because in order to acquire in- depth knowledge student must be capable of finding reliable information from several sources (*Ibid.*).

Now, however, I will turn my focus on blended learning because at the present day a variety of digital solutions, that could facilitate the acquisition of mastery skills, are available and easily accessible. It is just a matter of finding a right strategy or method from many options.

1.1 Blended learning

Diverse technical means (smartphones, tablets, PC's etc.) impact a significant amount of people in different realms every day. For example, Brandellero & Kloosterman (forthcoming) have stated that the same is happening in the field of world music where producers are faced with expeditious changes in technology all the time. Some fields are more prone to innovate and they adjust faster to changes (e.g. telecommunication), but for some others change is not always warmly welcomed and difficulties are faced on implementation. One of these fields is education because according to Garrison & Kanuka (2004), higher education institutions are known for their tendency to resist change, or as they call them 'notorious resisters' (p.102). Furthermore, Mioduser, Nachmias, Oren, & Lahav (1999) have argued that there is a tendency of "one step forward for the technology, two steps back for the pedagogy" (p.233) in tertiary education. There are many reasons why changes in higher education are hard to make: class duration, size, location, and availability of technology (Graham, 2004). However it may be, there are more and more opportunities to combine traditional learning settings with modern online solutions, and it has become a trend in higher education (Yen & Lee, 2011). For example, Koutsoupidou (2014) brings out that in music education technology has contributed to notation and composition software. Moreover, Sherbon & Kish (2005) have argued that "the rapid development, availability, and marketing of online education will almost certainly accelerate the development of distance learning in music education" (p. 36). To date, however, different levels of music education programs are tied to practical, hands-on activities (Koutsoupidou, 2014) and to conventional face-to-face instructions where teachers are in control of the learning process, the curricula, feedback and assessment (Lebler, 2008). Yet, it does not mean that it is the most suitable way of learning classical music (Green, 2003).

Blended learning is a relatively new term that descends from the beginning of the 21st century (Bliuc, Goodyear, & Ellis, 2007). It has been studied throughout different disciplines, like optometrics (Hua, Goodwin, & Weiss, 2013), sociology (Poon, 2013), veterinary (Ginns & Ellis, 2007), nursing and midwifery (Smyth, *et al*., 2012) etc., but there is no clear consensus on blended learning definition (Bliuc, Goodyear, & Ellis, 2007; Oliver & Trigwell, 2005). That is why blended learning has many definitions that revolve around different environments, delivery and content modes. Graham (2004) argues that "blended learning is part of ongoing convergence of two archetypal learning environments": face-to-face and distance learning systems (Past, Present, and Future, pgh.1). According to Garrison & Vaughan (2008), "blended

learning is the thoughtful fusion of face-to-face and online learning experiences… most important, blended learning is a fundamental redesign that transforms the structure of, and approach to teaching and learning" (as cited in Almpanis, *et al*., 2010, p. 264). These are only two of many possible definitions of blended learning but "at its simplest, blended learning is the thoughtful integration of classroom face-to-face learning experiences with online learning experiences" (see Figure. 1) (Garrison & Kanuka, 2004, p. 96). To make it more clear, blended learning is a combination of two, virtual and physical environments where former is characterized by synchronous and human interaction, and latter by asynchronous, text based and independent human interaction (Graham, 2006 in Poon, 2013, p. 274).

Figure 1. *Different modes of learning*

1.1.1 Digital tools and personal resources

In order to go further with the study, it is necessary to define the concept of digital tools as the fundamental means in blended learning utilization. This paper adopts a definition of digital tools as follows: digital tools are technical means (e.g. Apps, websites, Skype, computer programs, email, Blackboard) that facilitate any kind of learning activity related to instrument study by using smartphone, tablet, computer, IPod etc. Besides dividing blended learning between synchronous and asynchronous environments, according to Koutsoupidou (2014), similar division applies to digital tools (Figure 2 Division of digital tools according to Koutsoupidou, 2014). "Synchronous digital tools allow the real time transmission of voice and motion across diverse locations" (p.246). These are tools like Skype, Google Hangouts, FaceTime, etc. Asynchronous tools are open-source platforms, such as Blackboard, Moodle, emails, WhatsApp etc. These platforms are used for uploading reading materials, announcements, podcasts, mediating discussion, etc. (*Ibid.).*

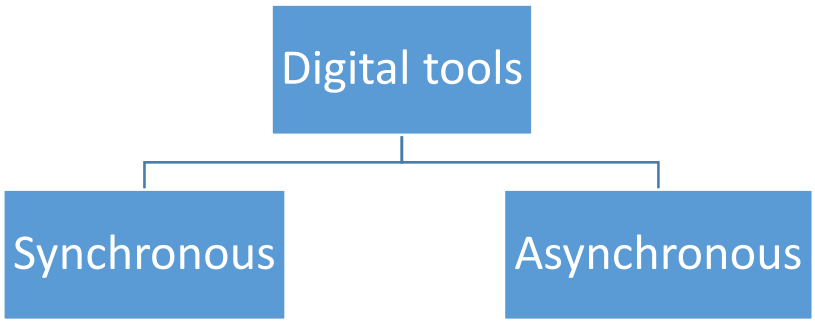

***Figure 2**. Division of digital tools according to Koutsoupidou (2014)*

Utilization of digital tools in blended learning setting is fundamental because it facilitates communication between the students in order to avoid 'isolation' (Smyth, *et al*. 2012) and to develop a sense of community. Personal practice is predominantly individual thus, it is necessary to offer an opportunity to be more involved into study-related discussions and to "provide the condition for free and open dialogue, critical debate, negotiation, and agreement" (Garrison & Kanuka, 2004, p. 97). Besides this, digital tools give student the freedom to learn independently from different online sources whenever and wherever, but also the opportunity to develop his/her research skills.

Even though, digital tools are contributing to good cause, they are also closely related to personal resources. It is important to look into personal resources because they are "valued by the individual and serve as means for attainment of other personal characteristics, objects, energies, or (study) conditions and be functional in achieving goals, and stimulating personal growth and development" (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007 as cited in Ouweneel, *et al*., 2011, p. 143). People possess different kinds of resources that can be financial, emotional, mental, physical etc. Technical means, and especially possessing them definitely depends on our personal financial resources. In order to experience blended learning, it is a prerequisite that a student owns some kind of technical mean (PC, tablet, smartphone etc.) or has an access to online sources because "technologically supported activity is usually some kind of on-line or web-based activity" (Bliuc, *et al*., 2007, p. 232). In other words, digital tools are the facilitators of blended learning. According to Salanova *et al*. (2009), "the more obstacles (e.g. poor time planning etc.) students perceive, the less engaged they are, and the more facilitators (e.g. hope, self-efficacy) they perceive the less burned-out they feel" (p.13). Therefore, it could be argued that students who perceive many facilitators, such as various

digital tools, are more engaged than the ones who experience multiple obstacles (e.g. poor internet connection).

1.1.2 Deployment of blended learning

In the 19th century students' learning problems were associated with limited intelligence or lack of diligence (Zimmerman, 2002). Besides enhancing the learning process and dealing with time and space problems, deploying customized learning styles for students with limited intelligence or diligence is something blended learning could overcome. It is evident from the literature that the popularity of blended learning has grown simultaneously with the digitalization and the term "blended learning" is not only a buzzword in education, but also in corporate environments (Graham, 2004). For example, in the USA around 10% of higher education students took an online course in 2003 , but by 2009 almost 30% took at least one online course (Knewton, n.d.). Moreover, according to Pappas (2015) Learning Management Systems market value has been raising from $ 2,55 billion in 2013 to 4 billion in 2015. By 2018 it is expected to be worth $8 billion. This shows the popularity of virtual learning environments, which is part of blended learning approach. Graham, Allen & Ure (2003) have summarized three main reasons why the implementation of blended learning has been increased over time (in Graham, 2004):

1) it improves pedagogy from transmissive approach to interactive strategies

2) it increases access and flexibility for instructors and learners

3) increased cost effectiveness

Partly because of this, some authors predict that the popularity of blended learning will grow and in the future it is going to be the predominant form of teaching (Yen & Lee, 2011; Hua, Goodwin, & Weiss, 2013).

1.1.3 Blended learning: benefits and challenges

There is some evidence that blended learning approach can be more effective and efficient than regular face-to face learning (Twigg, 2003; Heterick & Twigg, 2003 as cited in Garrison & Kanuka, 2004), and it has a positive effect on indicators, like lower dropout rate,

higher grades and greater knowledge (López-Pérez, Pérez-López, & Rodríguez-Ariza, 2011; Twigg, 2003). Poon (2013) has argued that benefits of blended learning emerge in increased students' motivation, involvement and satisfaction. Motivated students are more involved in the class subject and therefore, determined to carry out their assignments (López-Pérez, *et al*., 2011). See Table 1 Summary of benefits and challenges to blended learning (Poom, 2013).

Many authors argue that digital tools and virtual environments have an important role in blended learning approach and they can support the enriched learning experience. From the study by Smyth, *et al*. (2012) it was found that blended learning facilitated unique learning experience because students could engage with their studies whenever and wherever. Shuler (2001) has stated that technology can play a significant role in arts education to reverse the trend of comfortable passivity and avoid people becoming "cultural couch potatoes" (p. 25). The same applies to music education because implementation of social technologies facilitate the opportunities to expand educational activities beyond traditional classroom setting and thus, diversify and deepen music learning and teaching practices (Salavuo, 2008). Furthermore, digital tools and online learning platforms are not only providing a great opportunity to teacher-to-student or vice versa communication. It is also a great way to predispose peer-to-peer learning and ensure that students have a stronger sense of community (Rovai, 2002; Rovai & Jordan, 2004).

The nature of blended learning is not rigid and there is no clear-cut solution for implementation. The design of blended study is highly context dependent (Graham, 2004) and therefore, gives the possibility to 'customize' learning environment for each student, which most likely results in greater learning success (Twigg, 2003). Every student is different and comes with different life and educational experience to academic study (Holley & Oliver, 2010), but often students lack fundamental grounding like "confidence in learning, choosing familiar ground, being prepared to be open… and working together in a safe and supported situation…" (Greener, 2008, p.2 as cited in Holley & Oliver, 2010, p.693). Thus, it is hard to believe that the knowledge acquisition works in the same manner for everyone. For this reason, blended learning can be used to find a perfect 'match' between knowledge acquisition and the needs of each student.

Although, the virtual part of blended learning has got a lot of positive reflection, it does not mean that distance learning would exclude the traditional ways of studying. Both, online and face-to-face learning, are equally important (Rovai & Jordan, 2004; MacDonald, 2008; Almpanis *et al*., 2010; Yen & Lee, 2011). Almpanis, *et al*., (2010) have argued that in order to provide a cohesive learning experience, course designers must consider carefully how to

combine two learning environments. It must be clear which activities suit the best for the online environment and which ones are the finest for the classroom, but also what should be the balance between these two environments. Also, Mortera-Guiterrez (2006) has shown that if the face-to-face part of teaching is not utilized, it might become ineffective. Moreover, it is important to keep the balance between online and on-site learning according to the nature of the class. From the music education perspective, Salavuo (2008) has argued that face-to face activities should not be hindered because of web-based environments. Online environments should just "enrich the total educational and musical experience, and most of all, create a basis for deep, self-directed and collaborative learning activities" (*Ibid*., p.126).

In general, it seems that the attitude towards blended learning is rather positive because it offers many opportunities to bring learning and teaching to 'next level' and moreover, it fits with the political agenda of the "21st Century Skills" (21st Century Skills, Education & Competitiveness. A Resource and Policy Guide, 2008). However, blended learning faces various forms of critique that are going to be discussed below. See Table 1. Summary of benefits and challenges to blended learning (Poom, 2013).

Attwell (2007) and Salavuo (2008) have found that despite the introduction of online solutions, like Learning Management System (LMS) and Course Management Systems (CMS) in educational institutions, educator's role has not changed and one is still seen "as the sole authority that passes knowledge down to disciples with 'empty minds' " (Bereiter, 2002, p.13-16 as cited in Salavuo, 2008). Furthermore, according to Sharp, *et al*. (2006) and Caruso (2004) the usage of LMS and CMS in educational institutions are mostly just an extension or an addition to traditional face-to-face instructions that aim to facilitate convenience instead of pedagogical benefits (in Salavuo, 2008). In a similar vein, Graham (2004) says that at the present day learning and teaching is mostly still based on transmission, but not on interaction. Yet, Swan (2002) contends that interaction between the instructor and learner is equally important in a classroom and in online environments because it impacts student's satisfaction of the course.

From implementation point of view, the main aim of blended learning should be enhanced study results and not cost saving (Mitchell&Honore, 2007; Trasler, 2002 in Poom, 2013). Nevertheless, the quality of learning and teaching in blended environment has been placed in doubt. Although, various modes of learning that consist of, or include some aspect of distance education (blended learning, e-learning, online learning etc.) offer convenience and comfort, it should be ensured that the quality of education does not suffer. Fewer amount of on-

site classes should not be associated with lesser coursework (Vaughan, 2007 in Poom, 2013). It is essential that online or on-site education stick with the familiar and agreed models of educational theories because different technical solutions are only tools and should not derive the teaching agenda (Sherbon & Kish, 2005).

From lecturers perspective Almpanis, *et al*. (2010) argue that constant change in technology makes teachers feel that they have always some sort of 'catching-up' to do. This makes them rather poor adjusters and resistant to whatever technological change. From the educator's viewpoint it is nice to provide an opportunity to enrich the study with online materials, but it is also important that lecturers are willing to relinquish a bit of their power and accept and value for example, individualized modes of study (Holley & Oliver, 2010). But in general, it seems that technical issues tend to accompany blended learning from each side: student's, teacher's and educational institution's.

Another challenge to blended learning is the feeling of 'isolation' (Smyth, Houghton, Cooney, & Casey, 2012) because online learning reduces the opportunities to interact with fellow students and teachers. Poom (2013) has also pointed out that the downside of blended learning is the invasiveness with personal life. Student, who study from home feel the invasiveness of schoolwork in their everyday life (Smyth, Houghton, Cooney, & Casey, 2012).

Oliver & Trigwell (2005) are turning their critical focus to more fundamental issue and are arguing that 'blended learning' is a misleading term, it should be abandoned and substituted with 'blended teaching' or 'blended pedagogies' because it has mostly the elements that apply to teaching or giving instruction.

Table 1. *Summary of the benefits and challenges to blended learning* (Poom, 2013)

Benefits	Challenges
• Enhanced student learning outcomes • Greater flexibility for students and teachers • Improved autonomy, reflection, and research skills • Reduced student withdrawal rate • Ability to foster a professional learning environment • Potential cost and resource savings	• Unrealistic student expectations • Student-perceived isolation • Technological problems for students • Invasiveness into other areas of life • Time commitment • Technological problems for institutions • Lack of support for course redesign • Difficulty in aquiring new teaching and technology skills

1.2 Enriched learning experience

Blended learning can positively enhance the learning experience as Motteram (2006) proved in his study about teachers' education at Manchester University. In the following section the concept of 'enriched learning experience' is going to be disentangled. Within this study, enriched learning experience entails three concepts: study engagement, ownership, and in-depth learning. The term enriched learning experience was created by the author to collocate aforementioned three concepts under one 'umbrella' term. Therefore, no literature regarding 'enriched learning experience' cannot be found. The following subchapters of are built on the literature concerning study engagement, ownership and in-depth learning. In order to operationalise engagement, ownership and in-depth learning, each of these concepts were subdivided into themes like dedication, active participation, freedom, autonomy, diverse resources and evolved research skills (see Figure 3 Enriched learning experience). It was presumed that student is having an enriched learning experience if he/she is engaged to the study, has ownership over his/her learning and strives to have an in-depth knowledge in certain topics that have been discussed in the class. The three concepts are not necessarily connected to each other, but each of them elaborates to the deeper understanding of the enriched learning experience. If a student is experiencing elements like, engagement, ownership or in- depth learning to smaller extent or not at all, does not mean that he/ she is not having an enriched learning experience. He/ she is just not using a full range of possibilities that digital tools offer to have an enriched learning experience.

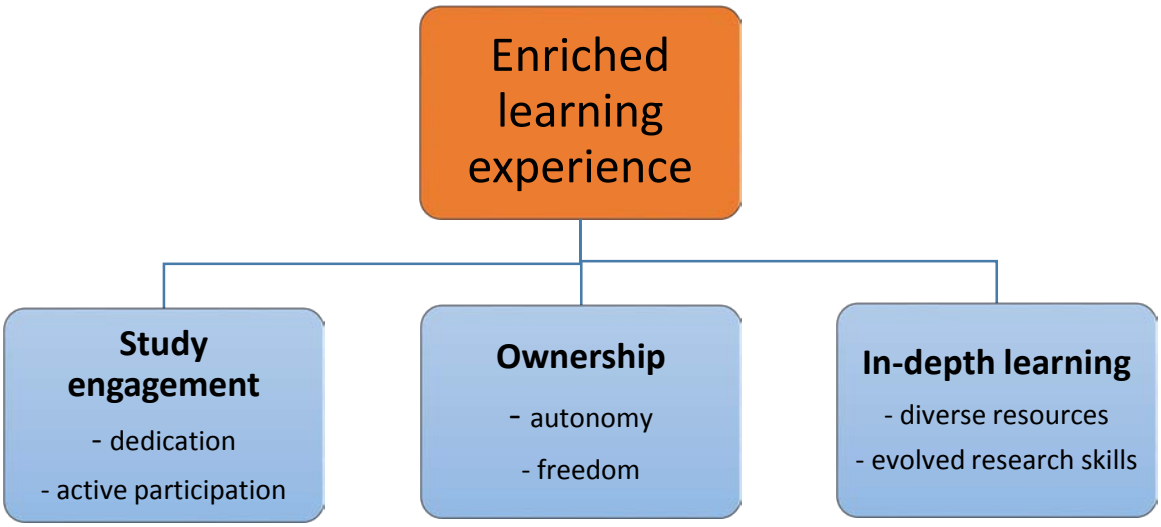

Figure 3. *Enriched learning experience*

1.2.1 Study engagement

Being engaged with one's work and study is well studied concept among psychologists, however different authors have defined it diversely. The most well-known explanation is given by Schaufeli, *et al.*, (2002): "engagement is a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption" (p.74). Ouweneel, Blanca, & Schaufeli (2011) have stated that study and work engagement are analogous concepts because similarly to employees, students are also bound up with organised and compulsory activities that result in a certain goal. Additionally, Schaufeli, *et al*., (2002) have found that when studying about work engagement, substituting word 'work' with 'study' is acceptable because both terms relate to individuals' performance of their daily activities that constitute their role. Thus, study engagement definition resembles with the one used for the engagement: "study engagement is characterized by feeling vigorous, being dedicated to one's studies, and being absorbed in study-related tasks" ((Schaufeli, *et al*., 2002 as cited in Ouweneel, Blanca, & Schaufeli, 2011, p. 142). Because the two concepts are very similar and overlapping, within this thesis work engagement is studied thoroughly to elaborate on study engagement.

In the field of psychology work engagement is studied hand-in-hand with the burnout concept. This means that engagement is also defined as "the positive antithesis of burnout" or "an opposite experience of burnout" (Schaufeli, *et al*., 2002, p. 75). From the behavioural viewpoint, engagement is perceived as "an outcome with a combination of intentions and successful academic and social integration within the study environment" (Tinto, 1993 as cited in Salanova, Schaufeli, Martinez, & Breso, 2009, p. 2). Taking a glance into earlier studies, Kahn (1990) has offered a figurative definition for work engagement as "the harnessing of organizational members' selves to their work roles" (p.694) and Astin (1984) has defined engagement simply as one's involvement to his/her studies. More precisely, "it is an amount of physical and psychological energy that the student devotes to the academic experience" (as cited in Salanova, *et al*., 2009, p. 2). According to McInnis (2001), in order to be engaged one must be determined about his/her studies (in Salanova, *et al*., 2009, p. 2). Last of all, Maslach and Leiter (1997) have argued that engagement can be described with energy, involvement, and efficacy; and "rather than a momentary and specific state, engagement refers to a more persistent and pervasive affective- cognitive state that is not focused on any particular object, event, individual, or behaviour" (Schaufeli, *et al*., 2002, p. 74).

Afore, a rich variety of definitions is provided, but within this thesis *study engagement refers to the state where student is:*

1) *dedicated to his/her study, which translates in interest to combine formal bodily learning with digital solutions in order to become an outstanding artist.*
2) *active and involves in different online learning communities and participates in study-related discussions in order to avoid 'isolation'.*

1.2.2.1 Positive effects of engagement

Study engagement is considered as one of the constituting elements of successful knowledge acquisition and enriched learning experience. Earlier studies have shown that "engaged students are energetically immersed in their studies" (Salanova, *et al*., 2009 in Bakker, Vergel, & Kuntze, 2015, p. 49) and this "paramount to their learning success" (Herrington *et al*. 2003 as cited in Sadik, 2008, p. 488). Engagement results in positive outputs like academic success (Salanova, Llorens, & Schaufeli, 2011), higher performance ability (Salanova, *et al*., 2009) and positive emotions (Cacioppo, Gardner & Berntson, 1999 in Ouweneel, *et al*., 2011, p. 144).

Dedication and enthusiasm, as the characteristics of engagement, have good impact on students and they are "more likely to adopt mastery approaches, and report higher self-control as well as higher grades" (Howell, 2009 as cited in Ouweneel, *et al*., 2011, p. 142). Likewise to engaged employees, who "have a sense of energetic and effective connection with their work activities and see themselves as able to deal completely with the demands of their job" (Schaufeli, *et al*., 2002, p. 73), engaged students can feel the same way about their main work-studying. Schaufeli, *et al*., (2002) have proved that professional efficacy is an important element of engagement and lack of professional efficacy leads towards burnout. Also, Salanova, *et al*. (2009) believe, the longer students remain disengaged from their duties has an impact on their performance and eventually results in lower grades.

As afore discussed literature shows, study and work engagement affect positively different indicators, such as academic success, performance, emotions, etc. Therefore, it is important to study how to bring study engagement to 'next level' with a help of digital tools. Moreover, how digital tool facilitate engagement and thus, impact enriched learning experience.

1.2.2 Ownership

Rainer & Matthews (2002) argue that choice, voice, and shared authority are the most important elements of ownership in academic literature. From music teachers' perspective, Johannesen (1997) has found that taking responsibility for one's learning and development are the most important elements to grow as an independent musician (in Jørgensen, 2000). Furthermore, according to Milner-Bolotin (2011), taking responsibility, finding a personal value, and the feeling of being in control are the constituting elements of ownership (in Enghag & Niedderer, 2008). In addition, it is argued that ownership refers to the "importance and need for students to participate by discussion, choice, responsibility and decision taking; it stresses the real actions of choice and control by the learners" (Enghag & Niedderer, 2008, p. 631). For example, the participants of the study by Smyth, Houghton, Cooney, & Casey (2012) believed that because of blended learning approach, they had more autonomy over their learning and therefore, they were more responsible about the time they had to dedicate on their study program, but they also learned more because they had the freedom over their learning. However, in music education students often rely on their teacher's expertise and for example, Jørgensen (2000) discovered that from the students' perspective instrument teacher has 'high' or 'very high' influence on their learning. Yet, 87% of the respondents found that they have the biggest impact on their practicing behaviour. He also found that other students do not have much influence on practice behaviour.

The most influential research in ownership of learning is done by Rainer & Matthews (2002). They have argued that "when human becomes mentally active, they are agents in their own learning" (p.22). Therefore, they are owners of their knowledge because it could be associated with personal experience. Ownership has been studied by various scholars and similarly to study engagement, it has been noted that being in control of your study path might have positive effect on learning outcomes, but above all, it is seen as a "central and cohesive element of knowledge construction" (Rainer & Matthews, 2002, p. 22). It is important that during the learning process each student ascertains his/her problems and formulates the questions by him/herself because this will lead them towards new insight (Enghag & Niedderer, 2008).

According to the author, ownership in music education is studied scantily because by default classical musicians have limited freedom. Musicians have mainly the mediator role between the composer and audience, and in this hierarchy of musicianship composer's role somehow overrules the performers', whose function is just to reproduce (Cook, 1998). For this

reason, the ownership element as part of enriched learning experience, was added to the research. Moreover, with the rapid development of digital tools and multimedia, our autonomy, control and choice in everyday life has increased to great extent. Various tools give us the freedom to do a wide range of things remotely, and also the autonomy to decide when and where to realise certain tasks. This paper adopts a definition of ownership as follows: *Ownership is student's freedom and autonomy to learn whenever and wherever, and the awareness of which digital solutions work best for him/her to enhance knowledge transfer independently*. This means that digital tools facilitate the autonomy to choose your own way to learn, but they also provide an opportunity to enrich one's knowledge independently despite the time and space problems.

1.2.3 In-depth learning

In-depth knowledge acquisition is learners willingness to fully understand necessary concepts, and ability to explain and apply it on everyday life (SWIRLsite, 2012). From musician's viewpoint, it means that they are able to understand and apply befitting knowledge to everyday practice. In- depth learning is characterized by an "intent to understand, vigorous interaction with content, critical appraisal of content, correlation of new and old knowledge (…)" (Boekaerts, 1997; Chi, De Leeuw, Chiu, LaVancher, 1994 in Kanter, Wimmers, & Levine, 2007, p. 405).

According to Rainer & Matthews (2002) in depth learning is "exploring something in a variety of ways; comprehending, applying, reflecting, evolving; becoming an expert on a topic; using multiple resources, and putting your topic under a microscope" (p. 27). Inspired by this rich list of in- depth learning elements, in this study context in-depth learning means the following: *in order to gain wider knowledge and better understanding of topics discussed in-class setting, student uses various online sources or digital solutions and therefore, develops his/her research and ICT skills which contributes to enriched learning experience.*

Not only instrumental skills, but also the ability to collect, analyse and understand information are defining factors of someone's success in the 21st century (Collins). If a student wants to learn deeply about some topics and ideas discussed in the class, he/she has to be able to use multiple resources to collect relevant and reliable information. Using different online sources in blended learning approach facilitates enriched learning experience and deeper understanding of subject under focus (López-Pérez, *et al*., 2011). The utilization of range of

methods, such as documents, discussion boards, emails, YouTube recordings will not only enhance student's ICT and research skills but they will also "gain different experiences and are more likely to sustain their interest in learning than in traditional instrument learning" (Koutsoupidou, 2014, p. 251). Therefore, digital tools play an important role in in-depth knowledge acquisition and in study engagement retention.

The term enriched learning experience was created by the author as an 'umbrella term' to collocate above discussed three concepts: engagement, ownership and in- depth learning. The three concepts are not necessarily connected to each other, but each of them elaborates to the understanding of enriched learning experience. If student is experiencing elements like, engagement, ownership or in- depth learning to smaller extent or not at all, does not mean that he/ she is not having an enriched learning experience. He/ she is just not using a full range of possibilities that digital tools offer to have an enriched learning experience

2. Method

The research was part of the Master's (MA) program Arts, Culture and Society in Erasmus University Rotterdam. The results of the research were used for the MA thesis that strives to find out, how digital tools influence learning in individual instrument practices. A written and oral data, collected from the students of Codarts were used to broaden the understanding of how classical musicians are binding digital tools with rather conventional instrument study. In particular, I discovered if supplementing practicing with digital tools impacts the level of engagement and ownership over one's education. Digital tools should give the students more freedom to control their study 'path'. Furthermore, similar pattern between digital tools in-depth learning was studied. Thus, in a nutshell, how are digital tools in individual instrument practices and therefore, in unplanned blended learning setting facilitating enriched learning experience.

Because of the explorative nature of the research, no hypotheses are going to be tested. Nevertheless, current study is looking to answer the question: ***how do digital tools facilitate enriched learning experience in individual practices among the instrumentalists in the classical music department at Codarts Rotterdam?***

The exploratory research was carried out in Rotterdam, the Netherlands and had an institutional approach that focuses only on single institution, Codarts. The research comprised of 76 self- completion surveys and 20 semi- structured interviews. Although, the nature of the current study is explorative, in order to answer the research question, mixed method was used. "Mixed methods research integrates quantitative and qualitative research within a single project" (Bryman, 2012, p. 628). It was important to study this topic by using mixed methods because according to Bliuc, *et al*. (2007) it is unusual to find a combination of considerable qualitative and quantitative research in one blended learning research. Quantitative part of data gave me an overview of Codarts students' individual preferences, the usage frequency and the importance of digital tools in their practice according to different aspects like gender, study year, age, instrument group, possession of PC/tablet, smartphone and holding a membership in different online communities. The results of the questionnaire were used as a preliminary indicator. However, it was necessary to conduct the follow-up interviews because survey-based research has limitations, such as incomplete and ambiguous answers, and constraints in the expression of the opinion (Burns, 1994 in Bliuc, Goodyear, & Ellis, 2007). Interviews were conducted to supplement and enrich the results of the questionnaires. However, both research

methods are considered equally important and the results gave the author relevant information for answering the research question.

As Codarts is dedicated to educate students from different fields of performing arts (classical-, jazz- and world music, circus art and dance), the target population was delimited to the classical music department. More precisely, in both steps of the research, instrumentalists were studied because unlikely to singers and conductors, they are using their instrument as a mediator to create sound and thus, music. Including digital tools into their practice is in some sense more complicated because in order to do that one has to put his/her instrument aside. For this reason singers and conductors were excluded from the study. They use their body as an instrument and utilizing digital tools simultaneously with bodily practice is less problematic comparing to instrumentalists. Also, composition and music education students were excluded in order to retain the clarity of the sample. Participants had to be enrolled either in Bachelor's or a Master's program at Codarts' classical music department. In sum, respondents had to fulfil three criteria: they had to be Codarts' students in the classical music department, they had to be instrumentalists and lastly, they had to speak English due to author's limited Dutch skills. Therefore, the sampling was purposive.

2.1 Surveys

The standardized self- completion survey begun with the definition of digital tools to assure that everyone would have a clear understanding of the meaning of digital tools. The definition was following: digital tools are technical means (e.g. Apps, websites, Skype, computer programs, email, Blackboard) that facilitate any kind of learning activity related to instrument study by using smartphone, tablet, computer, IPod etc. In general, the survey was divided into 3 blocks: personal questions, factual questions, behavioural and attitude questions. See Appendix A Survey.

In personal questions section, students were asked to fill in their student number, email address, gender, instrument, nationality, year of study, age, and their student status. This was necessary to get in touch with the respondents for scheduling the meetings for interviewing that was the next step of the research. Also, these indicators were used to categorize and analyse the data. However, personal information came also handy for identifying the respondents whose answers were incomplete or ambiguous.

In the second set of questions the possession of various technical means (tablet, PC, smartphone) was studied. Also the usage, frequency, and popularity were explored. The factual questions' section ended with an open question where students were asked to name the digital tools they are using in their practice. These questions were necessary because in order to use digital tools in practice, one actually has to possess or have an access to technical means, such as smartphone, computer or tablet.

The last set of questions were concerning the attitude and behaviour. Enriched learning experience was assessed with 14- items that included three subscales: engagement (5 items), ownership (4 items) and in-depth learning (5 items). All the items were pre- coded with keywords like dedication, involvement in online communities, freedom, autonomy, various online sources, and enhanced research skills. The Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) was used. Later these keywords were used to measure the main concepts of the research, such as engagement, ownership and in-depth learning. These concepts were used to assess the overall enriched learning experience when digital tools are part of the practice. Enriched learning experience is just an overarching term for the three main concepts.

2.1.1 Collection of quantitative data

The written data were collected from 4 - 15 of April 2016. The first week of data collection was an untraditional study week, referred as 'project week', where regular classes did not take place. Students attended to different workshops and worked on a bigger project that resulted in big performance. For the convenience of the research, it was important to find group practices or bigger group lessons where many student are present because of the time restriction that constrained this research. Project week was chosen for the field work because it was the easiest way to approach a large group of students at the same time after their workshops. In the second week, students were approached in the canteen during their lunch break, but also in the classical music department, where administrative matters are handled. Before handing out the survey, it was confirmed that the respondents are willing to fill in the survey and they meet the criteria stipulated to the research. Also, for all of them the confidentiality of their personal information (email, student number) was guaranteed. None of the students refused to participate in the study and the research was perceived rather positively. Majority of the surveys were in a form of hardcopy (n=74) and were filled in at the presence and under supervision of the author. However, two students wished to respond online and this option was made possible

for them. Hardcopies were recommendable because from the previous researches the low respondents' rate among Codarts students' was known according to the head of the classical music department (Personal notes, 09.03.16) Bakery goods were offered to persuade the students to participate in the survey. During the coding a few shortcomings in the surveys were found, such as unanswered questions and ambiguous answers. In these cases, respondents were identified and contacted again at Codarts to specify their answers. After analysing the hardcopies, the data were stored in Microsoft Word and Excel, and the Statistical Package for the Social Sciences (SPSS).

2.1.2 Sample characteristics

In total 76 students filled-in the survey, but 74 (n=74) of them were usable for the analysis. This makes the total sample size quite small because on the Bachelor's and Master's level in the classical music department of Codarts is studying in total 170 instrumentalists. I am aware of the rather small sample, but there are also benefits of a smaller sample. For example, Crouch & McKenzie (2006) believe the quality of the small sample is higher because researcher will get more involved with the participants and will gain better understanding of the research topic (in Bryman, 2012).

However, the goal was to collect 75- 80 filled surveys that is the minimum requirement for the MA thesis where mixed method is used (Janssen, Verboord, Berkers, & Kersten, 2015). The sample differs from the desired sample only regarding 'student status' variable. In the desired sample the division between part-time and full-time students would have come close to equal. Nevertheless, author's intention was not to create generalizable data set, but rather to get insight into overall usage of digital tools among classical music students. The response rate was 100% which was possible only because of the hard copies that had to be filled in at the presence of the author. The amount of surveys that were handed out, were all returned to the author. In this total sample, 58. 1% were male (n=43) and 41. 9% were female (n=31). 82. 4% of the students were between the ages 17-24 and the rest between the ages 25-35. Table 2 sums up all the sample characteristics.

In the sample all the traditional instruments of a symphony orchestra were represented, but besides that also the keyboard instruments like organ (n= 6; 8. 1%) and piano (n= 13; 17. 6%). The biggest proportion of the respondents were violinists (n=17, 23%) and the pianists.

Majority of the students were following Bachelor program (87. 8 %) and the rest of the respondents were enrolled to Master's program (12. 2 %).

As Codarts is acknowledged for its diversity, students from 15 different nationalities, wherein 2 with double nationality, were part of the study. This deepens the results of the research because people with really diverse cultural backgrounds were studied. Majority of the respondents were Europeans (89. 2%) and the rest were out of Europe (8. 1%) or holding a double nationality (2. 7%). See Figure 4 Sample characteristics: nationalities. Remarkably high was Dutch (*n*=27, 36. 5%) and Spanish (*n*=22, 29. 7 %) population in the sample. High percentage of Dutch participants can be explained by the location of Codarts (the Netherlands). Nevertheless, there is no clear reason why Spanish population is quite high comparing to other nationalities at Codarts.

Table 2. *Sample Characteristics*

	Frequency (n = 74)	*Percentage (%)*
Gender		
Male	43	58.1
Female	31	41.9
Year of study		
First year BA	14	18.9
Second year BA	19	25.7
Third year BA	15	20.3
Fourth year BA	17	23.0
First year MA	7	9.5
Second year MA	2	2.7
Student status		
Full-time	73	98.6
Part- time	1	1.4
Age group		
17-24	61	82.4
25-35	13	17.6
Instrument group		
Strings	32	43.2
Woodwinds	8	10.8
Brass	10	13.5
Percussion	5	6.8
Keyboard instruments	19	25.7

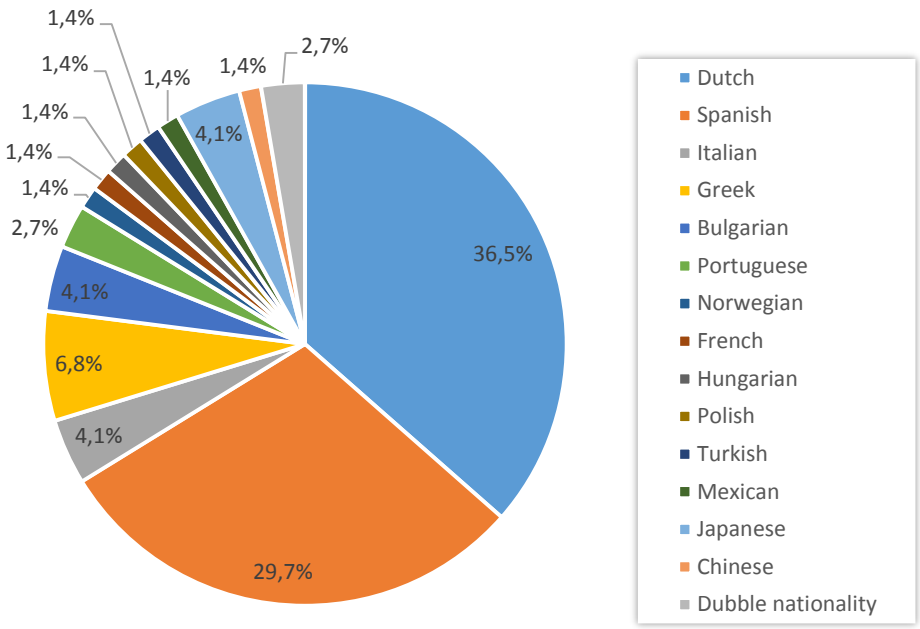

Figure 4. *Sample characteristics. Nationality.*

2.1.3 Analyses

As a first step, all the data gathered from the surveys were initially coded in Microsoft Excel with the intention of generating numerical data. Later, all the data were transferred to SPSS. In the SPSS all the variables were named, labelled and value labels were created. All the missing values were replaced with 99. Replacing values was only possible due to small sample size. Secondly, all the necessary descriptive statistics (frequencies) were calculated (see Table 2 Sample characteristics). In order to measure the internal reliability of the questions designed for operationalising the main concepts: study engagement, ownership and in depth- learning (EOI), Cronbach's alpha (α) was computed. All the questions that affected α negatively were removed. This action results in a minimum amount of items, but guarantees that the scales have the maximum inner consistency. According to Methodological Guidelines Thesis Research (Janssen, Verboord, Berkers, & Kersten, 2015), if alpha is smaller than 0.60, then the scale is unreliable. From 0.60– 0.80, the scale is found moderately reliable. The scale has good reliability if it is greater than 0.80.

Secondly, the concepts (engagement, ownership, in-depth learning) were computed into measurable variables (means, *M*). Calculating means for each concept (EOI) was necessary in

order to associate them with independent variables. The means were following: engagement is (*M*= 3.588), ownership (*M*= 3.020) and in depth- learning (*M*= 2.757). Subsequently, the means of each concepts (EOI) were correlated with social and study- related independent variables, such as gender, age group, year of study, possession of PC/tablet/ smartphone, and the usage of digital tools in practice, instrument group, and membership in online groups.

As follows, statistical significance between the groups was tested to estimate the generalisability of the results (*p < 0.1. **p < .05. ***p < .001). Because of the rather small sample all the significance tests, where p < 0.1 were taken into account and considered as meaningful results. Thus, a higher mean score can be interpreted as one's higher study engagement, better ownership over learning and greater in-depth learning experience. According to the statistical significance, it was concluded which findings are generalisable and which not. The aim of the first part of the research analysis was to gain a tentative understanding of the connections between the main concepts of enriched learning experience: engagement, ownership, in- depth learning and the digital tools in the instrumental classical music practice.

2.2 Interviews

Simultaneously with the self- completion questionnaires, more personal approach in a form of interviews were utilized. The qualitative part of the study was an important supplementation to surveys and helped to explore and interpret the correlation between enriched learning experience and digital tools in a more rigid way.

All the interviews were semi-structured (see Appendix B Interview guide) and comprised of eleven or more questions. The questions were divided into three categories: introductory, indirect and direct questions. The last question, regarding study engagement was adjusted during the research because it appeared to be too complicated to grasp. Even after the explanation of the concept 'study engagement', it was rather unclear and confusing to the participants. The goal for the interviews was to find out the ways students approach individual instrument practice and what is the role of digital tools in it. Also, what is their general opinion about digital tools in a conventional instrument study, how independent they are and much ownership they have over their learning, Moreover, from the students' perspective it was studied how digital tools make them more or less engaged to their study. It was told to all the interviewees that the purpose of the interview is to discover the role of digital tools in their instrument practice. All these questions contributed to a deeper understanding of study

engagement, ownership, and in-depth learning concepts and therefore, to the wider knowledge regarding how digital tools can facilitate enriched learning experience.

2.2.1 Collection of qualitative data

An inviting email about the opportunity to participate in the second part of the study was sent to all the BA students at the very same day as the quantitative research begun. To this email only two students responded. As a second step, before handing out the questionnaires all the respondents were informed about the possibility to take part of the second phase of the research. Also, it was emphasized that it is all volunteer and no one is obliged to do it. This strategy was more productive and with five volunteers the appointments were scheduled right after returning the survey. The third wave of finding the interviewees was combined with the surveys. The author just walked up to students at Codarts, confirmed that they meet the criteria, and asked them to fill in the survey. After finishing the survey students were asked about their availability to do an interview. This strategy increased the sample by seven people. After that, a general email was sent to all the MA students, but no one responded to this email. Lastly, random people from the survey sample were contacted personally in order to ask about their willingness and availability to participate in the second phase of the study. Out of 11 people 6 agreed to do the interview. Interviewing 20 people was sufficient enough to reach the five hour interview goal stipulated in the Methodological Guidelines Thesis Research (Janssen, Verboord, Berkers, & Kersten, 2015). The criteria remained the same to all the interviewees.

The interviews took place at Codarts from 5th of April until 22nd of April 2016. Before the beginning of the interview, all the respondents had to fill in the consent form (see Appendix C Consent form), whereby they agreed to participate in the interview and thus, being audio recorded. From the author's side it was promised that the confidentiality of their personality will be protected. Personal computer (PC) was used for the recording and all the interviews are stored in Dropbox. The duration of an interview was between 11- 23 minutes and they are recorded, transcribed and coded.

2.2.2 Sample characteristics

In total over 5 hours of interviews were conducted with 20 students from various instrument studies (trombone, violin, flute, organ, piano, clarinet, trumpet, double bass, and

percussions) and also from different nationalities (Dutch, Malaysian, Spanish, Greek, Italian, Japanese, Bulgarian, Mexican, French and French-Russian). 11 of the interviewees were male (55%) and 9 female (45%). The proportion of BA students (16) was higher than MA students (4).

2.2.3 Analyses

All the interviews were transcribed by using the website otranscribe.com and thereafter, coded manually in two steps in the Microsoft Word. For the coding the recommendations by Liamputtong & Ezzy (2005 in Saldaña, 2012, p. 17) were followed. This means that the pages were formatted into three columns. The first column contained 'raw data' (transcribed interviews), the second column contained preliminary codes, and in the third column the final codes were listed. For the preliminary coding descriptive and In Vivo Codes were used. For example, independence, authenticity, practicing process, benefits of digital tools, main digital tools in practice, student-to-student learning, recording as a way to learn, teacher's reliability, appreciation of digital tools, in-person contact etc. During the preliminary coding it was taken notice of the terms that were used for operationalising engagement, ownership and in-depth learning. Therefore, the categories were not created according to preliminary coding but according to theoretical framework (see Figure 3. Enriched learning experience). The author was working towards the pre- determined categories. The categories were following: dedication, active participation in the field of study, autonomy, freedom, diverse resources and evolved research skills. All the preliminary codes and relevant quotes were matched with each category. All these categories were translated into concepts like engagement, ownership and in-depth learning. Lastly, the concepts were amalgamated with quantitative findings and the theory.

3. Results

3.1 Blended learning

Classical music world and a classical music pedagogy are associated with conventions and traditions where teacher is in control of the learning process, the curricula, feedback and assessment (Lebler, 2008). The interviews showed that these connotations have also very much to do with cultural background and personal traits. For example, while talking with an organ player about his opinion regarding digital scores, he told me the following:

"I think that it's a new world and a little bit difficult to apply to classical music because it's a very traditional world. Commonly, at least as I've seen in this country (the Netherlands), they are more open with this kind of things. But for example, in my country Spain, the classical world is completely conservative." (Third year BA organ student, 22.04.16)

It appeared that Codarts' students are combining their practice and knowledge acquisition with different digital tools. Around ~72 % of the survey respondents are positively minded about the opportunities that technology offers and a majority of them believe that adding different digital tools into their practice can be helpful in developing their technique. Even more students believed (74. 4%) that digital tools are supporting their interpretation of assigned pieces. These finding are in accordance with Yen & Lee (2011) who argued that combining traditional learning settings with modern online solutions has become a trend in higher education. In contrary to other blended learning studies that are focused on group lessons, this study was focused on individual practices. This makes the utilization of blended learning easier because there should be no obstacles regarding class duration, size, and location (Graham, 2004). Despite the availability of many digital tools that are facilitating blended learning in individual learning practice, all the interviewees concluded that if they are facing some issues with their technique or interpretation, they mainly rely on their teacher.

" I have a notebook and if I really have a problem with technique or sound or really hard fingering passages, then I note it like, "Okay, ask this to your teacher in the next lesson"." (Fourth year BA flute student, 18.04.16)

“I use to record the lesson and listen to the recording afterwards. So, it’s like I have the same lesson ten times because I listen to this recording again and again until I get the idea that my teacher wants me to do.”(Second year BA violin student, 07.04.2016)

This proves again the conventionality of classical music study where teacher has the central role in students’ learning. Teacher is an authority to students, but in the case of instrument classes it does not necessarily mean that they pass down the knowledge to empty minds (Bereiter, 2002 in Salavuo, 2008). In individual classes interaction between the teacher and a student is extremely important as it is exhibited in the quotations above. However, blended learning is context dependent (Graham, 2004) and there is no clear-cut solution, how it should be implemented. Each student can ‘customize’ the learning environment and find the best solution how he/she could benefit from digital tools.

The result showed that most of the students (95. 9%) own a personal laptop/table. This was also evident during the interviews where most of the students confirmed to own at least one of these electronical means. However, possessing a smartphone with active 3 generation (G) or 4G connection is much lower (64. 9%). Majority of the respondents (n= 61; 82. 4%) said that they are using digital tools in their practice and 17. 6% students claimed that digital means are not part of their study. Out of these 61 instrumentalists 82% are using 1-3 various digital tools to support their practice. Although, the interviews and surveys unveiled that the most common tools are applications like the metronome, tuner, recorder; different music listening platforms such as YouTube, Spotify, iTunes; and an online sheet music library called “International Music Score Library Project (IMSLP, also known as Petrucci Music Library), there were few students who are more aware of digital possibilities that are useful and beneficial to their learning.

“I have an IPhone and for example, I record myself, I use the metronome, tuner, and I get also Skype masterclasses and lesson from my teachers via Skype” (First year MA clarinet student, 05.04.16)

“There’s also these days an app called "Cadenza". If you play a concerto, it plays the orchestra part and then it follows you, as you play your part. And then it waits for you. So that's really helpful to get an idea of the sound and where your edges are supposed to be.”(Third year BA violin student, 05.04.16)

“If something is complicated I maybe try to listen to the recording. And then I also have an app, which you can use to slow down the recording. Normally if you put the slower tempo, the pitch goes down. But this app doesn't do that. I think it’s called "Amazing Slow Down". It is useful because when the rhythm is complicated and it's very fast, then you try to put it very slow and try to understand the structure.” (Fourth year BA bass clarinet student, 13.04.16)

Graham (2004) has argued that blended learning environment must be well organised because otherwise it might become counter-effective from many aspects. In the century of digitalization various digital solutions are helpful, but at the same time we are easily unfocused because of the distractions that are always accompanying our ‘smart’ tools (e.g. notification, messages, updates etc.) Most of the Codarts’ students found that digital tools are also a distraction and this is the main negative aspect about it. See Table 3 Benefits and downsides of digital tools in instrumental classical music practice. However, students are aware of the caution they have to take if digital tools are involved into their practice. Similarly, Jørgensen (2000) has found that concentration and efficiency are the aspects students are struggling with and would like to learn more about. Majority of the interviewees agreed that all the tools must be used smartly because it is easy to get distracted by other things.

“The main problem of digital tools is that they are not made to attend one goal. A smartphone will also send you notifications of what your friends are doing and you will receive messages. Sometimes I think it's really distracting to have digital tools in front of us. We have to be careful with how we use it.” (Fourth year BA flute student, 06.04.16)

It's a useful tool but we have to learn how to use it. That's the main problem because I think it's also a possibility that technology can distract our study time. If you are studying and you have the mobile here [pointing in front of him] and you are playing and paying attention if your girlfriend is talking to you or your group of friends is posting a new stupid thing, then it becomes a problem. So, it's always as problem of how to use it. (Third year BA organ student, 22.04.16)

“I think you have to turn off all the notifications and only work on your digital tool (etc. metronome) if you need to practice because when you see it [message], you are already distracted. That’s why sometimes I don’t use it and then I can practice one hour without any digital things.”(Third year BA trumpet student, 21.04.2016)

Poom (2013) has brought out the benefits and challenges to blended learning (See Table 1 Benefits and challenges to blended learning). Similarly to this study, students found that technical troubles are a downside of digital tools also in an individualistic instrument learning. For example, students were not satisfied about the quality of Skype.

"It's not like I can play a concert through Skype because sometimes it's broken or it stops. I don't like Skype too much because it doesn't have a really good quality."(First year MA clarinet student, 05.04.16)

Also issues with authenticity were seen as a downside of digital tools. Authenticity is going to be discussed more in detail under the results' subchapter 'Ownership' (page 48).
Selectiveness is a negative aspect that students face frequently. In many online environments people are allowed to make posts, regardless the quality. This means that for example, on YouTube you can find amateur videos and also, professional ones. Musicians were telling that they really have to pay attention to what are good and trustworthy sources.

"I think digital tools can help maybe for a recording or if you search on the Internet for a help grip. Maybe the master classes on YouTube. But for the trumpet you have really stupid, stupid movies about how to reach a C4 on the trumpet? And then you have some people who say, "Yeah, I can play it" [making really high squeaky sound]. It's really funny but not helpful at all." (Third year BA trumpet student, 21.04.16)

Table 3. *Benefits and downsides of digital tools in instrumental classical music practice*

Benefits	**Downsides**
Source for interpretation/ideas/motivation	Distraction
Valuable (teaches you things)	Loss of authenticity
Learn more/faster	Technical issues
Source for information	Selectiveness

Besides the negative aspects, many positive elements of digital tools were evident. Students used mainly the word 'useful' if they were asked about the benefits of digital tools. It was discovered that digital tools can be useful from many aspects. Mostly, it was found that they are a source for interpretation, ideas and they can enhance student's motivation. This is also according to Poon (2013), one of the main benefits of blended learning. Namely, she argued that blended learning increases students' motivation, involvement and satisfaction.

"We are the young generation and we are the technology generation and we spend, maybe we shouldn't, but we spend a lot of time on Facebook, on YouTube. I think it's good in the case of musicians because good part of that time is also listening to music and listening to recordings because it also gives you motivation. Because you are saying "Okay, I want to reach to that level. So, I have to work hard." (Third year BA organ student, 22.04.16)

"Last month I started using groups and chats for clarinetists on Facebook. I think it makes you grow, gives you more information and makes you more involved."(First year MA clarinet student, 05.04.16)

Salavuo (2008) has stated that online environments should "enrich the total educational and musical experience, and most of all, create a basis for deep, self-directed and collaborative learning activities" (*Ibid.* p.126). It was found that digital tools are really valuable and they can be used to learn about new things. Numerous student appreciated recording function because it gives them immediate objective feedback. Moreover, a bass clarinetist described how YouTube helped her to learn about the technique she did not have much knowledge.

"I went to YouTube to see how people describe the modern technique. And that happened once. It helped me a lot to get this extended technique." (First year MA bass clarinet student, 07.04.2016)

"The problem is that we have certain idea about our playing. Like, I have my idea about my playing but it's always different if you listen to it. Now you can record right away and you can check it right away and you can check the tempo, you check the intonation. Is very easy to be objective. I think, that's one advantage [of digital tools]. (Fourth year BA clarinet student, 13.04.16)

Among the other benefits, digital tools are seen as a great source for information and students think that digital tools help them to learn more in a shorter period of time, but they also save them time that can be used for practicing.

"I often search on the Internet for competitions, audition and also concerts. Or sometimes I try to search if there is transcription for other instrument and I will try to listen to how the other instruments play this piece to have a more open idea of the piece. (Second year BA flute student, 22.04.16)

The fact that we can gain so much music recorded on our devices, give us more time to be focused on what we are learning, and we don't have to spend time looking for recording or sheet music. It just optimises the time that we have. It gives us more time to practice. We don't lose time looking for things."(Fourth year BA flute student, 06.04.16)

As previous studies have showed blended learning has positive and negative sides. Similarly, this study has proven that regardless the individualistic nature of instrument study, unplanned blended learning and more precisely, digital tools in blended learning approach have their benefits and shortcomings in instrumental classical music studies.

3.2 Engagement

During the interviews engagement was associated with the ability to combine digital tools into individual practice and also being active in online groups which are related to students' instrument study. As mentioned before majority of the students (82. 4%) use some kind of digital tool in their practice and in total, including interviewees and the surveys, 27 different tools were mentioned if the respondents were asked to name the tools that they include into their practice. Students, who said that they do use different digital means are doing it either every time (59 %), 2-3 times per week (27. 9 %), once a week (8. 2 %) or once a month (4. 9%). However, it seemed that for the survey respondents it was not entirely clear what was meant by digital tools because instead of naming specific software (e.g. Skype, phone applications, e-mail, computer programs, websites), the students also brought out hardware, such as laptop, tablet, mobile phone, but did not specify what tools exactly they are using in these devices and how it could be related to their learning. From software's perspective, the

metronome (*n*=41), tuner (*n*=21), and audio and video recorder (*n*=22) turned out to be the most popular tools in the practicing process. Also, for listening to music on YouTube and Spotify are relatively well perceived (*n*=20). For all the interviewees it was explained specifically the meaning of digital tools and all of them confirmed to use at least some of the aforementioned tools in their practice to facilitate greater learning. Out of 20 interviewees 14 said that their practicing process of a new piece starts actually without out the instrument. They are trying to find good recordings of the best performers in their field and then listen to the piece either on YouTube, Spotify, iTunes or school library. According to the students, listening to music gives them a better understanding of the piece. For example, the bass trombone player said:

"Well, when I got a new piece I just go to YouTube or if I know some good recordings from some other application, I do that. I just first listen because I want to have a good shape of the piece in my mind. How it sounds, how it's going to be with feelings. Everything." (Third year BA trombone student, 05.04.16)

"Sometimes you play a piece which was written for the violin or for the cello, and then of course there is no place to breathe because these instruments don't need it. So, I will listen to the version for cellos and then I will find, okay, what would be the most natural for the breathing if I was playing a cello. (Fourth year BA flute student, 18.04.16)

Also, the usage of the metronome, tuner and recorder reflected during the interviews. It became evident that digital metronome or application is always part of the practicing process and especially at the beginning of learning a new piece. Many students found that if they are struggling with some part of the piece then the metronome can be really helpful tool. Tuner was also used quite frequently, but not all the players need it (e.g. percussionists, pianists). Yarbrough, Karrick, & Morrison (1995) have stated that in music education educators put great emphasis on "developing skills of pitch matching and tuning accuracy" (p.233). Surprisingly, there was relatively much criticism about the tuner. Many found that using a tuner makes you more dependent on the tool because as a musician you skip the important part of the practice, which is training your hearing. Instead of that one starts to rely on the 'green light'.

Engagement, as one of the elements of enriched learning experience, was precoded with keywords, such as dedication and active participation and involvement in online environments.

In the surveys, five questions were compiled to operationalise engagement (see Appendix A. Survey). Subsequently, between these five question the inner consistency was tested. The reliability test showed that Cronbach's α was .511, which made it unreliable. After excluding one on the items, the reliability improved to α= .594 and can be considered moderately reliable because it is really close to .60. Moreover, findings from the interviews will fortify the reliability of the results.

In order to have a deeper understanding of enriched learning experience, the correlations between engagement and different indicators, like gender, year of study, age, possession of PC/tablet/ smartphone, including digital tools into practice, instrument group and being active in online study groups were calculated. Including digital tools into practice and being part of online communities were the pre-conditions stipulated to this study to measure engagement. From engagement perspective, it was found that the year of study, instrument group and involving in online study groups are significantly related to each other (Table 4. Significance between the groups).

The correlation between engagement and the year of study was statistically significant (.030 < .05), while ownership and in-depth learning are not (.669 > 0.1; .729 > 0.1). It was evident that students are most engaged to their study in the fourth, thus their last year of BA program (*M*= 3.6471) and in the first year of MA program (*M*=4.1786). The lowest engagement is experienced during the first year of BA program (*M*=3.3929) and in the last year of MA level (*M*= 3.2500). See Table 5 Year of study and enriched learning experience to learn about the differences in engagement according to study year.

It can be anticipated that over the years students, who are advanced in their studies have gained more experience and knowledge, how to approach difficulties by combining regular practice with digital tools and therefore, are more engaged to their study. There is no theoretical explanation why the engagement varies and for example, suddenly drops after reaching the highest engagement in the last year of BA studies and the first year of MA studies. However, these differences in study engagement might be affected by the small sample of MA students (*n*= 9).

Interestingly, differences in study engagement between the instrument groups are noticeable and also statistically significant (.012 < 0.05). The most engaged to their study are the woodwind (*M*= 3.9687) and brass instrument students (*M*= 3.7000). There is least connection between digital tools and study engagement among percussionists (*M*= 3.1500). See Table 6 instrument groups and enriched learning experience to learn about the variations in study engagement between instrument groups. This finding got also some support during the

interviews. When a percussionist was asked about the action he/she takes if he/she comes across with some troubles while learning a new piece, the students said the following:

"If I have a problem, I don't know how to solve it with digital tools. It's not like I play the violin and if I don't understand something I go Google things or I go to YouTube. I'm not sure how it works for percussion players" (First year BA percussion student, 05.04.2016)

Table 4. *Significance between the groups*

	Engagement	*Ownership*	*In-depth learning*
Gender	.750	.970	.166
Year of study	**.030****	.669	.729
Age group	.207	.617	.809
Owning PC/tablet	.598	.885	.469
Owning smartphone	.280	**.078***	**.067***
Digital tools in practice	.157	.370	.783
Instrument group	**.012****	.0349	.137
Online study groups	**.014****	.615	**.001*****

NOTE: *p=< 0.1. **p=< .05. ***p=<.01.

In contrary to this, one of the woodwind players had totally different approach and she knew exactly which tools could supplement her study.

"If one bar is truly difficult and I could not do it technically, I go to listen. How to do it? If it doesn't work, I go to online master classes because these teachers explain to you how to play that." (First year MA clarinet student, 05.04.16)

The finding that digital tools facilitate engagement among the woodwind players to greatest extent was remarkable, but the author has no clear explanation, what could be the reason behind it.

Table 5. *Year of study and enriched learning experience*

Year of study		*Engagement*	*Ownership*	*In-depth learning*
First year of BA	Mean	3.3929	2.8571	2.7571
	N	14	14	14
Second year of BA	Mean	3.6447	2.9211	2.5579
	N	19	19	19
Third year of BA	Mean	3.4000	3.0667	2.7333
	N	15	15	15
Fourth year of BA	Mean	3.6471	3.2647	2.9294
	N	17	17	17
First year of MA	Mean	4.1786	3.0357	2.8857
	N	7	7	7
Second year of MA	Mean	3.2500	2.6250	2.9000
	N	2	2	2

As work and study engagement are studied hand in hand, Schaufeli, Salanova, Gonzalez-Roma, & Bakker (2002) have stated that engaged employees think that they are able to deal with the demands of their job. Similarly to this understanding, the difference between the percussionist and clarinet player is noticeable. As the clarinettist knows exactly what to do, the percussionist seems to be more 'lost' in his main job- learning and is therefore, less engaged to his study.

Comparing to brass instrument players the engagement of string students was slightly smaller (*M*= 3.6875). The keyboard instrument players (pianists, organists) are slightly more engaged (*M*= 3.3158) than the percussionists. In a nutshell, digital tools facilitate engagement differently between the instrument groups.

Table 6. *Instrument groups and enriched learning experience*

Instrument group		*Engagement*	*Ownership*	*In-depth learning*
Strings	Mean	3.6875	2.9375	2.7250
	N	32	32	32
Woodwinds	Mean	3.9687	3.1875	3.2000
	N	8	8	8
Brass	Mean	3.7000	3.4250	3.0200
	N	10	10	10
Percussion	Mean	3.1500	3.1000	2.5200
	N	5	5	5
Keyboard instruments	Mean	3.3158	2.8553	2.5474
	N	19	19	19

Tinto (1993) has argued that engagement is related to academic success and social integration with study environment (in Salanova, Schaufeli, Martinez, & Breso, 2009) and

according to Astin (1984) engagement is just as one's involvement to his/her studies. This statements found confirmation in this study. Regardless, the active involvement in face- to- face environment, the engagement might be even greater if one is part of online communities. A significant finding was (.014 < .05) that students who are part of online study groups, such as WhatsApp, Facebook etc. are more engaged to their study (M= 3.7434) than these student who do not involve in online environments that are related to their study (M= 3.4236). See Table 8 online study groups and enriched learning experience to learn about online study groups and differences in engagement. Also from the interviews, similar pattern was found and for example, one of the students stated the following:

"In Codarts we have a clarinet Facebook group where we can share the information, share the scores. And we write like, "Okay, I cannot go to the rehearsal tomorrow, can you maybe replace me?" All these things we can communicate through Facebook. And nowadays we can find top players on Facebook and then it's easy to contact them because in Facebook groups there are always this kind of people. In this a way, I think, I am more involved."(Fourth year BA bass clarinet student, 13.04.16)

Smyth, Houghton, Cooney, & Casey (2012) have argued that one of the challenges to blended learning is the feeling of 'isolation' because learning online reduces the opportunities to interact with fellow students and teachers. In contrary to other blended learning studies where group lessons are under focus, music instrument study is predominantly individual and online environments (e.g. Facebook, WhatsApp) can create an opposite effect. Participating actively in online environments can be used as a tool to avoid 'isolation', interact with fellow students and to be up to date with developments in the specific music field and therefore, feel more engaged to one's study. Hughes (2009) have found that university students use social networking to communicate with their tutors, but especially to keep in touch with peers about their social life and also to discuss schoolwork. Furthermore, Rovai (2002) and Rovai & Jordan, (2004) have stated that that digital tools and online learning platforms are not only providing a great opportunity to teacher-to-student or vice versa communication. It is also a great way to predispose peer-to-peer learning and ensure that students have a stronger sense of community.

It was evident that digital tools facilitate study engagement according to study year, instrument group and involvement in online study groups. There is no clear pattern how engagement changes over time, but students in the last year of BA studies and first year of MA

studies are the most engaged. It can be presumed that students who are more advanced in their studies know how to take advantage of digital tools and therefore, also online environments. This makes them feel more involved and engaged. It was also found that digital tools facilitate study engagement between instrument groups unlikely. The author has no clear explanation to this finding.

3.3 Ownership

During the research the ownership concept was associated with student's freedom to learn whenever and wherever, and the autonomy to choose which digital solutions work best for him/her to enhance the knowledge transfer independently. Similarly to engagement, firstly the four- item subscale of ownership was tested. These were the questions about students' freedom and autonomy (see Appendix A. Survey). It was found that the different aspects that were expected to align closely, are less similar and Cronbach's α was only .554, which makes it unreliable. However, all the findings are substantiated with the findings from the interviews and therefore, make the results fairly plausible.

Secondly, the correlations between ownership and various indicators, such as gender, year of study, age, possession of PC/tablet, including digital tools into practice, instrument group and being active in online study groups were calculated. Only one of the correlations was found statistically significant. Namely, owning a smartphone has a connection with ownership (.078 < 0.1) (see Table. 4 Significance between the groups). It was discovered that students who own a smartphone with active 3G or 4G connection have more ownership (M= 3.1354) over their learning comparing to these respondents who do not own a smartphone (M= 2.8077) (see Table 7. Smartphone and enriched learning experience).

Owning a smartphone gives us the freedom to do a wide range of things remotely, and also the autonomy to decide when and where to realise certain tasks or involve in online environments (e.g. Facebook, WhatsApp etc.). Enghag & Niedderer (2008) have argued that to participating in discussion, making choices, being responsible and taking decisions are the main elements of students' ownership. Smartphones connect students to their teachers, colleagues and to online study groups which presumably makes the participation easier. As regards responsibility, smartphone is also a great 'assistant' if students face some problems with sheet music or technical and organisational matters. One of the flute players told me the following:

"Digital tools give us the chance to improve faster and easier because everywhere we go, we always have our smartphone in our pocket. So, wherever we are, we can just pick up a smartphone and basically have the necessary tools for practising. If I've forgotten all my things except my instrument, I am still able to find the pieces online and have a metronome and tuner with me. So, I am able to pick up my IPad or my smartphone and read the piece."(Fourth year BA flute student, 06.04.16)

Table 7. *Smartphone and enriched learning experience.*

Smartphone		Engagement	Ownership	In-depth learning
Yes	Mean	3.6406	3.1354	2.8667
	N	48	48	48
No	Mean	3.4904	2.8077	2.5538
	N	26	26	26
Total	Mean	3.5878	3.0203	2.7568
	N	74	74	74

This quotes illustrates also Milner- Bolotin (2011) argument that being in control is one of the constituting elements of ownership (in Enghag & Niedderer, 2008). From the research it appeared that 63.5% of the students stated that they 'always' or 'frequently' listen to the pieces online and afterwards decide about their repertoire. This means that digital tools make students to feel in control and give them the freedom to learn wherever and whenever. For instance, the freedom to learn wherever and whenever was apparent in the interviews with a percussionist.

"I think I use more the digital tools outside of the school. So, let's say, I come walking to the school and maybe sometimes I use a phone app to listen the piece. And then I come to school and do more- less practical stuff." (First year BA percussion student, 05.04.16)

Students are also in control of choosing their sources. Although, various digital tools, like videos that are available in online platforms like YouTube, Spotify and iTunes were considered useful and handy, most of the students stated that they have to be smart when supplementing their practice with these tools. Moreover, they have to be selective about the recordings what they use as a source for inspiration because for example, YouTube is an open website where everyone can post their videos regardless the artistic quality.

"I think it's nice to get more things from there [the Internet] but we really have to choose what we use and what we trust because there is so much out there."(First year MA clarinet student, 07.04.16)

"You don't have to copy exactly what you see on YouTube. Maybe you find some things incredibly nice or incredibly bad. So then you don't want to copy the bad things. You want to get the good things and make it your own." (Third year BA bass trombone student, 05/04/2016)

Smyth, Houghton, Cooney & Casey (2012) found that students who experienced blended learning approach (see Figure.1 Different modes of learning) had more autonomy over their study path. Consequently, they learned more because they had the freedom to make their learning choices. Similarly to this finding, many students in Codarts' classical music department are aware of which tools are the most useful, how to combine them into practice, and what the learning benefit is if digital tools are part of their practice.

"When I have an audition or concert coming up, I always start recording myself for two things. I record without an image because when you are playing you don't have a clear idea of what people are listening. And also I record the visual aspect because I have a lot of movement in general, and then it helps me to see… when I'm not comfortable because I start moving more and more." (Fourth year BA flute student, 18.04.16)

"Next week I will play in Concert Gebouw. I like to play in the same moment with the orchestra. It's really cool when you have the score and you have also YouTube recordings and you can play along with the orchestra. If you close your eyes, you can imagine that you are inside of the orchestra and then when I play there, I understand it much better."(Second year BA violin student, 07.04.16)

Despite the knowledge of combining digital tools with practicing, in music education students often rely on their teacher's expertise. This was also evident in the study by Jørgensen (2000) where 61% of the students found that their instrument teacher has 'high' or 'very high' influence on their learning. All the interviewees seemed greatly to rely on to their teacher and many stated that if they are facing some problems with a piece, they look for help from their teacher.

"I use to record the lessons and listen to the recordings afterwards. So, it's like I have the same lesson ten times because I listen to this recording again and again until I get the idea that my teacher wants me to do." (Second year BA violin student, 07.04.16)

However, Rainer & Matthews (2002) have stated that "when human becomes mentally active, they are agents in their own learning" (p.22). This became also evident in the research because some of the students want to challenges themselves more, be independent and saw their teacher as the last option. Therefore, they are the agents of their own learning.

"When you start to study in the university as Codarts, you need to be able to practice and work by yourself. And you should not all the time wait for your teacher to tell you, "You have to do this, or this." Because actually it [a piece] starts to be completely impersonal. It's not you who is playing, it's a version of your teacher". (Second year BA flute student, 22.04.16)

"In general, I always like to find it [solutions] by myself. Because if you talk too much and you ask too much, you may end up coping too much instead of being honest to your own idea. Even if your teacher doesn't like it. I am not making music to reproduce something perfectly and to win an audition with it. I want music to make me feel things and make me a better person in a way." (Fourth year BA trombone student, 06.04.16)

These students seemed to have more ownership over their learning, yet concerns about the authenticity reflect clearly in their answers. Throughout the interviews, majority of students were worried about the loss of artistic identity that comes along with the utilization of digital tools in their practice. Listening to music is big part of the musicianship (Koutsoupidou, 2014) because listening to diverse recordings facilitates the understanding and interpretation of a piece. Many musicians brought out that listening to too many recordings may result in loss of originality and leads to copying of other players. One of the violinists brought out next:

"I think that danger can be that if you listen to a recording you really like, then you try to copy it instead of using it as a guideline or a possibility. I think that's when it gets a bit less useful to develop as a sort of a musician or as an artist." (Third year BA violin student, 05.04.16)

It was found that there are many elements that lead towards greater ownership, but owning a smartphone with active 3G or 4G connection is a precondition that facilitates the ownership. Rich range of digital tools give students the autonomy to choose which means benefit their learning the most, but at the same time they are able to make the distinction between the trustworthy and unreliable sources. Moreover, digital tools give the opportunity to enrich one's knowledge independently despite the time and space problems, and take the responsibility for their learning acquisition and thus, being an agent of his/her own learning. Towards greater ownership leads also the wise usage of digital tools. This means that students are taking advantage of digital tools in their individual practice, but trying to use them intelligently, so as not to lose their artistic identity. It was also evident that although, various digital tools give students the freedom to study whenever or wherever, they mostly rely on their teacher's opinion. This confirms that teachers' still are in control of the learning process, the curricula, feedback and assessment (Lebler, 2008).

3.4 In- depth learning

In-depth learning is one of the elements of the enriched learning experience and within this research it was defined as students ability to use various online sources for *expanding his/her knowledge and to get better understanding of topics discussed in face- to- face setting. This also contributes to the development of his/her research and ICT skills.* Similarly to other enrich learning experience concepts (engagement, ownership), in-depth learning was coded beforehand and was assessed by student's ability to expand his/her knowledge independently and get a better understanding of topics discussed on face- to face setting. In order to do this, student uses various online sources or digital solutions and therefore, develops his/her research and ICT skills that are defining factors of someone's success in the 21st century (Collins*).*

In the questionnaire five questions were compiled to assess the in-depth learning experience (See Appendix A. Survey). All these five items were pre-coded as enhanced research skills and diverse sources. Between these five questions Cronbach's α was computed

and inner reliability was α= .629. This makes the subscale moderately reliable. No items were removed because .629 was the highest result.

Subsequently, the in-depth learning concept was correlated with various indicators (gender, year of study, age, possession of PC/tablet/smartphone, including digital tools into practice, instrument group and being active in online study groups). Two correlations out of seven were conspicuous. Statistically most significant was the connection between in-depth learning and being a member of online study groups (.001 < .01) such as WhatsApp, Facebook etc. Students who said that they are part of one or many online groups related to their study are experiencing in depth- learning in greater extent (*M*= 3. 0053) than these students who do not involve in online study groups (*M*= 2. 4944). See the Table 8. Online study groups and enriched learning experience.

Table 8. *Online study groups and enriched learning experience*

Online groups		*Engagement*	*Ownership*	*In-depth learning*
Yes	Mean	3.7434	3.0329	3.0053
	N	38	38	38
No	Mean	3.4236	3.0069	2.4944
	N	36	36	36

Presumably, the students who evolve in various online study groups have an access to information in shorter time period because they do not have to search for it, but can just ask from these groups and have an answer immediately. This could also mean that students are exploring some topics in a variety of ways (Rainer & Matthews, 2002) and fellow students are considered as a trustworthy source to expand the knowledge on interesting topics. For instance, it turns out that over 50% of the students actually learn about digital solutions from their fellow students.

"Sometimes somebody [fellow student] finds some app and says like, "Yeah I found this nice metronome which makes crazy sounds which is helpful. Okay, let's try it!" We mostly tell

each other if we've found something and tried it out."(Third year BA bass trombone student, 05.04.16)

In contrary to study by Jørgensen (2000), where students do not see other students as great influence on their practice, many students at Codarts said that they like to get feedback from their fellow students and not only from their colleagues, but also from other instrument players. This shows the importance of diversity of sources in instrumental classical music practice.

[If I'm struggling] of course I'll ask my colleagues because sometimes they have already played that piece or they had a similar problem with another piece. Then they can support another point of view of the same piece. Of course, [I will ask from] all the musicians, other instrument players. Like, for example, if you play a minimal pieces, you have to ask to a percussionist. Why? Because they are playing that kind of repertoire all the time and you are not so used to this." (Third year BA organ student, 22.04.16)

Sherbon & Kish (2005) have found that regardless the improvements in technology that facilitate distance learning, in music education face- to-face method is the standard in all levels Although, students like to get a second opinion, they prefer to do it in- person and not by using digital tools. 66. 2% of students 'never' or only 'sometimes' send their recording to their fellow students for feedback. Sending recordings is not done so often and was seen mostly as a 'backup plan' if in-person contact is not possible.

"I don't like to send my recordings. If I want to get feedback, I just tell them, "Can you come to listen to me, to the room…?" And then I get the feedback immediately there."(First year MA clarinet student, 07.04.16)

"Sometimes, I send recordings via WhatsApp. Last summer I sent my recordings because I had my exam in October. So, I was in Spain alone and I sent the recording of myself to friends to see what they think." (Second year BA violin student, 07.04.16)

Despite the noteworthy correlation between online study groups and in- depth learning, it was evident that most of the students use Facebook or WhatsApp just for sharing study-related information or for communicating with colleagues and teachers. However, from student's perspective it is important to have diverse opinions and not to rely only on one source,

teacher. Fellow students, who are easy to approach can be used as a primary 'source' for getting information because according to Rainer & Matthews (2002) in- depth learning is about "comprehending, applying, reflecting, evolving; becoming an expert on a topic; using multiple resources, and putting your topic under a microscope" (p. 27).

The second significant finding was between the in-depth learning and owning a smartphone (.067 < 0.1). Students who own a smartphone with active 3G or 4G connection (*M*= 2.8667) experience in-depth learning to greater extent than those, who do not have one (*M*= 2. 5568). See Table 7 Smartphone and enriched learning experience. It was already noteworthy in the engagement chapter that owning a smartphone makes one more engaged to his/her study. Possessing a smartphone is a precondition to experience in- depth learning because it enables the utilization of applications and also facilitates the access to various sources and therefore, diversifies learning and expands student's knowledge.

"I'm alone in my studies. In order not to practise alone all the time, I do it with the orchestra or with the piano digitally. I think it's also more fun to study. Because it diversifies your practice. And it's like a game more or less." (First year MA clarinet student, 05.04.16).

It was found that smartphones facilitates in- depth learning. This is probable because they mediate different functions, such as email, websites, apps, listening to music, participating in discussions (Koutsoupidou, 2014). Smartphone is an important tools to experience in- depth learning because it a primary tool that students seem use to get some information. Mostly the fellow students are their main source of information. Presumably, for this reason involving in online study groups facilitates in- depth learning. However, in- person contact with other students is valued more than communicating through online environments. Smartphones are facilitating in- depth knowledge acquisition because they are immediate and the 'easiest' mean to find the sources that are beneficial to students' learning.

3.5. Enriched learning experience

Enriched learning experience is an overarching term for the three concepts: engagement, ownership and in- depth learning. Previously all the concepts were discussed separately, but it is important to analyse these concepts together and therefore, get a richer understanding of how digital tools facilitate enriched learning experience.

Firstly, no remarkable correlation between gender and engagement, ownership, and in-depth learning (EOI) was found. It was evident that there is a slight difference between genders and EOI. However, the p- value for each group was not statistically significant ($p > 0.1$) which makes the results not generalisable. For all the p- values, see the Table 4. Significance between the groups. This result exhibits that digital tools facilitate enriched learning experience in a same way between men and women.

Interesting was the finding that age does not necessarily affect the study engagement, ownership and in- depth learning (EOI) ($p > 0.1$), but the study year impacts remarkably the engagement element ($.030 < .05$) of enriched learning experience. In contrary, ownership and in-depth learning does not change over years and are not dependent on study year. From the behavioural viewpoint, engagement is perceived as "an outcome with a combination of intentions and successful academic and social integration within the study environment" (Tinto, 1993 as cited in Salanova, Schaufeli, Martinez, & Breso, 2009, p. 2). According to Tinto (1993), it can be presumed that students who are involved into their studies already for a longer time period (e.g. fourth year BA and first year MA) are more integrated to their learning environment and thus, more engaged to their study. However, it is not known if they are also academically more successful because study results have not been part of this study. This can be only assumed because for example, earlier studies have shown that "engagement is paramount to learning success" (Herrington *et al*. 2003 as cited in Sadik, 2008, p. 488).

It was also noteworthy that owning a personal computer or tablet does not necessarily impact any of the enriched learning experience elements ($p> 0.1$), but owning a smartphone with active 3G or 4G connection affects students ownership ($.078 < 0.1$) and in- depth learning ($.067 < 0.1$). Enghag & Niedderer (2008) have argued that ownership refers to the "importance and need for students to participate by discussion, choice, responsibility and decision taking; it stresses the real actions of choice and control by the learners" (p. 631). It was found that smartphone is the primary tool that facilitates ownership and in- depth learning, but there is no clear reason why it is so. It can be assumed that most of the students are always carrying it with them, thus they are able to take decisions and be in control immediately and for instance, they can access the necessary sources and expand their knowledge straightaway.

Over 82% of students said that digital tools are part of their practice and the correlation analysis showed that they are slightly more engaged, having more ownership over their learning and are experiencing in- depth learning in greater extent. However, the difference is not significant enough comparing to the students who do not use digital tools in their practice. Thus, in general various digital tools do not facilitate the enriched learning experience completely in individual

practices. However, as mentioned before, for some reason smartphones are playing an important role in students' ownership and in- depth learning facilitation.

Involvement in online study groups affects most significantly the enriched learning experience. Particularly, it impacts the study engagement (.014 < .05) and in- depth learning (.001 < .01). Students who are part of online groups (e.g. WhatsApp, Facebook) are more engaged (*M*= 3. 7434) and experience in- depth learning in greater extent (*M*= 3.0053) comparing to their colleague who are not active in these groups (*M*= 3.4236; *M*= 2.4944). One of the challenges to blended learning is the feeling of 'isolation' (Smyth, Houghton, Cooney, & Casey, 2012) and lack of interaction with fellow students. Instrument study is principally individual and the reason, why students feel more engaged to their study if they are part of these groups might be associated with the opportunity to interact with their colleagues and therefore, avoid isolation. Also, other students were seen as a source for information and feedback that could explain the correlation between in-depth learning and active participation in online study groups.

Lastly, it was discovered that enriched learning experience varies with respect to instrument group. In particular, digital tools facilitate study engagement the most among the woodwind players and the least among percussionists. The author has no clear explanation to this, but during the interviews it seemed that woodwind players have greater knowledge of how to supplement their practice with digital tools. In contrary, percussionists are aware of these tools, but they do not want to add these means to their practice or they do not know, how to do it.

It was presumed that student is having an enriched learning experience if he/she is engaged to the study, has ownership over his/her learning and strives to have an in-depth knowledge in certain topics that have been discussed in the class. It was found that students who own a smartphone, are part of online study groups and are either on their last year of BA or the first year of MA studies experience enriched learning experience most likely. The three concepts are not necessarily connected to each other, but each of them elaborates to the understanding of enriched learning experience. In particular, year of study influences students' engagement; owning a smartphone is related to greater ownership and in- depth learning experience; participation in online study groups affects students' engagement and in- depth learning; and lastly, between instrument groups digital tools facilitate engagement differently. Digital tools facilitate different elements of enriched learning experience separately, but not concurrently.

4. Conclusion and discussion

Combining traditional learning settings with modern online solutions has become a trend in higher education (Yen & Lee, 2011) and presumably, blended learning is going to be the predominant form of teaching in the future (Yen & Lee, 2011; Hua, Goodwin, & Weiss, 2013). So far, only different group lessons have been under the focus of blended learning studies. This research focused on individual instrumental classical music practices because this sort of study is principally associated with Western traditions and conventions where teachers are in control of the learning process, the curricula, feedback and assessment (Lebler, 2008). Thus, it was exciting to see how more modern approach of learning bears upon traditional instrument studies.

It was found that supplementing instrument learning with digital tools is relatively popular among the classical music students. This means that students from the performing arts studies are following the general trend towards digitalization. Sherbon & Kish (2005) have argued that regardless the improvements in technology that facilitate distance learning, in music education face- to-face method is the standard in all levels. Despite the fact that many students use digital tools in their practice, they still prefer in- person contact over digital tools. For example, sending recordings is not so popular and mostly seen as a 'backup plan' if in-person contact is not possible.

Poon (2013) and Smyth, Houghton, Cooney, & Casey (2012) have discussed about different benefits and challenges that surround blended learning. Likewise, in this study it was found that digital tools in instrumental classical music practice have many benefits and downsides. In particular, it was found that mostly they are a source for interpretation, ideas and they can enhance student's motivation. Also according to Poon (2013), this is one of the main benefits of blended learning. She argued that blended learning increases students' motivation, involvement and satisfaction. Although, in the century of digitalization various digital solutions are helpful, they also make students easily unfocused because of the distractions that are always accompanying their 'smart' tools (e.g. notification, messages, updates etc.) Similarly, Jørgensen (2000) has found that concentration and efficiency are the aspects that students are struggling with and would like to learn more about.

Digital tools facilitate different elements of enriched learning experience separately, but not concurrently, which means that none of the correlations showed that digital tools facilitate engagement, ownership or in- depth learning simultaneously. Nevertheless, there are findings

that were significant enough to draw more general conclusions. Observing some of the concept and correlations separately, gave interesting insight to enriched learning experience.

With respect to study year and instrument group, digital tools do have a role in facilitating study engagement. Engagement was associated with student's ability to combine digital tools into individual practice and also, being active in online groups which are related to their instrument study. Different digital tools facilitate engagement the most among the first year MA and the fourth year of BA students. The lowest was study engagement among the second year MA students. Respecting instrument group, digital tools are facilitating engagement to greatest extent among woodwind players and the least among percussionists. This was one of the remarkable findings, but the author has no clear explanation what could be the reason behind it. The findings were significant, but study engagement is rather fluctuate and does not align with clear pattern as regards increase or decrease in engagement according to study year. However, increased study engagement is more evident during the later stages of the study and it can be anticipated that over the years students, who are advanced in their studies have gained more experience and knowledge, how to approach difficulties by combining regular practice with digital tools. Therefore, they are more engaged to their study because according to Tinto (1993) engagement is related to academic success and social integration with study environment (in Salanova, Schaufeli, Martinez, & Breso, 2009).

It was also noteworthy, that owning a smartphone facilitates ownership and in- depth learning. Ownership was associated with student's freedom and autonomy to learn whenever and wherever, and the awareness about digital solutions that work best for him/her to enhance the knowledge transfer independently. Apparently, people who own a smartphone with active 3G or 4G connection have more ownership over their learning and they experience in- depth learning to greater extent. This finding was not that surprising because smartphone is something students usually carry with them and thus, it facilitates learning in general despite the time and space issues. So they can take the responsibility for their learning acquisition and thus, be agents of their own learning (Rainer & Matthews, 2002). Towards greater ownership leads also the wise usage of digital tools. This means that students are taking the advantage of digital tools in their individual practice, but are trying to use them intelligently, so as not to lose their focus and the artistic identity. Although, various digital tools give students the freedom to study whenever or wherever, they still mostly rely on their teacher's opinion. This confirms that teachers' still are in control of the learning process, the curricula, feedback and assessment (Lebler, 2008). However, smartphones are providing an opportunity to be more involved in discussions with teachers and other students from school and outside of the school that

facilitates ownership and in particular, student's autonomy and freedom to learn whenever and wherever.

The connection between smartphone and in-depth learning experience was also significant. In- depth learning was defined as student's ability to use various online sources for expanding his/her knowledge and getting better understanding of the topics discussed in face-to- face setting. This also contributes to the development of his/her research and ICT skills. The finding that owning a smartphone facilitates in- depth learning can be explained by the fact that in order to have an access to various sources, a student actually has to have a proper tool that mediates his/ her access to different sources. Smartphone is often the first tool that can be used for the knowledge acquisition.

The most significant findings were related to one's membership and participation in online study groups. Students, who have joined online groups related to their study are more engaged and experience in-depth learning much more than those, who do not take advantage of this opportunity. This means that online groups can be very helpful in facilitating greater engagement and in-depth learning. Also, Salavuo (2008) has stated that online environments should "enrich the total educational and musical experience, and most of all, create a basis for deep, self-directed and collaborative learning activities" (p.126). From the interviews it became quite clear that most of the students are using WhatsApp or Facebook groups and chats for communication and being up- to date with their field. Smartphones connect students to their teachers, colleagues and online study groups which presumably makes the knowledge acquisition and participation in online groups easier. Enghag & Niedderer (2008) have argued that to participating in discussion, making choices, being responsible and taking decisions are the main elements of students' ownership. Sharing their knowledge and using fellow students as a source is also an important aspect of these groups.

Digital tools, and in particular online study groups are used to facilitate communication between the students in order to avoid 'isolation' and to grow as a musician. Personal practice is predominantly individual, thus it seems that for the students it is important to have a group feeling because it makes them feel more supported and motivated. Furthermore, digital tools and online learning platforms are not only providing a great opportunity to teacher-to-student or vice versa communication. It is also a great way to predispose peer-to-peer learning and ensure that students have a stronger sense of community (Rovai , 2002; Rovai & Jordan, 2004). Salavuo (2008) has also argued that implementing social technologies in music education

facilitate the opportunities to expand educational activities beyond traditional classroom setting and thus, diversify and deepen music learning and teaching practices.

4.1 Directions for future research

As many studies, this one is no exception and has its shortcomings. The main limitation of this research is the institutional focus and therefore, findings might not be applicable to other analogous organisations because educational institutions differ from many facets like curricula, teaching methods etc. As blended learning is context sensitive, it makes it even more complex to administer in different setting because no case is the same.

Secondly, in this study three indicators (engagement, ownership, in- depth learning) were presented to measure the correlation between digital tools and enriched learning experience in personal practices and individual classes. These variables are not conclusive and definitely there are many more traits that characterizes the relationship between digital tools and enriched learning experience. Moreover, for the future research student's study results should be taken under consideration because they will facilitate greater interpretation of the study success and engagement, ownership and in- depth learning.

Thirdly, survey sample might be considered too small and in the future, bigger sample is necessary, in order to increase the correlation significance between different groups. This will result in more diverse findings.

Blended learning and also online distance music education studies are unique and still at the very beginning as a field of research (Koutsoupidou (2014). Performing arts studies definitely need more research because with the development of ICT higher education seems to head for more extensive use of technology in the future (Orton-Johnson, 2009; Attwell, 2007). For the future research, it would be fascinating to see how digital tools influence enriched learning experience in different music departments at Codarts (classical, world, pop and jazz) and subsequently compare the results to one another.

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Appendices

Appendix A: Survey

Digital tools and individual practice

Digital tools have started to gain importance in different levels of education and therefore, it is necessary to find out how much it impacts your study results and study engagement. This questionnaire has a number of questions about your individual instrument practice and the deployment of digital tools. What are digital tools? ***Digital tools are technical means (e.g. Apps, websites (e.g. YouTube), Skype, computer programs, email, Blackboard) that facilitate any kind of learning activity related to your instrument study by using smartphone, tablet, computer, IPod etc.***

Please choose ONE appropriate response to each question. It is important that you answer each question as honestly as you can. Do not spend a long time on each item: your first reaction is probably the best one. The information provided by you will be used for research purposes. Your personal details will not be revealed to people outside the project.

Thank you for your cooperation!

Marie Trei (Erasmus University Rotterdam)

Personal questions *(please fill in the gaps or tick the right category)*

Student number: _____ **Male ___** **Female ___**

E-mail: _____ **Instrument: _____**

Nationality: _____

1) Year of study

- First year BA ___
- Second year BA ___
- Third year BA ___
- Fourth year BA ___
- First year MA ___
- Second year MA ___

2) Student status

- Full- time ___
- Part- time ___

3) Age group

- 17- 24 ___
- 25- 35 ___
- Over 35 ___

Factual questions

(Please tick ONE category that comes closest to your deployment of digital tools)

4) Do you own a personal computer/ tablet?

Yes ___ No ___

5) Do you own a smartphone with active internet connection (3G or 4G)?

Yes ___ No ___

6) Do you use digital tools during your individual practice?

Yes ___ No ___

If **NO**, please proceed to question **9**

7) How frequently do you usually include digital tools to your practice?

Every time ___
2-3 times a week ___
Once a week ___
Once a month ___
A few times a year ___
Once a year ___
Less than once a year ___

8) How many different digital tools do you use to support your practice?

- 1-3 ___
- 4-7 ___
- 8-… ___

Could you please name them:

……
……
……..

Attitude and behaviour questions

(Please tick ONE category that comes closest to your practice)

9) Adding different digital tools to my practice can be helpful to develop my technique.

Strongly agree ___
Agree ___
Undecided ___
Disagree ___
Strongly disagree ___

10) Digital tools can support the interpretation of assigned pieces.

Strongly agree ___

Agree ___

Undecided ___

Disagree ___

Strongly disagree ___

11) Are you part of any online groups related to your study?

Yes___ No___

12) Being part of different study-related online groups is supportive because it makes me feel more involved to my study.

Strongly agree ___

Agree ___

Undecided ___

Disagree ___

Strongly disagree ___

13) From different online study groups I can get good advice to be more efficient in my practice.

Strongly agree ___

Agree ___

Undecided ___

Disagree ___

Strongly disagree ___

14) I am following different online news platforms to be informed about the latest news in my field.

Always ___
Frequently ___
Half the time ___
Sometimes ___
Never ___

15) I believe Skype-like solutions are great additions to face-to-face individual classes.

Strongly agree ___
Agree ___
Undecided ___
Disagree ___
Strongly disagree ___

16) I prefer to listen to different pieces online and after that decide about my repertoire.

Always ___
Frequently ___
Half the time ___
Sometimes ___
Never ___

17) The pieces I currently study, I carry with me on my I phone, IPod, smartphone, mp3.

Always ___
Frequently ___
Half the time ___
Sometimes ___
Never ___

18) I like to play along with performances posted online, to get better understanding of the pieces assigned to me.

Always ___
Frequently ___
Half the time ___
Sometimes ___
Never ___

19) I spend extra time on different websites to read about background information related to the pieces assigned to me.

Always ___
Frequently ___
Half the time ___
Sometimes ___
Never ___

20) I get online-consultation with experts from my field in a distance learning environment.

Always ___
Frequently ___
Half the time ___
Sometimes ___
Never ___

21) Since my enrolment in Codarts I have learned to use new kinds of digital tools.

Strongly agree ___
Agree ___
Undecided ___
Disagree ___
Strongly disagree ___

22) Mostly I learn about digital tools from my fellow students, not from the teachers.

Strongly agree ___

Agree ___

Undecided ___

Disagree ___

Strongly disagree ___

23) I record myself and send the video/audio material to my peers for feedback.

Always ___

Frequently ___

Half the time ___

Sometimes ___

Never ___

Appendix B: Interview guide

Interview guide

Introductory questions

1. Could you please say your name, what do you study in Codarts and how far are you with your studies?
2. Could you please describe in as much detail as possible your practicing process from the moment you see a new piece?
3. How many hours approximately you practice per day?

Indirect questions

4. What is your opinion about including digital tools into instrumental classical music practice?
5. Are digital tools positively or negatively influencing efficient practising? Why?

Direct questions

6. What is your experience regarding individual practice and digital tools? Do you use digital tools during your practice? If **YES** → a), if **NO**→ b)
    a) What sort of digital tools do you use the most during your individual practice? What is the learning benefit if you add them do your practice?
    b) Why don't you use digital tools?

7. Where do you seek for advice if you are struggling with some parts of the piece?
8. What do you do if you want to enhance your technique?
9. How do you keep in touch with fellow students about study-related topics? How do you keep in touch with your teacher?
10. Do you also learn from fellow students in a digital space (audio files, sharing knowledge, and recommendations)?
11. (How can digital tools facilitate your study engagement? Why?)→ Correction (14/04/2016) Are digital tools making you more engaged to your study? How?

Appendix C: Consent form

Consent form to participate in the study *"Facilitating enriched learning experience in the practice of instrumental classical music in the century of digitalization"*

I, the undersigned, have read and understood the Study information Sheet provided by Marie Trei (*Erasmus University Rotterdam & Codarts (lectoraat blended learning)).*

I have been given the opportunity to ask questions about the Study.

I understand that taking part in the Study will include interview which is going to be audio recorded.

I understand that my personal details such as name, student number, email will not be revealed to people outside the project.

I understand that my words may be quoted in research outputs but my name will not be used.

I understand that I can withdraw from the study at any time and will not be asked any questions about why I no longer want to take part.

Name of participant: _____ Date:

Student number: _____

Researcher Signature: _____ Date:

Appendix D: Recordings and transcribed interviews

Recordings and transcriptions are uploaded to Dropbox and are available on demand.