Transformative learning

Final report on the CEMPE development project 'Integrated Practice'

Julius Pranevičius

CONTENTS

Summary (Abstract)

This report presents a three-year Centre of Excellence in Music Performance Education (CEMPE) development project titled 'Integrated Practice'. The report surveys the participating teachers' and students' experiences and learning outcomes after teaching and learning their main instrument in an environment that included group tuition and the use of the Alexander technique. The report teases out some of the complexities of main-instrument tuition as viewed from the students' and teachers' perspectives; the report also discusses challenges to the assumption of an all-knowing instrument teacher as well as common music-education conceptualisations of the body. The argument presented in this report is that by addressing these issues, a richer and more supportive learning environment can be created for students, with the added benefits of supporting teachers' professional development and decreasing the problem of studio isolation. A transformation in the way project's participants thought about their discipline can be traced in the project's findings, a process which unfolded over time. The temporal dimension of learning is important to acknowledge when designing learning environments to provide the necessary support for the unfolding learning process. The project has resulted in an integrative and collaborative tuition model that promotes the emergence of shared practices, which in turn has several implications for curriculum development. The report concludes with suggestions for further research.

Introduction to the project and its structure

This report presents the project 'Integrated Practice', which explored the organisation of main-instrument tuition within performance degree studies at the Norwegian Academy of Music / Norges musikkhøgskole (NMH). The Integrated Practice project merged and further developed two Centre of Excellence in Music Performance Education (CEMPE) projects: the first, led by Jørgensen and documented in his report (Jørgensen, 2015), looked at the potential benefits of linking teaching of the main instrument and the Alexander technique (henceforth 'AT') more closely. The second, led by Hanken and documented in her report (Hanken, 2016), investigated complementing one-to-one instrumental tuition with group work. Starting in 2015, a team of main-instrument teachers gradually adopted an integrated setup that combined these two strands in their teaching. By the project's completion (in May 2018), a total of ten main-instrument teachers and around sixty students had participated.

The main motivation to follow up on Jørgensen's project (2015) was a shared belief among the initial group of teachers that the AT and close collaboration between the teachers had several potentially important implications on the way we teach music performance more generally. Organising parts of tuition in small groups provided a helpful arena in order to expand upon observation and reflection. While the approach clearly had a positive impact on the students' playing, many questions remained unanswered by these initial projects. These questions included:

- How could the impact of the integrated approach on student playing (and learning more generally) be characterised?
- How does the approach fit into the day-to-day teaching practices of individual teachers and established traditions?
- How could this positive impact be made more sustainable, both for students and the institution?
- Do teachers need to expand their skill-set to include the AT, or does the presence of a teacher of another discipline explain the difference in learning outcomes in some way?
- What is it about the AT that seems to provide tools for issues that appear important yet unaddressed by current teaching practices and curricula in general?

- Is the approach only suited to the needs and preferences of a few individual teachers and students, or is it relevant on a larger scale?

The exploration of these questions appeared to be immediately relevant to our teaching practices, and it seemed unfortunate to stop at a point where the project would have had only cursory impact. A particular focus of the follow-up project was on increasing the scale of the inquiry. Jørgensen's project (2015) had a limited number of students, and we wanted to gain a better understanding of how a larger and more diverse student body (in terms of year of study, background, and skill level) would respond to an integrated main-instrument study setup. Because of the possibility that Jørgensen's project (2015) may have been successful due to the initial group of teachers being outliers in their positive attitude towards the AT approach, an investigation across a broader population of teachers was thought to be important to increase the validity of the findings.

The current project was executed in three iterations, each lasting one academic year, between 2015 and 2018. In the first part of the project, a learning environment was designed around the main-instrument study that included group work and work with the AT. The key characteristics of this environment included (1) an *expanding notion of main-subject teaching* that went beyond one-to-one instruction, (2) the *embedding of a supporting discipline*, with the aim of highlighting that discipline's pertinence to the main-instrument study, and (3) *collaborative teaching and learning settings* that would foster dialogue and the development of a shared discourse and would encourage active sense-making processes by providing an arena for a shared understanding to evolve.

Each year, a cohort of students was offered the chance to study their main instrument based on a teaching model with the following adjustments compared to the traditional one-to-one teaching scenario:
- a number of individual AT lessons for the students as a part of their main-instrument study;
- a group-work setting where the teachers of both disciplines would work together with a small group of students (three to four per group); the students were encouraged to actively engage in observation, commentary, and discussions; and
- optional AT lessons for the main-instrument teachers.

Essentially the same model for organising teaching activities was used in each of the three iterations, with slight variations in teaching time due to the varying levels of resources available.

Table 1: Details of each iteration

	Iteration 1	Iteration 2	Iteration 3
Period	Sept. 2015–Feb. 2016	Sept. 2016–Apr. 2017	Part 1: Sept. 2017–Feb. 2018 Part 2: Feb. 2018–May 2018
Instruments (no. of students)	Horn (15)	Horn (15), harp (8), oboe (7)	Violin (6), trumpet (3), trombone (4), percussion (3–4), clarinet (3), horn (3), oboe (3), harp (4)
No. of students involved	15	30	30
No. of teachers	1	3	9
No. of individual AT sessions per student (30 min) – intended	8	10	10
No. of group sessions with both teachers	6	6	6
Introduction to the AT	No formal introduction	No formal introduction	Online course designed for the project

While the teaching activities remained essentially the same, the project's research focus shifted somewhat with each new iteration. Iteration 1 was characterised by its focus on (1) employing the AT as a method for the development of breathing skills and (2) exploring the ways that the main-instrument and the AT teachers could work together, both inside and outside the group sessions. Since a whole instrumental class was involved, the synergies that developed between peers observing each other and engaging in discussions were interesting to explore. Individual differences among the students and their learning became clearer, since there were now more students to compare. For example, some students seemed to learn and understand how the AT was relevant to their instrumental playing more quickly than others. In addition, many students' pre-assumptions about playing came to the fore as they worked with the AT.

The focus on the development of breathing was abandoned quite early in the project, since the implications of organising the tuition in such a way exceeded such a narrow focus. Thus, in Iteration 2 we wanted to survey and explore the variety of implications and learning outcomes.

While each teacher had the same guidelines on how to implement the model into their practice, and they each had the same resources available, in Iteration 2 the teachers implemented the model in different ways to suit their own practice. They tweaked their implementations by exchanging best practices of what worked and what did not among themselves. For example, the project experimented with the size of the group, the balance of teacher versus student utterances in the group sessions, and the way feedback was provided. These parameters affected the group dynamics, which seemed to be an important aspect of the model's effectiveness. Each studio had slightly different needs, given the different personalities and the varying ways in which the practices had been structured before the project.

The teachers who participated in Iteration 2 reported that organising their practices in this way contributed to the development of their teaching. Thus, in Iteration 3, the perspectives of as many different teachers as possible were gathered to investigate whether the impressions gleaned from Iteration 2 might be relevant more broadly. Since some of the students had been involved in more than one iteration, Iterations 2 and 3 were used to look at how student learning had unfolded over an extended period of time.

To make Iteration 3 more manageable, the iteration was divided into two parts, each lasting one semester, although this turned out to be an overly short time frame to fully engage with the setup; the first group of teachers used most of the second semester to finish their assigned quota of individual and group sessions. Iteration 3 also offered students an opportunity to take an introductory online course on the AT that had been designed specifically for the project. The course was delivered through Canvas LMS.

The primary aim of this report is to explore the project participants' perspectives (i.e. those of teachers and students) on engaging with teaching/learning a main instrument within an environment with the aforementioned characteristics. The project raised several questions:

- What are the potential benefits and challenges to the students?
- How do the teachers employ these principles in their own practices?

- What are the benefits and challenges for the teachers?

- What are the implications for pedagogy in general?

We hope that illuminating these questions will contribute to the development of discourse within the discipline of music performance (e.g. the way we see, think, and speak) based on the findings of this exploration. We believe that a more integrated understanding will be beneficial to the practitioners of the discipline, and that such an understanding can become available through collaboration and interaction.

The primary research question of the report is, 'How do teachers and students experience participating in the project, and how do they interpret and characterise their learning?'

Literature review: The context of main-subject tuition

The relevance of the project and of its findings is potentially wide-ranging and will contribute to the ongoing debates about one-to-one studio teaching in conservatories. A number of studies (e.g. Burwell, Carey, & Bennett, 2017; Carey, Harrison, & Dwyer, 2017; Carey & Grant, 2014, 2015, 2016) have summarised the challenges that face the field of music-performance education based exclusively on one-to-one tuition. According to these studies, reliance on this kind of model has several issues related to power (e.g. student dependence and submissiveness and teacher dominance), which in turn might have adverse effects on student learning (e.g. inhibited growth of autonomy). The potential isolation of teachers within the confines of their own studios might prevent their engagement with colleagues, the general pedagogy, and the institutions they are part of. The existence of concrete institutional settings might cause teachers to become defensive and reluctant to share and update their teaching practices and, by extension, could become an obstacle to larger-scale change (Burwell et al., 2017). Students also frequently view curricula as being hierarchical and lacking in integration. Despite these criticisms, however, one-to-one teaching is largely acknowledged as being crucial in the development of emerging high-level musicians-as-artists with distinct artistic voices (Association of European Conservatories [AEC], 2010). The AEC (2010, p. 8) also acknowledges that instrumental/vocal teaching is 'a field with much fragmented and scattered specialist knowledge that would benefit from more sharing and reflection on an international level'. It is imperative for higher music-education institutions to invest in increasing teaching competence at all levels, since current graduates, as future teachers themselves, will be preparing students for these same institutions. While the reflective nature of teaching calls for engaging in dialogue with various specialists, the demand for professional development opportunities 'seems to be much greater than supply' (AEC, 2010, p. 25).

The potential for transformational learning, and its obstacles

The value and purpose of individual tuition have both changed in recent decades; a need has emerged to push the boundaries of traditional understanding. The literature indicates that main-instrument tuition is under-theorised. A few relevant questions include the following. What are the best ways to conceptualise main-instrument tuition? What skills does such

tuition stimulate? How do students learn? How does this learning relate to other contexts of learning? What skills do teachers require? (AEC, 2010; Creech & Gaunt, 2012).

One-to-one teaching allows for highly personalised learning with the potential for transformative learning, although, as Creech and Gaunt (2012, p. 707) argue, 'for the potential of transformational learning to be realised, a shift is required from the traditional master-apprentice model in instrumental teaching, toward a more facilitative model where teachers and students collaborate, reflect, and problem-solve together'. The authors use the term 'transformational learning' in a somewhat broad sense to refer to a mode of learning that yields a change in learners' perspectives about what they are learning. This learning occurs through challenging assumptions and exploring knowledge and understandings (and how they pertain to practice) through reflection, which ideally will result in the integration of these new perspectives into the learner's life.

But several obstacles currently prevent a shift towards a more facilitative model. The isolated nature of studio tuition is one of the main obstacles, which has implications both for student learning and for the development of staff competence. This situation is largely brought about by historical assumptions about instrumental teachers within the traditional master-apprentice paradigm, where a teacher might be viewed as an all-knowing guru who has a complete grasp of the total scope of how to play (and teach playing) an instrument. This view appears to have limitations, however, as illustrated by the following quote.

> The masters … too often lack access to the communities of practice that might help them to develop their engagement – with pedagogy, with one another, and with the institution to which they contribute. If they sometimes seem reluctant, defensive, or even secretive about sharing their practices, the sources of identity formation that have been available to them – exclusive or excluded, peripheral or marginal – are often embedded in concrete institutional settings, and the cultural implications that come with them. (Burwell et al., 2017, p. 16)

Reporting on her research on conservatory teaching, Gaunt (2008) notes that many of her informants 'were isolated as teachers, with few mechanisms of support, or opportunities for professional discussion or development in place … the majority reported having difficulties with individual students and displayed a thirst to learn and develop skills' (p. 238). For students, Gaunt (2008) argues that the intensity and exclusive nature of the teacher-student relationship is often at odds with 'facilitating student autonomy and self-confidence in learning' (p. 215). Gaunt notes that 'the ways in which this relationship seemed to be

creating potential challenges in learning suggest as well that *more needs to be done in terms of reducing the isolation of one-to-one tuition*' (2010, p. 203; emphasis added).

Complexity of the discipline and the limits of its pedagogical and theoretical foundations

Playing an instrument at a high level is a complex endeavour with a large number of skills to be acquired, which are then integrated into a coherent whole as a performance (Hallam & Bautista, 2012). But performance is more than a collection of skills – it constitutes a complex interplay of skills, habits, beliefs, preferences, and personal abilities – and, like any human activity, it is embodied. As Gallagher (2005, p. 3) notes, 'The human body, and the way it structures human experience, also shapes the human experience of the self, and perhaps the very possibility of developing a sense of self'.

Instrumental pedagogy is thus an endeavour of immense complexity, where the complexity of performing is compounded by the pedagogical aspect. Tradition weighs in heavily in regard to how certain things are to be taught, and instruction is mostly based on teachers' own experience rather than evidence-based principles (Clark, Lisboa, & Williamon, 2014). For example, as Gaunt (2004, p. 326) notes, 'Watson and Hixon (1985) drew attention to the disjunction between what singers think they do in terms of anatomy and physiology of breathing, and what they actually do'. Gaunt (2004, p. 326) further notes that Fuks and Sundberg (1999) identified 'the value of scientific research to fill the gaps left by individual observation, and to challenge some common practices amongst musicians that are based on *obsolete hypotheses* which remain credible only through their being upheld through many generations' (emphasis added). Scientific research should not be consumed blindly, however, as different fields rely on a wide array of epistemological and metaphysical positions that might be incompatible. Maintaining awareness and a critical eye on how the research is used is thus of great importance.

In illustrating the complexity of the discipline, commentators seem to agree that the various aspects of the discipline of music performance are intricately interrelated. Gaunt (2007) mentions the interrelatedness of breathing and posture and of breathing and musical interpretation. Shoebridge, Shields, and Webster (2017) propose a framework that integrates the bodily aspect of performance, and they hint at the body's role beyond merely being healthy and as such getting out of the way of a good performance. Their emphasis on

'optimal posture' might be problematic, however, in the sense that such a view implies a normative stance; in discussing breathing, for example, Gaunt (2004, p. 325) indicates that a normative stance 'could easily be counterproductive, promoting mental and physical locking rather than opening up increasing possibilities'.

As various commentators have pointed out, because of a mixture of the complexity of the discipline and various historical factors, music performance currently lacks a shared interdisciplinary foundation. Collaboration seems to be difficult to accomplish due to lack of shared understandings and discourses, which likely contributes to the problem of studio isolation.

Gaunt (2004, p. 327) sees action research as a way forward to exploring 'instrumental teaching and learning in higher education from an insider's perspective'. Contributing to the body of disciplinary knowledge in music performance in a way that will take the intricacies of the discipline into account is imperative for the field to maintain practical relevance.

Desirable learning outcomes of main-subject tuition

While accruing many practice hours and mastering efficient practicing strategies are important goals for instrumental students (Jørgensen & Lehmann, 2012), these things cover just a small part of the complexity of the discipline outlined above. James (2003) argues that traditional training does not prepare musicians to manage the demands of their profession.

Recently, exploration and self-discovery emerged in the literature as important aspects of practicing, a view that expands the notion of practicing beyond merely learning a skill or the music to be performed (Clark et al., 2014; Carlsen, 2015; Johansen, 2018). The teachers in Gaunt's (2008) study aimed 'to provide students with a general vocational toolbox, including technical, musical and professional skills' (p. 238). Independence and resilience, alongside musical skills, are often seen as important factors to sustain motivation and to aid in the transition to a professional career (Creech, 2014; Hallam, 2014). Many practitioners of the discipline view the idea of 'becoming your own teacher' as an important teaching goal (Eastop, 2001; Gaunt, 2008).

Because teaching and learning increasingly rely on reflective practices, the ways in which metaphors and conceptual tools are embedded in discourses are important

considerations. Metaphors and conceptual tools mediate understandings among the participants of communities of practice and act as vehicles for the transmission of knowledge (Nerland, 2007). Deliberate versus explorational practice (Ericsson, Krampe, & Tesch-Römer, 1993; Johansen, 2018) represents one set of such metaphors, although one-to-one instrumental tuition is abundant with metaphors related to all aspects of music making, thus helping to build the 'learning environment through shared experience' (Wolfe, 2018, p. 11). Actively developing and sharing languages based on shared experiences might provide ways out of isolation and could contribute to a more fertile dialogue about the foundations of the discipline.

Finally, health and well-being are often thought of as important aspects of musicians' development. While many approaches have been undertaken in various international settings, these approaches seem prone to viewing health and well-being as separate from practice and performance (Farruque & Watson, 2014). Because music performance has consuming intellectual and emotional demands (Ericsson & Chamess, 1994), practitioners are often reluctant to try out new approaches (Clark et al., 2014). Farruque and Watson (2014, p. 328) thus call for more integrated approaches in which the disciplinary boundaries would be blurred:

> It has been our experience that the students are responsive to [approaches to health and well-being] if the relevance to performance is made clear.… The long-term goal of such courses should be that the healthy practices which optimise performance and limit the risk of injury become so integrated into practical music teaching that they are barely perceived as embodying a separate discipline.

Research design: Data collection methods and analysis

This project was characterised by its iterative nature and a great degree of uncertainty between the iterations regarding whether the necessary resources would be made available for the project to continue. Due to slow decision-making processes in the organisation and much uncertainty regarding participants' work contracts each year, we had three to four weeks to prepare for each new iteration. Premeditation of a research design thus was not the main focus, as the practical matters of preparation seemed more pressing (e.g. the actual scheduling of lessons, group work, and preparing the online course, among others).

In the first two iterations, we initially wanted to interview the participants before they joined the project, but this was impossible given the above reasons and the constrained resources. The most practical approach in each iteration was to execute the 'teaching' part and then interview the students to inquire about their experiences as an extended version of the regular 'evaluation of teaching' that is conducted every year, with a sharper focus on the adjustments that had been made within the project to the regular tuition mode. The interview guidelines are included in the appendixes. In addition to the student interviews, several reflection sessions and teacher interviews were conducted. Table 2 below illustrates what data was collected, when it was collected, and who was responsible for the data collection.

Table 2: Data collection procedure

When?	What?	Interviewer / moderator	Code used in quoting this source
May 2016	Individual, semi-structured interviews with 5 horn students	Interviewed by an external researcher (PhD fellow from the University of Oslo)	INSTR student x (IT1)
Dec. 2016	Reflection session with 15 students and 4 teachers	Moderated by the project leader and the report author	INSTR student (IT2 RS)
May–June 2017	Focus groups with 3 student groups (grouped by instrument); individual, semi-structured interviews with 3 teachers	Interviewed by project's research consultant (associate professor at NMH)	INSTR student (IT2 FG) INSTR teacher
Dec. 2017	Reflection session/working meeting with 6 teachers	Moderated by the project leader	INSTR teacher
June 2018	Individual, semi-structured interviews with 2 teachers	Interviewed by project's research consultant (associate professor at NMH)	INSTR teacher

Note: INSTR refers to the participant's instrument; x refers to an internal student number in the data set for that iteration (IT). RS refers to Reflective Session and FG to Focus Group. For example, a student might be referred to as 'Horn student (IT2 FG)'

A reflection session halfway through Iteration 2 was very useful, both in terms of yielding the observations of students in the middle of their learning and in terms of allowing the project team to adjust how the teaching would be delivered. The lesson observations that were attempted in Iteration 3 unfortunately could not be conducted to a satisfactory degree due to scheduling challenges. The few lessons that were observed yielded many interesting observations, however, and would be an asset for further research.

The students for the interviews were chosen to represent as broad a range of students as possible in terms of their year of study, background, and gender, among other factors. In the first iteration, the students were chosen so that one student from each year of bachelor studies (four students) and one master's programme student would be included. The group included a mixture of Norwegian and international students.

All the students were invited to the reflective session in Iteration 2. We offered pizza to increase the likelihood that more students would come. The turnout represented

approximately half the participating students from each instrument group. This session included students from every year of study, with a good mixture of Norwegian and international students. As a facilitator, I ensured that all the students would share their thoughts and experiences, and I encouraged them to report on both positive as well as challenging or negative aspects of their participation and learning; the students seemed to be comfortable with reporting on both sides of learning. One variance was that the horn students who attended this reflective session differed from those who were interviewed for Iteration 1.

The students for focus group in Iteration 2 were chosen to represent different years of study and, where possible, different lengths of participation in the project (and thus exposure to the adjusted main-instrument tuition model). By this time, some of the horn students had participated in two iterations, with one also having received AT lessons during the initial project documented by Jørgensen (2015), which essentially made this her third iteration.

All three main-instrument teachers were interviewed in Iteration 2. The AT teacher was not interviewed. In Iteration 3, the interviews were only conducted with those teachers who had completed the full amount of group work and whose students had taken the full number of individual lessons at the time of the scheduled interviews. The three teachers interviewed in the previous iteration were not interviewed again.

All the interviews, focus groups, and meetings were audio and/or video recorded and transcribed verbatim; some of the interviews and other encounters were conducted in Norwegian, while others were conducted in English. The quotations have been edited lightly for clarity for this report, although the editing has not affected their meaning in any way. The original transcriptions are available upon request. The findings presented in this report are based on my own analysis using the qualitative research tool NVivo. A partial analysis of the dataset in Iteration 2 was also conducted by our research consultant in parallel using HyperResearch. These analyses were conducted independently and were later compared; both seemed to yield similar findings.

In my analysis, the teachers' and students' transcripts were analysed separately, and an initial reading of the material was undertaken within each group. The interview guidelines already pointed towards certain aspects of the project that we were interested in illuminating and thus contained a certain degree of bias (see the appendixes for the

interview guidelines). While analysing the data, however, I did try to keep an open mind for new insights that might emerge. A round of open coding was then undertaken; any utterances with distinct meanings were marked, and a code summarising the content of that utterance was created and assigned to the utterance. As the number of codes grew, I created overarching categories to group the lower-level codes.

After the initial open reading, the second step was to 'saturate' the emerging categories, which entailed the undertaking of several new readings of the material. This time I selectively looked for utterances that related to the codes and categories that had emerged in the first step but that had not initially been included in them. During this step, most of the initial categories were able to be saturated; some had to be renamed or regrouped to better reflect the material, and a couple of new categories also emerged. The most saturated categories are presented in this report.

The author's role in the project

I have played many (and sometimes conflicting) roles in this project. I took the initiative to start this project, with the support of my colleagues, and I acted as a project leader and manager throughout. I have also participated in data collection during the analysis as a participant researcher. I have served as an informant and was interviewed by the research consultant in Iteration 2 because of my role as a main-instrument teacher whose teaching setup had been altered according to this model.

Simultaneously playing so many roles did present a few challenges, but several opportunities also arose that otherwise would not have been available. The difficulty of balancing my faith in the project's ideas with keeping an open mind in analysing and interpreting the data was ever-present. Lobbying to acquire resources to assure the project's continuation with impassioned arguments sometimes made it difficult to maintain an analytic distance. At the time of writing, however, no further lobbying is necessary, and taking a more detached stance now seems possible.

While there is the possibility of bias in how the model was developed and the research conducted, the increased number of participants and the engagement of a research consultant in the later stages of the project may provide indications that the project's findings might be relevant to a larger context beyond my own teaching practice.

Having immediate access to the actual practice and having an 'insider' understanding of the practice presented possibilities that might not have been visible if using an outsider, detached perspective. Being in the middle of the teaching practice (and having to make sense of how the new approach could be integrated), seeing how the students responded, and noting what challenges they faced provided questions that we could then ask our research informants. Because the research was more explorative at the outset, determining which questions to ask seemed like an important goal, which I think the project has succeeded in. My closeness to teaching the main instrument might provide some useful insights into how and why the project is relevant more broadly. The project showed that nuance is very important in the material foregrounded in this report; the proximity to the teaching/learning events of the project seems like an asset.

In the findings that present the teachers' perspectives, only the utterances made by my colleagues will be presented in order to maintain a certain distance, although full objectivity will surely not be possible because of my close collaboration with these colleagues. On the other hand, many of the findings can be triangulated, as they are illustrated from both the teacher and student perspectives and show a good degree of agreement.

Finally, using precise and appropriate language has been a challenge, both in presenting the project in general and in writing this report. Given the large amount of tacit knowledge in the field, and because everyday language is often insufficient for expressing various nuanced points, some of the explanations and expressions might appear cumbersome and contrived to the reader. Because different senses of some words are discussed later, the reader might rightly criticise the lack of consistency in referring to the different senses. The reader is left to judge the credibility of the findings and the aptness of the language.

Findings from the students' perspective

This section presents the findings pertinent to the student participants' experiences and their interpretations of learning outcomes and implications for pedagogy. The section that follows reports on the findings on the teachers' perspectives. Each perspective is further divided into three threads that run in parallel between the perspectives. Table 3 below provides an overview of how the main research question is clarified. These threads run in parallel between the perspectives, thus allowing intersections to emerge and producing a composite image of the learning.

Table 3: Student and teacher perspectives

The student perspective	The teacher perspective
On their own learning: What do the students report to have learned or gained by participating in the project?	*On their own learning*: What do the teachers report to have learned or gained by participating in the project?
On teaching: How do the students characterise their main-instrument teaching, and how, if at all, has it changed during the project?	*On the students' progress*: How do the teachers describe the development of their students during their participation in the project?
On the curriculum: How do the students relate their learning during the project to the formal curriculum?	*On the curriculum*: How do the teachers of the main instrument make sense of the curriculum and their subjects' places in it, and what interfaces with other disciplines do they have at their disposal?

Student perceptions on their own learning

The data indicates that the students who participated in the project experienced a wide range of learning outcomes. Gaining new perspectives and developing new tools are generally viewed as contributing to both personal development and growth as musicians. These contributions support the ongoing learning processes while also initiating new ones. Before illustrating the learning outcomes, however, a cursory mention of the context within which they unfolded is in order.

Time, confusion, and sustained effort: The context of learning

The students reported that the learning outcomes presented in this report depended on sustained effort over time. They often seemed to go through periods of confusion (and possibly discomfort) as they grappled with complex subject matter of the AT. In other words, achieving these outcomes seemed to require considerable investment on the part of the learners. A learning environment that is sensitive to these issues seems to be important in attaining the learning outcomes outlined in this report.

> Horn student 1 (IT2 RS): *One thing that I would mention: [this kind of learning] takes some time. [It's] taken me three years to get to this point where I really … can get a lot out of it.*

Further research is needed to better understand these processes and what might characterise a fertile learning environment. This will be dealt with in the Discussion part of this report. We now return to presenting the learning outcomes.

New perspectives and ways of thinking

The students felt that they gained new perspectives as a result of their participation in the project; they now saw their discipline from new angles and in different ways. As one student remarked:

> Horn student 1 (IT2 RS): *I've been playing the horn for many years now, and this [new approach] really added something new to my experience of practicing and playing.*

More specifically, the students reported that they:

- gained insights into the extent and prevalence of habit(s) in playing their instruments;
- challenged their prior knowledge and preconceptions in light what they had learned in the individual AT lessons and through group-work peer observation;
- recognised the interrelated aspects of instrument playing and increasingly saw their discipline as being connected and complex; and
- realised that personal effort was necessary to figure out what they must learn, as indicated by one student's quote that 'I have to learn myself'.

Extent and impact of habits

The students reported being surprised about the extent to which habits shaped the way they performed their activities, which included playing their instruments. The nature of this finding is twofold. First, the students realised that the nature of any activity is habitual, i.e. that engaging in an activity essentially means performing a habit. Second, the students clearly had little awareness of these habits previously, regardless of the number of years they had been learning their instrument. Thus, even though habits play a major role in shaping how we perform our activities, they tend to become invisible. We may consider this a major finding, as most of the respondents talked about these habits.

The students described how habits had shaped their activities in a variety of ways. First, habits are small, unconscious reactions to stimuli that, once brought to our attention, seem unconstructive, 'stupid', and unnecessary. Second, it is impossible to separate between simple and complex activities. We are constantly engaged in activity and are never idle; playing an instrument, brushing our teeth, and waiting for a bus are all instances of activities. If we take the perspective that engaging in an activity means performing a habit, then the influence of habit is clearly ever-present and continuous. Third, it is often easier to notice habitual response patterns in others. Based on the students' observations of their peers in group settings, the students agreed that we are all affected by our own habitual patterns. The students mentioned seeing the connection between everyday activities and playing their instruments.

> Horn student 3 (IT1): *The most important part for me was realising all the things I do with my body that I wasn't aware of … not just while playing the horn but when brushing my teeth or doing anything. The tendencies are quite clear, and that for me was quite a discovery, because I couldn't imagine [that these habits were that strong]. I also really realised that of course when playing the horn, my body actually works against me, sort of, or against the breathing, which I hadn't realised before.*

Another student noted:

> Horn student 1 (IT1): *It was these tiny tendencies that we all do.… I've never thought about that before, and then when I notice them in others … everyone's doing [these things].*

As a result of these new insights, the students reported that new, previously unavailable, possibilities had opened up to them.

Challenging and re-assessing prior knowledge and assumptions

Students reported having to challenge several preconceived notions in light of their experiences with the AT. One such notion was that practicing and playing were supposed to be painful. The 'no pain, no gain' thinking seemed to be prevalent among the students, yet as Harp student 1 (IT2 FG) reported approximately three months into her participation in the project, the idea that 'you should have pain practising is gone'. Oboe student 1 (IT2 RS) elaborated on this idea:

> *I never [got to the point where] I couldn't play. I was just fighting through; I just played until I could play the piece, not thinking about how I stood, how I sat, how I moved my legs ... And now, just after three or four sessions with [the AT teacher] and the group sessions, I'm starting to make a change, but I think … we have to continue at least for the spring semester…. It's been a very revealing experience for me.*

Many students problematised the oft-heard request to 'stand straight' after having experienced several individual and group AT lessons:

> Horn student 1 (IT2 RS): *What was new to me was to think what* not *to do … people always tell you to straighten up or do this and do that, but instead I have to concentrate on the habits, and what not to do. Just stop doing them instead of compensating with something else.*

> Harp student 2 (IT2 RS): *When someone told me, 'Just stay straight', I was doing that, but that's really wrong, so you know like it really changed my mind of thinking these kinds of things, and it helps a lot.*

One of the students started to critically examine what on the surface might have appeared to be established truths of the discipline. By illustrating how expressions like 'stand straight' emerge, he illustrated a more general mechanism of knowledge formation within the discipline. Teaching methods and the underlying understandings are often based on little more than personal experience and anecdotal evidence, which the students saw as being problematic.

> Horn student 2 (IT1): *Sometimes we think that we do something with the body that helps us to accomplish a task, but in fact it's not related at all with success. Maybe some people think if you have a rabbit's tail in your pocket then you're OK, like if you tense this muscle then it will help you play best, but it doesn't work like that. For example, support is a big thing you hear about. 'You have to activate the muscles, and the abdominal muscles, so they can support you'. Well, of course, I think in a way it's not wrong; also … I would say that I'm playing more relaxed [now], and I don't really*

> *care about activating big muscles in my body, which is less tiring. I don't want to say one [approach] is better than the other – it's just maybe two different approaches to horn playing.*

Seeing things as being connected

Horn student 3 (IT 1) noted that:

> *I thought of breathing as one thing and the body as another, but now they are sort of combined.*

The students reported that they had started to see connections they previously had not been aware of. They often mentioned the interrelatedness of breathing and posture as a new perspective, and several discussed the relations among posture, thinking, and perception, or what more broadly could be called 'mind-body interrelatedness'. In exploring their playing from this interrelated perspective, the students reported changes in sound quality and of having a sense of increased ease while playing, to which we will return in a later section.

> Horn student 5 (IT 1): *I really learned a lot about the body and the processes and what's connected, and also the way of thinking: not to just put yourself into the right position to stand in, but that it's a dynamic thing … what I've learned is that even the legs are really important, because if you lock your knee, like this, then you create tension in your whole body…. I've learned about how things are connected.*

'I have to learn this myself'

Many students came to the realisation that a considerable investment on their part was necessary to internalise the ideas behind the AT. The following quote illustrates the importance of self-study:

> Horn student 1 (IT1): *For some people, they get the idea really [of the AT] quickly, and the more you get the idea, the easier it is to help yourself … it's not difficult in, like, 'I don't understand what you're saying' or 'I don't get the idea'; it's more like 'I have to practice a lot'. I didn't think [the AT] was something that needed to be practiced at all.*

Other students also acknowledged that it was up to them to learn and develop their own understanding, but ultimately, the AT is a tool that brings a sense of self-sufficiency and independence.

Oboe student 2 (IT2 RS): *You get a lot of information in the individual lessons, and then you also see [that learning] in others, and then the third step is where you actually process the lesson and apply it to yourself. But it really takes time, yeah.*

Horn student 2 (IT2 FG): *It's important to focus on us not being trained by a teacher. We must learn to teach ourselves, and it's in this context where the AT is relevant. For me, the AT is a tool that makes me aware of what I'm doing and how I myself can solve problems. We get instructions in how an in-breath should be taken, but we have to figure out for ourselves how it works for us.* (Translated from Norwegian)

New tools and perspectives for practicing

The students reported developing new skills and tools as a result of gaining new perspectives. The students mentioned acquiring observational skills, increasing their self-awareness, and adopting a non-judgmental (and non-normative) stance as they explored new approaches to practicing.

Harp student 1 (IT2 FG): *You learn to find solutions. It takes time [to grasp the AT], and you start to discover new things. [The AT] gives you tools to deal with the things you experience while playing the harp. So, I think it's amazing to have this opportunity to know that there's a way to cope with things, also in the future. [The AT] will always guide you and be part of your music career and life.*

Many students reported that their thinking during practicing had changed as their awareness increased.

Horn student 3 (IT1): *My thoughts are definitely different in the practice room. I feel more focussed on the ways I can use my body in different ways, or all the ways I can use my body to breathe better, actually. I didn't think about that before.*

The students mentioned new approaches and strategies for practicing where practicing *not* to do something seemed particularly challenging to them:

Horn student 1 (IT1): *It's surprisingly difficult to learn how to not hold yourself in a locked position … [and] practicing not to do stuff. Which is super hard, because I mean I can think about the directions and I can think about how not to hold myself, but it's really hard to practice not to do something.*

The students aimed to be able to apply the new insights in their practice independently, and they viewed the opportunities to observe their peers as an important stepping stone towards that goal.

> Horn student 3 (IT1): *We all have roughly the same patterns, and to actually see someone else demonstrating just the same thing that I do [is useful]. I've been told for six months that I do this [pattern], but I didn't know until I'd actually seen someone else actually doing [the same thing].*

The students mentioned increased self-awareness as an important addition to their toolbox.

> Oboe student 1 (IT2 FG): *For me [the AT is] more about being aware of how I use my body: I was just focussing on how to play a piece and play it better; if I got hurt, I didn't think much about how to avoid [getting hurt again]. Now I'm more aware.*

> Horn student 2 (IT2 RS): *I think [the AT is] also just about raising awareness of what habits I actually have, and what I do with my body that isn't necessary.*

Adopting a non-judgemental (and non-normative) stance seemed to be an important insight as well:

> Horn student 3 (IT1): *[The AT teacher] has shown me some alternatives to what I do. It's not that he says ['This is how it's supposed to be']; he has alternatives, and I think that's a positive way to see the world in general. Or for him to say, 'You're not doing anything wrong, but I have a few alternatives for you to improve'.*

> Horn student 2 (IT2 FG): *What I've learned through the various phases [is that it's not about] right or wrong: you're presented with some alternatives to breathing and standing. Someone might say, 'Now you're breathing like this; try doing that'. [You] get alternatives, and you can choose to relate to those or not. The most important thing is that you become aware of the choices you take*. (Translated from Norwegian)

Language development

As a result of these new perspectives – in particular seeing things as being more connected – the students started to employ a language that reflected a more integrated understanding. This understanding was reflected in two parts of the data. In the interviews (Iteration 1), the students were asked to reflect upon how they would describe their understanding of their playing both before and after their participation in the project. The quotes to substantiate this aspect may be found under the heading 'Seeing things as being connected'. The second

part of the data included the teachers' observations from the group sessions in which the students commented on their peers. The students often attempted to use more nuanced ways of expressing themselves, even though the resulting expressions often became cumbersome for them.

The students seemed to recognise the need for support for their conceptual and linguistic development; for example, horn student 2 (IT2 FG) said, 'It's unfortunate when the Alexander technique teacher isn't present, because then we don't have the necessary knowledge. We don't have the conceptual toolbox' (translated from Norwegian).

Development as a musician (artist)

The majority of the students reported that they had developed as musicians as a result of gaining new perspectives and applying new skills and tools. Some indications showed that the students were better able to deal with the challenges of engaging with their discipline on a professional level, as the following exchange reveals:

> Interviewer (IT2 FG): *Do you think you've become better musicians as an outcome of this project?*
>
> Harp student 1 (IT2 FG): *I think at least we have more tools to work with.*

One of the students described how these outcomes had helped to deal with the demands of the professional life of an orchestra musician. Applying the AT principles, he reported, helped to reduce the back pain that often results from long rehearsals and improper bodily reactions to the conductor's instructions.

While some of the students commented on general improvements, others went into more detail by mentioning the increase of ease and efficiency in their playing and their improved sound, breathing, and intonation. Better balance and posture also seemed to be related to their improvement as musicians.

> Horn student 5 (IT1): *If you use your body in the wrong way, or not in a productive way, then what usually happens is that it strains your breathing. For instance, I used to stand like this, sort of leaning backwards. So once I managed to be more balanced, then I didn't have as much tension [and] I was able to take in more air.*

Continuing on the topic of breathing, another student said:

> Horn student 2 (IT2 RS): *I think the breathing is just such a big part of playing a wind instrument, and all [this tension] and stuff that most of us do doesn't help us breathe better. So if we can get rid of [those negative things], then the playing will get better automatically, I think.*

As a result of having better balance and posture and improved breathing, the students reported hearing improvements in their peers' sound as well as in their own. They also reported having more tools with which they could work on their sound.

> Horn student 2 (IT2 RS): *For the horn … usually the sound gets bigger and rounder and better, because if the AT works, then everything gets more relaxed and you can breathe better, and breathing better is always a good thing for sound, and playing in general. I think we've often had this situation where the people listening have given us the kind of feedback where the sound got more relaxed, or rounder, or warmer.*

Another student connected these improvements with the amount of effort musicians put into playing; these improvements challenged her preconceptions about what playing more loudly means.

> Harp student 2 (IT2 FG): *If you want to have a bigger sound, you put more energy into it. What we've experienced now is totally different from what you actually should do to enrich your sound, because if you think 'I have to make this sound stronger', you'll put more energy into it, and then you become tenser. What we've learned is more about how we can find the right sound and at the same time lose the tension.*

In general, addressing student's preconceptions about playing loudly resulted in the students reporting more ease, efficiency, and freedom in their playing, which also contributed to the students' well-being.

Personal development

In addition to the students developing as musicians, a related development also occurred on a personal level, although it was not easy to separate these processes. The students mentioned three related topics: (1) the development of autonomy, self-sufficiency, and independence; (2) an increase in self-confidence and improved stress management during performance situations; and (3) more open-mindedness. Even though these outcomes may be considered desirable for the students, they did require significant investment on their part. The students seemed to have learned something important about themselves. While

many of these insights were often unproblematic, a few seemed to be troublesome and difficult for the students to either understand or accept.

We consider autonomy to be a general life skill for managing emergent challenges in both daily life and in the professional life of a musician and the project's data suggests that the students saw themselves evolving into more autonomous, self-sufficient, and independent learners. In other words, they were becoming their own teachers.

> Harp student 2 (IT2 FG): *When you have habits like tension, you don't feel [their influence]. If you do feel [tension], you don't know why. It takes time to work with [raising awareness and acquiring tools to deal with the habits], but then you learn to take care of them yourself.*

Another student alluded to an ethical dimension of personal development that went hand in hand with becoming autonomous and independent. The student saw that being aware of his habits and consciously making decisions was an important aspect of this development, even though doing so required an investment.

> Horn student 2 (IT2 FG): *I have access to a tool that hasn't just changed how I see my own playing and my own practicing, but also how I handle all the challenges I experience, from when I get up in the morning until I go to sleep…. It's about being observant of your own habits – which I hadn't had presented to me before in that way. Both physical and mental. Where are you going [with your attention] now? Why are you not present? Why did you disappear?*

> Interviewer: *This must be very tiring then? To think about this from when you get up in the morning until you go to sleep?*

> Student: *No, it isn't.*

Self-confidence and stress management in performance situations

It was evident from the interviews that the students perceived an increase in their self-confidence.

> Interviewer: *Have you noticed any changes in your confidence or the feeling 'Yes, I can do this'? And, if so, could you describe those things?*

> Horn student 3 (IT1): *Yes, definitely … it's more safe; it doesn't feel like a disaster if something goes wrong, even in a performance situation. If I crack a note, it's not a disaster…. I used to get a very dry mouth, and that's stopped, and I used to shake, and that's stopped, at least for now, and I think that's because of having more confidence.*

While it is difficult to pinpoint the reasons for this increased confidence, employing the principles of the AT seems to have contributed at least to some extent.

> Horn student 1 (IT1): *I don't know if [my sense of self-confidence] is from standing better, or if it's from standing a little better and then playing a little better, and then having the confidence from playing to stand even better. But I'd say it's primarily from the Alexander technique.… It helped with taking up all the space that I can, and not holding yourself together and being too compact and tense and stuff like that.*

It was also evident that many of the above findings also led to better stress management during performance situations.

> Horn student 1 (IT1): *I've learned to manage stress better when I'm playing in front of people, because for me the stress of being nervous affected my breathing, so I began breathing really shallowly, but as I learned … the basic principles about direction, about expansion into the performance situation, it helped me to breathe better, and that's really helped with all the nerves and the stress.*

Having experienced something that the students had not formerly felt comfortable with led to opening up new ways of seeing and generally becoming more open-minded.

> Horn student 4 (IT1): *I think I'm much more open-minded to new ideas and ways of doing things…. For example, [I learned that] letting [go of] a lot of the control could actually help. I think I would've been really sceptical of that [approach] before.*

Capacity to let go and a detached attitude

The most troublesome aspect of personal development, as experienced by the participating students, was the need to let go of preconceptions about how to do certain things, a move required to grasp the AT. Some of the students perceived the new perspectives as threatening. New perspectives have to replace the old ones, and some students were unwilling to abandon their familiar positions. The data suggests that some of the students were deeply attached to their beliefs about themselves and their playing, making it difficult to let go. They reported a sense of loss once they saw that adopting the new perspective would require them to abandon their current certainties.

> Horn student 4 (IT1): *I was kind of sceptical, because I was a little bit unsure if I wanted to just think about this [new approach]. I felt like I suddenly didn't play that well, or that I'd lost a little bit of control, and then*

> *of course I got a little bit sceptical. I think the times I learned most from [the AT] was when I tried to do it one hundred percent.… If that makes sense…*
>
> Interviewer: *Yeah, so it basically was scary almost to [fully engage with the AT] because of the loss of control?*
>
> Student: *Yeah, because you lose something.*
>
> Interviewer: *How did you deal with that?*
>
> Student: *I tried to think: 'OK, I'll try this for real, and just if I want to get down to learn something new, maybe I'll have to try [the approach fully] and trust it', and I remember that it was very interesting [embracing the approach]. I think my sound changed a little bit.*

Some of the students seemed to realise that they would require sufficient support over time to get through the difficult parts of learning to apply the AT to their instrument playing; they seemed concerned that lacking such support would prevent the attainment of those learning outcomes as their letting go of pre-assumptions would leave them uncertain and vulnerable. Furthermore, they seemed concerned about the slowness of the learning processes, which exposed the affective side of learning:

> Harp student 1 (IT2 FG): *When you have to change anything, and you notice that it will take many years, it's sad… [It's sad] when you notice that something you've done for many years you have to change… When [the AT teacher] explains that this is something that will take you years, and it's nothing that can be fixed tomorrow…*

These findings raised the question of whether this approach to the instrument teaching/learning was suitable for everyone, and whether the attainment of these learning outcomes justifies the investment required of the learner. Furthermore, these findings raised the question of how the various degrees of attachment to one's beliefs affect the student's learning trajectory. We will return to these issues in the Discussion part of this report.

Well-being benefits

Students reported increased general well-being, not only while playing their instruments but also in general life, as a result of their increased awareness. They mentioned decreased back pain and strain in general, which illustrates the interrelatedness of aspects of the discipline and hints at the downsides of addressing things from isolated perspectives.

> Horn student 1 (IT1): *Well, the biggest and best change is that I have less back pain. I used to have really constant pain in my back, and I still have back pain, but it's way less…. It was kind of this 'wow' experience when I learned how not to sit … but then it took some time before I got home and sat down to eat dinner: 'Well, why don't I do that now, too, just sit in a comfortable way that doesn't hurt my back?'*

> Harp student 1 (IT2 FG): *What's interesting is that we're all working hard, and we're very tense, and sometimes when he just says 'Relax', you don't know how to do that. The relaxing I used to do before was not a hundred percent relaxing.*

This concludes the student reports on their own learning. We will now proceed with illustrating their perceptions of the teaching during the project.

Student perceptions on teaching

This part of the findings addresses the students' perceptions of teaching. While the focus is primarily on the main-instrument teachers of the interviewed students, the students emerged as both their own and each other's teachers in this setup. This part begins by illustrating student perceptions of their main-instrument teachers' competence and the limits of that competence before proceeding to show how the teachers' competence developed in the course of the project. This section on teaching concludes with an investigation of the participants' roles (as viewed by the students) within the teaching/learning environment, which illustrates how independent students can ultimately become their own teachers.

The competence boundaries of main-instrument teachers

The quote below bluntly sums up student perceptions of their teachers' competence:

> Horn student 2 (IT2 FG): *Most of those who teach us how we should stand are often lacking in competence – they just have their own experience.*

Rather than pointing to shortcomings particular to specific teachers, this quote illustrates that despite main-instrument teachers being traditionally viewed as all-knowing gurus, their competence might have limits, although, this is more an observation than criticism. Another student elaborated on how the teachers might be lacking in specialisation rather in competence:

> Harp student 2 (IT2 FG): *The harp teachers look at how you sit and how you move, but they aren't specialised. And I think that the AT is a very specialised way to look at things. It's not about, 'You have to sit straight and not move too much'. It's more about a feeling you develop.*

> Harp student 1 (IT2 FG): *You could have very good teachers, but … if you haven't taken these important things into account from the beginning, then you really can have many bad habits that can influence your playing – your sound, your technique – everything.*

Another student refined the picture:

> Oboe student 1 (IT2 FG): *I think maybe most of our teachers haven't been aware of how to use the body in the best way, so you get into some habits when you play; it might seem to make the playing easier, but it's not the best for your body. So when you [try a teacher's suggestion it] might function well, but over time [that approach] will become a barrier to further development.*

The students did, however, have a sense that their teachers were curious about and interested in the body-related topics in music performance and that the teachers deemed these topics relevant for the main-instrument study:

> Harp student 1 (IT2 FG): *She is very interested in [the body's role in playing], and she knows a lot. And I also think that there are so many things that she can correct by herself. She's also attending the group lessons and observes when the AT teacher works.*

Teachers' development of competence

The students then proceeded with observations on how they perceived the teachers to be developing their competence. Generally, they reported that the teachers had increased their competence, since they had become more observant and had developed a broader repertoire of pedagogical approaches and ways of explaining.

> Oboe student 1 (IT2 FG): *[The teacher] tries to use some of the things we've learned in the group lessons. He knows what to look for, and he can hear it in my sound: 'Now you're not breathing very well'. So I think it's good that the teacher is joining us [in the lessons], because then he can remind me.*

> Harp student 2 (IT2 FG): *[The teacher] observes more of the problems we have. Before she maybe didn't notice…. she talks more about … it's not about how you hold your hand, but more about how you feel inside, and your body and your mind.*

To a large extent, this development of competence happened through the teachers' interactions during the group lessons:

> Horn student 1 (IT1): *In the beginning [we had] a lot of group lessons, where [both teachers] were present and asked each other questions – say, I was playing, and [the AT teacher] was talking about my posture and then commenting on my playing and then asking [the horn teacher], 'Well, was [her playing] better, or [did it only appear so] for me?' and vice versa.*

The teaching/learning environment and participants' roles

As the teaching/learning environment changed, a range of new roles became available to the project participants. The students described their teachers as taking up new roles. Due to the inclusion of the AT in the project, the students described the main-instrument teacher as a translator of the new discipline into the language of the main instrument.

> Harp student 3 (IT2 FG): *The AT teacher is not a harpist, and we don't always understand what he means, but when [the harp teacher] is with us, she translates [what the AT teacher is saying] into harp language.*

> Harp student 2 (IT2 FG): *If the AT teacher notices something that isn't functioning well, [the harp teacher] can translate. [When] the harp part and the AT are put together, it's positive.*

Because the teachers of both disciplines supported and followed up on each other's work, the students felt that their instrument teachers could remind them of what the AT teacher had been teaching, and often vice versa.

> Horn student 4 (IT1): *I felt like we were learning a lot about the AT in the lessons with [the AT teacher], and then [the horn teacher] reminded us to put [what we had learned] into the horn playing in the lessons…*

> Horn student 2 (IT2 FG): *We get help from the main-instrument teacher, who has knowledge in that field, and from the AT teacher, who can see things from outside the main-instrument aspects. One teacher helps the other, and they both learn.* (Translated from Norwegian)

The perspective of the AT was important, since the technique's presence was even felt in situations where the AT teacher was not involved.

> Horn student 1 (IT2 FG): *If the AT teacher is present, then we also focus on how to use your body. The fact that we talk about the body means that we address these things even when the AT teacher isn't there.* (Translated from Norwegian)

> Horn student 2 (IT2 FG): *[The AT] also gives us a different perspective. For example, the AT teacher doesn't necessarily know that you've worked at achieving a better approach. And he isn't interested in horn technique per se, so you get other kinds of input. The focus is different, more unified. It usually has the same goal – better playing, mastering the piece better – but you come at it more from a different angle.* (Translated from Norwegian)

Through becoming more independent and gaining new tools, the students themselves started to participate in the teaching situations. They reported contributing to their peers' learning through feedback during the group sessions, but also of becoming 'their own teachers'. From the interviews, we can see a dialogical relationship developing where teaching others helps people to gain insights into how 'to teach yourself'.

> Horn student 2 (IT2 FG): *I feel that the group lessons have become a kind of self-help where we're quite exposed. You have issues when you're coming in, and then you get help from colleagues who can relate to the same issues. Then you also get help from the main-instrument teacher, who's knowledgeable about the field, and from the AT teacher, who sees things from outside the instrument perspective. Each helps the other as we learn, and it's not necessarily the one who's playing who learns the most. The most important thing is that you have someone from the outside who contributes to generating a different kind of forum than the usual.* (Translated from Norwegian)

> Horn student 3 (IT2 FG): *What's important to me about the AT is that I can solve my own issues from within, rather than having someone else tell me. You observe others and work through things when you're playing music yourself.* (Translated from Norwegian)

The preceding quotes hint at how the learning environment contributed to generating the above-mentioned learning outcomes. Beyond what was mentioned in the Introduction, it is beyond the scope of this report to draw a complete picture of what characterised the learning environment in this project and how those characteristics are related to the learning outcomes. This topic requires further research and is addressed in the Discussion section. For the time being, we can simply say that the group lessons played a key role in the attainment of the learning outcomes.

This concludes the students' perspective on teaching. We will now proceed with their reflections on the formal curriculum.

Student reflections on the curriculum

In the interviews, the students related their learning to their perceptions of a formal curriculum. They reported that what they had learned through participation in the project was distinct from what they perceived as being offered by the formal curriculum. The students also compared these offerings and discussed how each offering was relevant to their development as musicians.

The students reported on their interest in learning tools that would help them to go through their careers in a sustainable way. While they acknowledged that the current curriculum did offer some help towards these goals, they also pointed out that something was missing. As is evident from the following quote, the use of an integrated approach brought added value to the curriculum, largely through adding new perspectives and understandings in a way that was tightly interlinked with their playing.

> Horn student 3 (IT2 RS): *It's very interesting to work on stuff that you don't [normally] work on in a music school. We're [typically] not introduced to work with our bodies or involve our bodies in that way. We always include our music abilities and our thinking within the music, but we're missing out on this perspective of our bodies … in the musical environment. I think that's really interesting, and it brings something new to the education. It's also very interesting to have this idea of the AT that we don't get in the physiotherapy or just training, exercising…. It's more a changing of habits, developing our thoughts on a much higher level than training the muscle groups, training our embouchures [i.e. facial muscles] and fingers, you know. So, I mean … approaching the music and the instrument in that way is very interesting, and as I said, it brings something new to the education [that] I'm very fond of.*

The findings in this section should be seen in the context of the rest of the curriculum offered at the Norwegian Academy of Music during the years in which the project took place. In particular, two offerings are relevant: a semester-long introductory course in work physiology (*arbeidsfysiologi*), which was offered to bachelor students during the first semester, and a general offering of physiotherapy that the students could sign up for individually when and if the need arose. The former course consisted mainly of an introduction to anatomy from a physiotherapy perspective, coupled with practical exercises.

Some of the students who were interviewed did not study at NMH for their first year and thus didn't go through this course. The experiences the students shared bear many similarities, however, and a certain generalisability to other institutions might be possible.

The students compared the integrated AT approach primarily with physiotherapy; this comparison helps to make a few important distinctions between the approaches. A primary distinction between physiotherapy and the AT, according to Horn student 3 (IT2 RS), was as follows:

> *[Physiotherapy] just approaches the muscles, and I've been doing sports and training regularly, so I know that you have to keep your body in shape, but … changing your habits, and being aware of what you're doing with your body, [is] a good thing.*

Another student elaborated on this idea:

> Horn student 2 (IT2 FG): *[With physiotherapy] you control a muscle here or there, move that muscle here to tense or release…. You can become stiff and then do exercises to loosen up, but what you end up doing is releasing [this tension] once a week for half a year, and for the rest of your life you don't have the tools to release muscle tension caused by hard work…. With the AT, you get a tool that addresses situations where you become tense…. What physiotherapy or medicine is about is fixing things…. We want to avoid becoming ill.* (Translated from Norwegian)

In addition to discussing the different foci of these disciplines, the students commented on the differences in the way the courses were set up. The students reported that the introductory courses at the very beginning of their studies had only scratched the surface of what needed to be learned. The students seemed unable to relate what they had learned in these courses with their practice and development as instrumentalists reinforcing the view of separate disciplines.

> Horn student 2 (IT2 FG): *Stage awareness, working physiology – these are a very 'quick fix'. They're so concentrated and easy, but they don't go to the heart of the problem. They don't yield tools you can work with yourself.* (Translated from Norwegian)

This concludes the presentation of findings from the students' perspective. The next section presents what the teachers learned and experienced during the project.

Findings from the teachers' perspective

This section presents the findings from the teachers' perspective. Following the template of the student perspective, the section is divided into the teachers' reports on their own learning and on their students' learning, followed by their thoughts on the curriculum. Although I myself was among the project's teachers, I refer to the teachers as 'they' because only my colleagues' utterances are quoted below. For a more thorough treatment of this issue, see the section The author's role in the project.

Teacher views on their own learning

The teachers reported that participating in the project had revitalised their teaching practice and contributed to increasing their competence. The project opened up new perspectives and contributed to the expansion of the pedagogical repertoire of tools and approaches available within teaching situations.

> Oboe teacher: *I didn't know what [the AT] was; I thought it was something for other people, because I'm quite happy with my life and with my body … It's really opened my view…. I've gained an important addition to my teaching repertoire, which I feel is very positive. I wish I'd received that earlier.* (Translated from Norwegian)

The teachers' participation, while not totally transforming their practices, did provide the opportunity to refine these practices. Echoing the student statements, teachers acknowledged the limits of their competence and appreciated the opportunities for learning together with their colleagues in order to gain new insights and to provide a richer learning environment for their students. Collaboration, rather than a demand for the teachers to become AT specialists, emerged as a way forward to developing teaching practices.

Revitalising teaching practice

Prior to participating in the project, two of the teachers had had several decades of teaching experience; the third teacher (the report's author) had been in the profession for four years. Despite their differences in experience, all three teachers reported that their participation in the project had a positive effect in how they approached teaching. As illustrated by the following quote, the teachers felt a new energy that stemmed from the combination of

teaching/learning in groups alongside the added AT perspective; they also experienced increased interaction with their colleagues.

> Oboe teacher: *It's useful to discuss things with the AT teacher when he is present. In general, [the AT] seems like a vitamin injection for my practice. What's been an eye-opener is that when we've had these group lessons and the students are working, the AT approach has opened a new avenue for me – with the little boost in competency I've gained, I can now teach in a more interesting way, not least for the students*. (Translated from Norwegian)

Teacher competence and its boundaries

A common thread among the respondents was that their professional knowledge had limits, in particular their acknowledgement of the bodily aspect of playing an instrument and performing. The respondents seemed to agree that instrumental tuition has traditionally lacked a bodily perspective.

> Harp teacher: *[The bodily perspective] is something that hasn't been spoken of before. When I was a student, there was no [awareness of this perspective].*

The oboe teacher seconded this idea:

> Oboe teacher: *Our level of competency [in the bodily perspective] is lacking. We've been brought up learning to play without talking about [bodily] things*. (Translated from Norwegian)

Speculating as to what might have caused this major oversight, the AT teacher observed the following:

> AT teacher: *I think that this [idea] touches on music education in general. Many of those I get to work with – whether orchestra musicians, or students, or younger people – when they first got started, they consistently paid attention to technical matters: getting through things quickly and effectively. These issues are not given much attention at all [in music education]*. (Translated from Norwegian)

Increasing competence

While main-instrument teacher competence has limits, the teachers' competence had clearly expanded and deepened through the teachers' participation in the project. An important question to ask is what dimensions the teachers' competence had expanded along. Compared to an exclusively one-to-one organisation of main-instrument tuition, the

setup offered the teachers new possibilities in how to teach. Through engagement with these new possibilities (e.g. teaching in groups and using the AT), the teachers reported (1) becoming generally *more reflective* and aware of their teaching practice; (2) exploring and acquiring *new ways of thinking* about the discipline at the intersection with the AT; and, as a result, (3) discovering previously unseen *interrelatedness* within their own disciplines.

> Oboe teacher: *What the project has succeeded in is that, in general, we have become more reflective teachers…. Our discussions with the AT teacher when he's here are useful…. We need to open the doors, not least to critically reflecting on our past skills*. (Translated from Norwegian)

> Harp teacher: *With the AT, you see the whole person, and for me that's helped me a lot – not just to look at the hands, the fingers, or even the arms and such, but the whole body. Much more than I did before. [The AT] has now taught me to see that 'If this is going on with the body, then things can't work well'. I've learned to read my students' bodies in a much clearer way than before, and I think that's very, very good. I think I can help them a lot more than before*. (Translated from Norwegian)

As the teachers developed observational skills and a richer and more nuanced language and understanding, they reported becoming better able to convey to their students some of the more elusive aspects of disciplinary knowledge. The teachers and students seemed to have increased the shared references between them.

> Oboe teacher: *[The AT teacher] is educated in such a way that he can do more with the body. You could say that I can't do exactly the same thing, and in a way he has magical hands. But when we're in an individual lesson, I can remind my students of what they've learned in the AT with just the help of a few movements: 'If you think like that, then …'*

> Interviewer: *Because then the students have the same frame of reference, the same language as you?*

> Oboe teacher: *Yes, I mean, I've said the same thing for many, many years, but in a slightly different way*. (Translated from Norwegian)

The teachers shared a sense that they had tried various approaches before in order to explain certain aspects relating to the bodily perspective to their students but had not had much success. This failure strengthens the impression that Gaunt (2004) refers to about the lack of a strong disciplinary knowledge foundation, which often consists of conflicting understandings and a general lack of shared points of reference.

The aforementioned development of observational skills and more nuanced language and understanding, however, is only part of the picture. The teachers appreciated the ability to pass students on to another teacher to work out a few quirks and then later to be able to follow up and build on that experience. At this stage the importance of a sense of shared responsibility emerged. Rather than learning outcomes being dependent on a single guru-type figure, this approach created an environment of care where the collaboration created a support network for the students.

> Oboe teacher: *When it comes to following up with a student who's relapsed [to the old habits], I don't have the authority and expertise to guide the student back out of a bad habit. That's what's been so enriching with the duo-like teaching aspect: that I can send students to [the AT teacher], and then it's easy for me to follow up afterwards. I also think that two of the students who are involved [in the project] wouldn't have come as far as they have had they not been in the project. I am one hundred percent certain of this*. (Translated from Norwegian)

Finally, in addition to the teachers reporting an increase in their own competence, they observed and reported development in the practices of their colleagues. A dialogical development of competence became visible within their teaching interactions.

> Harp teacher: *After a number of years of cooperation, I've undoubtedly learned a lot, but [the AT teacher] has also learned about the instrument. He's become more and more knowledgeable about the harp and how players are to sit and so on. What he does when working with harpists has become more and more precise, because he now knows so much more about the instrument and can go more directly into what's important*. (Translated from Norwegian)

It is important to emphasise that the findings above unfolded over a period of several semesters; the time component is crucial.

Exploring and developing roles

Developing role awareness and flexibility seemed to be an important area for reflection in the project. The teachers felt that they had connected to their students in new ways, and new kinds of relationships developed as they saw both themselves and their students in a new light.

> Oboe teacher: *[The project] has helped me to establish an easier channel of communication with my students, so that I can get to know them in a new*

way… We're more open towards each other [than before] …. I feel I've achieved closer and more personal relationships with each one of them…. Now we touch on these sensitive issues, talking about the body and so on…. It's not that our [earlier] relationships were bad, but now we have an invisible thread that we both can trust and relate to. (Translated from Norwegian)

What became apparent was that the collaborative approach is more dynamic than its non-collaborative counterpart, which challenged the teachers to explore their roles but also gave them the opportunity to do so. The teachers indicated that complex and dynamic relationships had developed during the project. These relationships consisted of both interpersonal relationships (e.g. between the teachers and the students, and the teachers and their colleagues) and relationships between subjects (e.g. the main instrument and the AT). The active role of the students contributed to the dynamism, since the students themselves oscillated between teacher/learner roles in the group lessons. Flexibility and plasticity of the roles seemed to be important to adapt to the needs within the teaching situations. The network of these flexible roles with an ongoing renegotiation of their boundaries constituted a platform for learning to unfold upon.

Refining pedagogy through new tools

As a result of the teachers' competence development, they refined their actual practice. Rather than completely changing their practice, however, the teachers thought of the changes as a sharpening and refining of their pedagogies.

> Oboe teacher: *For me as a teacher, I've adjusted part of the way I teach certain aspects, not least regarding breathing and articulation and in regard to posture and warming up and all sorts of things.… These things have become more refined: not directly changed, but with new ways of expressing the same things being added.* (Translated from Norwegian)

The teachers reported expanding the repertoire of approaches to handle their students' challenges, such as with their sound and technique. Once the teachers started to employ these tools in practice, they perceived an increase in the efficiency of their practice.

> Oboe teacher: *In the classes we've had with the AT teacher, you can hear a clear difference in how the students sound after the AT teacher has worked with them. It's also easier to bring that [progress] back again when I'm working individually. I wouldn't manage to reach these outcomes working by myself. I'm not fully educated in that regard, but the dialogue helps to move forward and support student development. I'm eager to find*

shortcuts. Well, not exactly shortcuts, but a way of preventing myself from having to take large detours in my teaching. (Translated from Norwegian)

The teachers reported gaining an increased ability to profile their students' unique needs for the improved structuring of teaching, better management of focus areas in teaching situations, and a sense that certain typical challenges were more easily addressed from a collaborative, multi-perspective approach.

Profiling the students' individual needs seemed to be an important part of teaching, as such profiling generally helps to structure teaching. The teachers reported that some aspects of that profiling might have been lacking before the project.

> Oboe teacher: *We can get to know the students more quickly [now], and I want to be able to see which areas need the most attention. And the AT is especially good for this; you can get a faster overview of the basic things in the playing, which you can then address more quickly. I think that the AT is a good catalyst for how we think…. I'd say that my teaching has become more structured – I've always found it enjoyable to teach, but it's always been a little bit like, 'What shall we do today?' But now my teaching has become more structured and planned. And that's a good thing.* (Translated from Norwegian)

Managing focus seems to have been a challenge to everyday main-instrument teaching, since many topics and issues must be addressed in such teaching. Having a structure that allows for collaboration seemed to relieve that burden and ensured that important learning topics would be covered.

> Harp teacher: *When you see a student once a week for 60 to 75 minutes and you have to be thinking in terms of music, interpretation, technique, and all of that, there isn't always a lot of time to focus on the body and the physical things. But when we have these group lessons, we can focus on just those aspects. Then, when you have these individual lessons, it goes much faster to say, 'Remember this or that?' This saves a lot of time, which we can then use on other important matters.* (Translated from Norwegian)

A few standard topics seemed to be more easily addressed from the multi-discipline perspective. This perspective exposed the limits of standard narratives and approaches. The quote below from the oboe teacher illustrates how standard explanation methods might stand in the way of the teaching of breathing skills, and how the inclusion of the AT can help to overcome those difficulties.

> Oboe teacher: *[I used to be] working for a whole lesson, attempting to get the breathing down here [demonstrates on his body]. And I've struggled a*

> *lot with this, and I've partly wrongly informed the students. I first got to experience this [new approach] myself and had a new experience…. Once you gain the AT perspective, I feel that you can get a more efficient 'feeling', if I can use that word. We tend to harp on about 'placing the air down there', but the students don't really get that feeling. But with someone who's a good AT teacher, the teacher can manage this in simple ways to place the air there, with just simple things like encouraging more freedom here between the chin and chest…. I didn't use that approach before, because I've learned that you have to do this, this, and this. That's the way traditional teaching used to be done.* (Translated from Norwegian)

The teachers seemed to be engaged with ways of developing 'metaphors' of practicing that would encompass more than simply accruing practice hours.

> Harp teacher: *It's not that you [have to] spend hours practicing your sound; it's just because you suddenly open your body a little … it feels and sounds so simple… it's not always so important how many hours we practice, but how we're practicing.* (Translated from Norwegian)

This concludes the teachers' reports on their own learning. The next section will illustrate what the teachers perceived their students to have learned.

Teacher views on student progress

In describing their students' learning, the teachers (1) acknowledged the diversity of the students' learning trajectories, which unfolded over time; (2) related the pertinence of the new learning outcomes to the core learning of the main instrument; (3) indicated the value of students becoming autonomous learners and observed students gaining the necessary tools towards those goals; and (4) mentioned the importance of students' personal development to support their growth as musicians. As one teacher put it:

> Harp teacher: *We're sowing a seed that will grow; sometimes this happens quickly, but sometimes it takes a little time.… It's very important to have this understanding*. (Translated from Norwegian)

Learning trajectories unfolding over time

As illustrated by the previous quote, teaching has an element of uncertainty and unpredictability. During the interviews and discussions, the teachers acknowledged that they had observed students' learning unfold in differing ways. During Iteration 2, each teacher had each of his or her students involved in the project, which made it easier to see similarities and differences across students.

The teachers acknowledged that some of the students benefited from participating more than others. In general, the benefits seemed to be related to the number of both individual and group sessions the students attended. Some of the students attended fewer lessons than others for a number of reasons, including practical challenges (e.g. from busy and/or incompatible schedules), sceptical attitude towards the AT, or not knowing what the AT was about and thus not prioritising the lessons. In some cases, the students likely experienced learning challenges that they found difficult to overcome.

The teachers reported that the starting phase seemed to be very important, and that ideally this phase should be as short as possible and should occur early on in the teaching process. They felt that only after the completion of a successful starting phase can learning begin to unfold. By the starting phase we mean a phase in which a student has taken a couple of individual AT lessons and started engaging in reflection and sense-making process on how the AT is relevant to their playing. The aspects of continuity and immersion within this engagement also seemed to be an important factor. The following quote was expressed midway through the second semester following the project's onset:

> Oboe teacher: *We came to a point at the end [of the project] where we should have been a few months ago. Now, the last few group lessons have been very interesting. Sometimes we've had a little too much time between lessons, so you've almost totally forgotten things [by the time of the next lesson].* (Translated from Norwegian)

The AT teacher provided some perspective from his teaching experience on how the learning trajectories might unfold:

> AT teacher: *[I have] over thirty years of teaching the AT [and it seems that] some people understand that this [kind of learning] is useful quite quickly, and some need a little more time, and some give up during that long introductory period.* (Translated from Norwegian)

We should keep in mind that learning trajectories are not limited to the duration of a particular course or even a study programme; they also continue to unfold beyond graduation.

> AT teacher: *I have a former student … from an elective course from three or four years ago. She told me a number of weeks ago that she understood little from the elective course but that she was starting to get it now. And a number of students have said the same thing. I have [a student] from a number of years back who essentially said the same: eight years ago he*

was an elective-course student, and he turned up last year for some lessons and remarked that 'Now I feel like I'm beginning to understand this'. (Translated from Norwegian)

Catalyst for attainment of the core outcomes of the main-instrument study

Despite the challenges that emerged from the students' differences, the teachers shared a sense that the students' participation in the project had significantly contributed to their attainment of the core outcomes of the main-instrument study.

> Oboe teacher: *I'm convinced that [the project] has been the reason that all three [of my students] have made big steps forward during the autumn … especially with the one student who's taken the complete number of lessons. Something has happened that I feel I can claim wouldn't have happened if we hadn't had this [project]…. It has to do with getting a sense of warmth in the playing and a free-flowing energy.* (Translated from Norwegian)

The teachers reported that the setup functioned as a sort of catalyst for student learning: the students progressed more quickly, became more open and responsive to teaching, and developed more constructive attitudes towards their studies.

> Oboe teacher: *[The importance of this project] is not just in the specific sense of whether [the students] become a lot better at playing but also that they adopt a new attitude towards their approach to studying and playing…. We've spoken a lot about practicing and how to practice.* (Translated from Norwegian)

In describing his students' progress, the oboe teacher highlighted the importance of the AT and of collaboration:

> Oboe teacher: *One of the students has made a jump that I wouldn't have managed without the AT teacher's help, that's for sure. [The student has] opened up, and major changes have happened … He has a completely different attitude. I would never have managed this alone.* (Translated from Norwegian)

The teachers reported that some of the students had become more focussed and calm, which they saw as being a valuable development.

> Harp teacher: *That [focus] provides much better balance, which means you're a lot more steady when you're playing … there's no hurry, and you're calmer in your breathing, so you can follow the rhythm of the music much better as well*. (Translated from Norwegian)

The teachers also mentioned increased well-being as an important precondition for quality and sustainability of the main-instrument study. Concerns about health and well-being were clearly prevalent in the main-instrument lessons and were intricately related to attaining the core learning outcomes.

> Harp teacher: *Many of [the students] turned up with either inflammation or back problems.… Some had pain issues and could no longer play. But after two to three months, those problems disappeared. They felt so much better in their bodies. And when you feel good and healthy in your body, then you have the desire to practice, so that you can give your best, instead of struggling. If the physical elements are in place, then the other things will become easier and simpler*. (Translated from Norwegian)

Becoming their own teachers: Skills for autonomous learning

Developing student independence and the skills of self-teaching emerged as an important goal of teaching for the participating teachers. They saw three tools as being central to this development: acquiring observational skills, being able to reflect, and having adequate conceptual understandings. Adequate conceptual understanding is generally characterised by a view of the discipline that places inherent complexity and interrelatedness in the foreground and reflects integration. As an example, the activity of playing an instrument has affective, bodily, and cognitive components, and the body as a whole is involved when playing. The teachers highlighted group working settings as arenas where the students got to practice and explore their reflection and observation skills. As a result, the students' seemed to increase their independence through *working together* with teachers and peers.

> Harp teacher: *I believe that the students and I have learned to read the body … to connect how we use the body and how we develop the way we play. [The students] can see that musicians don't just play with their fingers, but that the whole body plays.… It was very exciting in the group lesson to see how they could also observe and see things.… Towards the end it was almost as if they didn't need us; they also kept an eye out to see what was going on. I've always told my students that if they can observe others, if they can find solutions, then it's much easier to do things themselves. And I think that this [advice] was so very important and successful in the course and in the project.* (Translated from Norwegian)

The AT teacher reflected on how the students' way of commenting on each other's playing had evolved over the course of the project to use more integrated and nuanced language:

AT teacher: *The students have become very good at commenting on things and seeing things, and in a way merging these things. Because when we began a number of years ago, the students might have first commented on someone's playing, perhaps remarking that 'When it comes to how you stand or sit, I can't see anything in particular', or 'I saw this and that about your body, but I don't know if it had any bearing on your playing'. Now everything's much more bound together as one, so that commenting has become more of a kind of unified response. This is very positive.* (Translated from Norwegian)

Teacher views on the curriculum

The teachers' statements about the curriculum were largely related to the way they made sense of main-instrument tuition's place within the curriculum. The teachers explored the notion of main-instrument tuition as a result of reflecting on their practices. A few questions emerged. What is the main instrument within a curriculum? How does it relate to the broader context of the curriculum? What are the boundaries of this kind of tuition, and how can it interface with other disciplines?

The teachers reported expanding how they thought about main-instrument tuition beyond the idea of 'this note is too high or too low' (Oboe teacher). The teachers became more aware of interfaces they could have with other disciplines (the AT in particular) and appreciated having the opportunity to expose their students to a richer learning environment where they could explore the full complexity of their given discipline.

Interestingly, the teachers shared a sense that integrating the AT into the main instrument was still within the scope of main-instrument studies and that the AT contributes something significant and foundational to the discipline of music performance itself. They broadly agreed that students should undertake this kind of work as early as possible in their studies.

Harp teacher: *For me this [AT integration] is very, very important. I don't know how we're going to continue with it, but I'm all in. This [integration] isn't a luxury; it's something that should be obligatory for all first-year students, regardless of whether they've just begun, or are in subsequent stages, or are master's students. They should be getting [an integrated AT teaching] in the first year when they arrive at the academy.* (Translated from Norwegian)

This concludes the teachers' perspective part of the two Findings sections. I will now proceed to discuss these findings in light of the literature review, and I will share personal

reflections on the implications the project has had on teaching the main instrument in such a way.

Discussion

The project's participants reported a broad range of learning outcomes as a result of their participation. Based on the interview data, the students' practicing and performing were enriched by their gaining of new perspectives and new tools. They started to see their instrument playing in a new light, thus suggesting that transformational learning had taken place. Unfolding over time as it did, this transformation manifested as the development of understanding through reflective practice and the development of a conceptual toolbox for students and teachers alike. The participants also reported gains in development (both personally and as musicians) and increased well-being.

We observed, however, that this kind of learning required that the students be actively engaged, willing to invest effort, and able to handle potential obstacles and discomfort while learning, since this type of learning challenged several of their previously held beliefs and assumptions. Some of the students in the project needed time to see the relevance of the work to their playing; the processes of making sense of and gaining mastery over certain ideas also took some time. The data suggested that the students in general needed an environment that could support their efforts over time and where their teachers could help them to translate between disciplines; the tight integration of the AT with main-instrument studies over an extended period of time seemed to support the students to attain these learning outcomes and mitigate the challenges.

I will now proceed to the main part of the discussion and will address three topics where the project's findings clash somewhat with commonly held views about main-instrument tuition and the AT. First, I will problematise the view of the AT as a 'bodily' discipline and will argue that a more nuanced conceptualisation is called for to explain the learning outcomes of the project. Second, I will discuss how common views about main-instrument teachers' competence might foster fragmented practices, contribute to teacher isolation, and stifle teachers' competence development. I will argue that designing teaching/learning environments that will allow the emergence of shared practices that are based on shared languages and understandings will mitigate the aforementioned challenges. Third, I will address whether being introduced to the AT in such a way is suitable and relevant for everyone who studies music performance, after which I will conclude the report with pointers for further research.

The need to better understand the 'bodily aspect' and the Alexander technique

Is it sufficient to say that the project yielded the reported outcomes by bringing the 'bodily focus' to main-instrument tuition? On the surface, the answer would seem to be yes, given the common conceptualisation of the AT as a bodily discipline; after all, the AT seems to address things like posture. While the project designers' intention was not to bring in a bodily focus (but rather to inquire about how the AT insights where relevant to the main-instrument pedagogy), two factors point to reasons why people might perceive otherwise.

First, the literature commonly groups a range of disciplines under the umbrella of body/awareness/mindfulness; for example, authors frequently mention the AT, Feldenkrais, and yoga (to name just a few) in the same sentence. To make such a grouping possible, the disciplines need to be boiled down to their lowest common denominator, which then loses any nuances and actual insights these disciplines otherwise might provide. Because these disciplines do have a certain conceptual and sometimes historical overlap among them, this grouping seems to conveniently simplify the field; the project's findings suggest, however, that this very simplification obfuscates the essential aspects of the disciplines – the aspects that make a difference.

Simplicity is of course useful for making decisions about, say, the curriculum. When curriculum designers face the challenge of designing comprehensive curricula and extra-curricular offerings, simplicity can offer them a way to tick off a box (so to speak) on the bodily focus. We often assume that the students will figure out which approach will work for them and that they will be able to employ that approach in their instrumental practice, after they have tried out some of the other disciplines. We do little to inquire what exactly the students are learning through these disciplines or what actual insights these disciplines offer, beyond their obvious commonalities of having something to do with the body.

The second factor for why the AT might be perceived as a bodily discipline is that the project's informants commonly referred to the word 'body' in the interviews. The bodily focus seemed to enter the main-instrument tuition as a result of the AT, as though the body has not been present in such tuition before: the AT teacher manipulates the body of a student, while the student's peers observe bodily changes. How is this *not* about the body?

A few questions need to be asked at this point. What existed in main-instrument tuition before the AT unveiled the body? And how can the appearing of the body be understood and explained? Because it is beyond the scope of this report to thoroughly investigate these issues, a few cursory remarks will have to suffice.

First, because we need to clarify what is meant by the 'body', I will proceed with a further question: In what way is playing an instrument *not* a bodily discipline? In other words, if the AT brings the body into instrument tuition, then how was it absent to begin with? Taking a starting point in phenomenology (Gallagher, 2012; Heidegger, 2010; Merleau-Ponty, 2013) and the perspective of embodied cognition, we cannot escape the body's constant presence; we also must acknowledge the body's role in shaping any activity. In shaping an activity, the body is not a mere instrument that is subservient to some higher-order control system. Activities are initiated and performed by bodies. Bodies take care of the necessary cognition and coordination; it is the body itself that constitutes its own control system. 'We are bodies' would be more correct to say than 'We have bodies'. This perspective is a starkly different view from the dualistic mind/body paradigm, where the body is often portrayed as a slave to some ephemeral mind.

Making a distinction between an object and a subject might be pertinent, or that of a third-person and first-person perspective. Looking from the outside (from the third-person perspective), the body appears to be a mechanical system. To understand that system, we can break it down into constituent parts. The first-person perspective, on the other hand, looks from within the body: this perspective sees the body as a subject (or more precisely it sees the body as itself; or its-self). These two understandings of the body are very different. An arm, in an objective sense, is an abstraction, a common label for the things that are attached to the body, but *my* arm is something I can raise, that I can perform an action with. One is inanimate; the other is lived.

To bring the matter closer to what we've discussed in this report, we might investigate the idea of posture. Looking from the third-person perspective, we see a certain configuration of bodily parts. We use the noun 'posture' for the totality of this configuration. From the first-person, lived perspective, 'posture' necessarily becomes a verb: 'I posture', 'the body postures'. While it would be more correct to use the verb 'pose': 'I pose', 'the body poses', such usage fails to activate the noun whose definition implies a static worldview against which I am arguing. Using 'posture' as a verb is meant to imply the

underlying movement, directionality and continuity of what it is that a body does. This view opposes looking at what a body does as a set of discrete spatial and temporal positions which a body moves to and from. Referring to posture as a set of discrete body positions raises a question of what happens in between those positions, or postures. What position is the body in between the positions? A static, mechanistic view doesn't account for this. Posture should thus be thought of as a continuous action[1] of the body. This is a subtle but very important distinction, in my view.

Returning to the question of 'In what way is playing an instrument *not* a bodily discipline?' if we take the phenomenological stance, then we have to concede that the question itself is built on a wrong premise. Just like every other activity, playing an instrument is by definition a bodily, or embodied, discipline. This conclusion brings us back to the issue of grouping of bodily disciplines. We have to concede that the label 'bodily' should be applicable to every human endeavour, discipline, and activity; from this it follows that the 'bodily'-label is useless for referring to only a subset of human activities.

What are we left with, then? Dropping a grouping category muddles the waters and requires new criteria for understanding instrument playing and the AT. If we define both the instrument playing and the AT as bodily disciplines, then what is the relationship between them? If the AT cannot bring the body into the instrumental pedagogy because the body was there all along (even though overlooked and disappearing into the background), then what exactly does the AT bring?

More research needs to be done along this avenue, but some of the project's findings point to the AT providing a different lens (or perspective) of looking at instrument playing. This lens seems to acknowledge the body as an 'actor' that is situated in, and interacts with, its environment, rather than as a mechanical tool steered by an ephemeral mind in a non-temporal vacuum. Furthermore, the perspective emerging in the light of the AT also offers the insight that the embodied activity is habitual, i.e. developed over time and influenced by one's assumptions and preconceptions, as well as environmental factors. The project's respondents reported that learning about how their activities were habitual was an important part of their learning process. A further related insight was that the way activity is performed is malleable. Activity is malleable because we can identify the layers of 'doing'

---

[1] The terms 'action' and 'activity' are used interchangeably in this report.

within an activity and manage them (so to speak). We can add new layers of 'doing' to affect an activity (to sometimes cover and hide other layers), but we can also subtract the layers that previously might have appeared useful but that are not so anymore. This process of subtraction tidies up the fabric of activity from sometimes-chaotic interactions between the layers of 'doing'. To clarify, it is not necessarily an *absence* of a certain skill or movement that might be preventing someone from performing an activity (say, playing an instrument) in a desirable fashion, but rather the *presence* of something in the habitual pattern that stands in the way. Typically, the students enter conservatories as already quite competent performers with many layers of assumptions, habits and ways of going about things which the AT helps to explore, assess and, often, address.

To sum up, the 'bodily disciplines'-label that the AT is often grouped under loses its grouping power once we acknowledge that every activity (and by extension playing an instrument) is embodied. In the common understanding of music performance, the presence of the body and the mode of its operation are either unaccounted for or are pushed out into the periphery, where the body plays a mechanical role. Therefore, I would argue that acknowledging, and transitioning into, the phenomenological, embodied, enacted, habitual, and malleable perspective helps to illuminate the relationship between the AT and instrument playing in music performance. This perspective provides sufficient room to encompass the range of the informants' experiences from this project.

The second point related to how the body 'appears' in instrumental tuition/learning can be elucidated from a learning-theoretical perspective. In the interviews, the informants referred to the development of their attitudes and understandings, which we may roughly trace along the lines of the previous point about the embodied nature of activity. It is through changes in participants' understanding, we could thus say, that the body 'appears' in their playing. To say that the body appears as a result of the AT being used is not the same as saying that the AT brings a bodily focus.

The AT in this context can be thought of as a catalyst for the development of understanding and a conceptual shift that allows the body to appear in music performance in an embodied, enactivist sense. The AT 'unveils' the body. In this I would argue we have observed transformative learning taking place in this project.

Given the informants' utterances and my own experience of teaching, I would argue that the way the body appears in music performance in this sense is qualitatively very

different from a mechanistic perspective. The body-as-an-actor and the body-as-an-acted-upon-object are very different things altogether, and this distinction is unveiled to the students through the observational and reflective processes stimulated and supported by the AT and the configuration of the learning environment.

We need to develop a better understanding of the students' developing understanding and accompanying processes as we observe the students moving along different learning trajectories. The data from this project suggests that some of the students progressed more quickly, while others encountered obstacles. While the student-respondents who participated in one iteration indicated that some transformation had occurred, a more elaborate picture has emerged from the participants who participated in two or three iterations. Future researchers might find it helpful to explore the more longitudinal aspects of this development, since a relatively small number of students went through two or three iterations in the project; also, further exploration could include the inquiry into the content and the nature of knowledge within the different learning phases.

Teachers' competence, shared practices, and the curriculum

The teachers who participated in the project reported a shared sense that this new way of teaching had revitalised their teaching practices. They acknowledged the blind spots in their competence and they were happy to collaborate with teachers from other disciplines, which supports Gaunt's (2008) finding about conservatory teachers' 'thirst to learn' (p. 238).

The main-instrument teachers reported increased efficiency in their teaching practices and appreciated the help from the AT teacher in managing the complexity of teaching their discipline. The management of focus areas within teaching situations was facilitated by the adoption of the collaborative model, since the teachers felt they could send their students to the AT teacher to address certain topics, and later follow up on what they had learned back in the instrumental lesson. The ability to interact with the AT specialist in the group sessions made it possible to integrate the subjects in a way that was 'barely perceived as embodying a separate discipline' (Farruque & Watson, 2014, p. 328). The teachers perceived that their students had progressed towards becoming autonomous and independent learners; they further reported developing a wider range of rich and

flexible relationships between themselves and their students, thus moving from the old master-apprentice relationship to more facilitative relationships, depending on the situation.

Both the student and teacher perspectives indicated that the main-instrument teachers had limited competence related to the bodily aspect. The teachers reported that this perspective had been absent in their own studies, while the students indicated that they perceived that the ways in which their teachers taught and talked about these matters were based on the teachers' individual, subjective experiences and understandings. How can we make sense of this apparent gap in competence?

I would argue that certain underlying assumptions are at play here; these assumptions relate in particular to (1) the thematic content of main-instrument tuition, (2) the instrument teachers' competence, and (3) how that thematic content is related to the teachers' competence. I would rephrase these points as questions. First, what focus areas are assumed to belong to main-instrument study? Second, what do we assume about the instrument teachers' competence, and how does this assumption relate to our assumptions about topical areas?

The part of the answer to the first question that we are concerned with here is that the body seems to be a part of the thematic landscape of the main instrument study in some way; it is not entirely clear what role the body plays there and how that role of the body should be treated from the subject-pedagogical point of view, but there seems to be an agreement that addressing the body is relevant to the main-instrument tuition. In the section above, I have presented my account of the body's presence and 'appearing' in the main-instrument study based on the interview data and insights from phenomenology: the body is an ever-present reality of instrument playing that is unveiled to the student during the course of tuition[2]. This unveiling might vary from none at all (i.e. no mention of the body) to an elaborate addressing of the body. Both the level and the nature of the unveiling of the body is subject to an individual teacher's preferences, interests, and pedagogical judgements of student needs and available resources.

The teachers in this project reported that before the project, they would often talk about similar things in reference to the body, although in slightly different ways and using

---

[2] I am not arguing that one conceptualisation of the body is better than others: they are complementary. I would argue, however, that we often fail to go beyond a single perspective (one that is often mechanistic) when thinking about the body-related matters.

different words, which confirms the assumption of the body as a theme in tuition. Furthermore, this illustrates the teachers attempts to unveil the body to the students within the boundaries of their specific competences and paradigms.

On to the second question: What do we assume about the main-instrument teacher's competence, and how does that assumption relate to the acknowledgement of the body's presence? This is a complex matter to disentangle, since it touches on several complex and contentious issues.

First, unveiling the body in an actual teaching situation has various ethical issues that we need to be aware of and that must be addressed. Looking at, talking about, and touching the body are sensitive topics and thus should be treated with care, respect, and consent. Second, it is unclear how the acknowledgement of the body plays a role in the process of becoming a good musician. While the findings of our project suggested that certain conceptualisations of the body and modes of its unveiling seemed to advance the students' development as musicians, further research is required to shed more light on this issue. Third, the assumption of a master instrument teacher who already knows everything seems to be prevalent. Conveniently, this assumption allows us to avoid questioning teachers' competence in the first place (in particular, about the body), since the teacher is supposed to know everything to begin with.

Investigating the boundaries of the competence of main-instrument teachers might be suspected to be a contentious issue, however, as we saw from our findings the teacher-informants willingly acknowledged limits to their competence, effectively refuting the all-knowing-teacher assumption. It is not to say that the teachers didn't perceive this assumption at work, shaping their practices. The teachers talked about a tension between their perception that the body was important, their attempts to address the matter in teaching (since they assumed they were supposed to be competent) and the results of these attempts that often did not yield the intended outcomes.

The competence gap thus only emerges if we start with an assumption of an all-knowing teacher. Once we drop it and tune in with the actual teachers, this 'gap' becomes a fertile field for collaboration and learning.

While it is convenient to maintain the all-knowing-teacher assumption and to try to fill that gap with other curricular offerings, the project's findings indicate that doing so will

not solve the issue. From the students' perspective, that gap remains unbridged by the supporting subjects, and they still perceive the curriculum as being fragmented.

We seem to have two options for further development: either all instrument teachers should become better versed in understandings of the body and methods of addressing these matters, or we should drop the assumption of an all-knowing teacher and move towards the distribution of competence, i.e. sharing competence among different members of the staff. A response to the latter option might be that distributed competence is already present in a typical conservatory, given the different subjects that attempt to cover different topics. But this idea is refuted by the literature – which often discusses fragmented specialist knowledge, studio isolation without knowledge sharing, and curricula being perceived as fragmented – as well as the project's findings. Furthermore, a distributed system is typically characterised by the communication of its components, and communication between the components seems to be lacking in the practices within conservatories. For communication to occur, the components of a distributed system need to agree on the same protocols or languages of mediation. The project's informants referred to an emergence of shared languages and understandings as a result of their participation, which I take to indicate the absence of shared languages prior to their participation. The students referred to their main-instrument teachers as translators of the AT into the language of their main instrument, again invoking the need for shared understandings and paradigms and the ability to 'translate' between the subjects.

Once we make the move into distributed competence, the notion of a practice, or a shared practice, would seem to be better able to encompass the emergent way of thinking and describe what is actually going on. In addition to our talking about the explicit and tacit competence of individual teachers, the relationships between participants –the ways through which competence is embedded, communicated and learned – will then become equally important aspects. The participating teachers reported raising their competence in the sense that they had developed their factual knowledge and evolved their understandings and ways of thinking about the matters that the AT illuminates. But I would also argue that the instrument teachers appear to have learned to participate in a new practice, since they had to negotiate understandings, formulations, and disciplinary boundaries with an AT teacher. Therefore, in addition to increasing competence in knowledge, the teachers have developed another kind of competence – participatory competence.

In a shared practice, participants learn to use the resources available to them within the practice. By 'resources' I am particularly referring to other participants' competencies, but also any physical things and conceptual tools that are available. For example, in order to tap into the resources constituted by the AT teacher's competence, an instrument teacher needs to learn an 'interface' to that competence, and we can think of language as one form of an interface; the same applies the other way around, from AT teacher to instrument teacher. The students also participated in this practice with their own competence, which the teachers could tap into. Through using these resources, the data suggested, the teachers started to think of their teaching differently. The students' learning through participation in the practice may be described in a similar manner once they become more proficient in using the interfaces to tap into other participants' knowledge and competence.

The transition to thinking in terms of shared practice is not without its problems. In addition to the potential challenges of negotiation between participants, questions of ownership and responsibility emerge. Who owns this emerging practice? And who is responsible for making the students into good musicians?

If we start from a traditional one-on-one instrumental teaching practice, this transition and opening up of a practice can amount to letting a stranger into the 'secret garden'. Typically, the ownership and the responsibility are balanced on a continuum between the main teacher (or the master) and the student. In master-centred environments, the teacher might assume most of the ownership and responsibility, while student-centred environments offload the ownership and responsibility onto the students.

The challenge might arise when a teacher from a different discipline enters an established practice. The project's findings do not indicate that such challenges arose; instead, they point to the participants' fluid adaptation to the new practice. But this situation might have arisen because of the relatively small number of teachers involved, or because of a tacit project's goal that the AT and the main-instrument teacher would be co-responsible for making the students into good musicians.

The project's findings indicate that the organisation of tuition in this way and the emergent practice mitigated studio isolation, helped to bring to light the assumptions that typically cause this isolation and alleviated the perceived lack of integration between different subjects. Acknowledging the boundaries to the main-instrument teachers' competence opens up possibilities for the development of new learning environments that

will contribute not only to student learning but also to the professional development of teachers.

The findings do not indicate that because the understanding became shared and because teaching was organised in similar ways that the instrument teachers started to teach in the same way; the instrument teachers continued to teach in their own unique ways, but now with a more aligned understanding with their colleagues. By enabling collaborative and interdisciplinary teaching in this project, we were able to embed knowledge development and sharing within teaching/learning practices. Collaboration and knowledge development were then not something that the teachers had to do on top of their usual practice but became a part of that practice.

The project's findings suggest that shared practices did emerge (and new ones seem to continue to emerge, even in the aftermath of the project). But it is important to acknowledge that the development of practices doesn't happen out of thin air. It was the *design* of the setup – and, more importantly, making available the necessary material *resources* (in terms of AT teaching hours) – that provided the necessary framework for the shared practices to evolve around. Without the design and the resources, no amount of teacher creativity or initiative could have led to the emergence of practices (and thus the learning outcomes).

We cannot make practices happen out of thin air, but we can design for an environment where a certain practice will be more likely to develop. The *curatorship* of a learning/teaching environment is thus an important task for curriculum developers. The project's findings indicate that the setup enabled the emergence of a shared practice around a curated set of insights and through reflective, student-active forms of teaching. Managing complexity through informed choices of what to offer – rather than including everything that might seem interesting – requires research, but also shared understandings and shared language.

What kinds of learning environments should we design? What kind of practices should we foster, especially in the face of the constrained resources that are so familiar to conservatories? This question is, of course, up for discussion. The Integrated Practice project discussed in this report only provides one humble option, but one that in the view of the project participants was an effective one. With any luck, the proposed blueprint for a learning environment can be further tested and developed in other institutions.

To conclude this section, I would like to briefly remark on the relationship between the emerging shared practices and the formal curricula. This section started with the project participants acknowledging how their perceptions of what they thought a main-instrument teacher should be competent in were not met by practice. A tension between assumptions and actual practice was exposed as a competence gap. I would like to embark on a brief exploration of how those assumptions are embedded in and later *perpetuated* by curricula. This will bring us back after travelling the full circle to the starting point of this section regarding the assumptions about the instrument teachers' competence.

The curriculum structures the teaching and learning that occur. It determines the resources that are made available at an institution and models the relationships between participants (teachers, students, and administrators) as well as the underlying subjects it encompasses. It mediates the tacit and implicit meanings of the knowledge culture of a discipline that the curriculum itself aims to reproduce and re-create. Curricula communicate what is being done within a study programme or a subject to the outside world, thus exposing assumptions about the nature of the discipline.

So, the curriculum is structured by assumptions about the discipline, but it also embodies and perpetuates those assumptions, thereby playing a structuring role towards the very practices that generated the assumptions in the first place. While it is common for curricula to be somewhat decoupled from enacted practices, they nonetheless define the playing field in which the teaching/learning practices unfold.

The main reason I bring up the topic of curriculum is because of two unresolved issues from the findings that might help to illuminate the hidden assumptions that first shape, and then are projected by, the curriculum. The first issue is that some of the student participants claimed that they had not been introduced to the body in their studies. Second, the teachers reported that they were eager to learn and that they felt positive about developing their teaching practices. There is the possibility that both points can be written off as local phenomena that only took place within the context of where the project took place. Positive feelings about developing teaching practices might be local phenomena because of particular characteristics of participating teachers, or due to particularities of the project's setup that the participants found interesting. Regarding the first point about the body, the analysis of these findings is quite interpretative. More specifically, within the

students' statements I implicitly read 'the body' in the sense of the 'subjective body' discussed earlier, which might not be what the informants are referring to.

Still, these seem to be important issues to be investigated. What does a student mean when she says that 'We're not introduced to the body in our conservatory'? This statement seems to make little sense, because at least one of the students who made this claim had taken the obligatory first-semester course on introductory physiology. Following from my previous points, I would thus argue that the body was either not unveiled through the practice that unfolded through the enactment of the curriculum, or it was unveiled in such a way that the participants did not perceive it to be an unveiling in a meaningful and relevant way. Although the data on this issue is scant, the enactment of the formal curriculum seemed not to have yielded the learning outcomes that it was supposed to yield. I believe that the assumptions about the conceptualisation of the body are at play in this case. A relevant curriculum-related question to ask is: How could a curriculum reflect and facilitate the development of understanding within the paradigm of embodiment?

The point regarding the teachers' 'thirst to learn' presents an interesting contrast to the assumption of an all-knowing teacher, or master. Is it possible that the structure of the curriculum projects a certain picture of an instrument teacher that is no longer accurate, or maybe was never accurate to begin with? Is it possible that this projection has led to studio isolation? While we currently cannot answer these questions with the data available from the project, these questions do seem to be important to pose nonetheless, as they illustrate the scope of implications that the development of shared practices might have.

So, if a curriculum fails to unveil important learning and is causing isolated practices through its embedded assumptions, then how should we respond? One response to failing to achieve learning outcomes would be to attempt to constructively align the curriculum – at least its learning outcomes and teaching/learning activities. While an important pursuit in its own right, this strategy would require the alignment of many perspectives: deep insight into the disciplines that it encompasses, consensus among stakeholders, and adherence to the outside constraints that curricula are subject to. This mixture is important, but it often fails to capture nuances in favour of generality, and, as we've seen, nuances are very important.

But I think it is important to pursue the idea of alignment further and to ask: What might constitute such an alignment in practice? The project's findings suggest that the students had attained a range of learning outcomes that had not been yielded by previous

practices. Thus, I would argue that a shared practice is the process through which alignment happens. In this project, the alignment was embedded in, and enacted by, the shared practice. The alignment took place through the sharing of language and understanding. Illuminating the assumptions about the nature of music performance and the expectations of teachers' competence has prepared the groundwork for shared practices to emerge.

General applicability of the approach: Is this for everyone?

As previously mentioned, the findings indicate that some of the students experienced more learning than others. Many of the students reported experiencing confusion and some discomfort as they grappled with the AT, while some reported having initial scepticism about the technique that in a few cases didn't fade away. This raises the question of whether integrating the AT into main-instrument tuition is appropriate as a general approach for every student.

The project's findings suggest that the answer is both yes and no. To start with the latter, as seen from the findings, a considerable investment on the learner's part is necessary. Musicians need to become more attentive and willing to explore and question their assumptions about how their playing should be done. While in many cases these are desirable developments, they might not be relevant in certain situations, or other issues might be more urgent to address (the discipline is very broad and complex, after all). There is the possibility that learners with a certain set of characteristics will be more likely to derive benefits from the approach than others. It is also possible that at some stages of individual learning progression, it will be easier to see the approach's relevance than at other times. The framework that the AT proposes might for some students be conceptually very far from their beliefs (and the gap in understanding so large) that trying to bridge the gap would further increase their confusion and discomfort and thus in general would need to be avoided. The sense of identity loss, as reported by some of the informants, might also be a reason not to engage with the AT, which points to the conclusion that the approach might not be the best for every situation.

On the other hand, if we subscribe to the paradigm of embodiment and to the idea that all human activity is habitual and enacted, then the insights and principles of the AT should not raise many objections about whether they are universally applicable. As reported

in the Findings sections of this report, one of the main insights the students gained was that of the prevalence and impact of habit in doing something, such as brushing their teeth or playing an instrument. The students commented on this idea regardless of their initial attitudes towards the AT, or how much they had reported to have learned. To recap one student's quote:

> Horn student 1 (IT1): *[What I learned] was these tiny tendencies that we all do … I've never thought about [those tendencies] before, and then once I noticed them in others … [I saw that] everyone was doing [these things].*

So, while investigating and exploring our habits and assumptions might not be the way to go in every situation, we also have to conclude that habits and assumptions do play a constant role in what we do, and in that sense, the AT might be said to be universally applicable, since it explores these very things.

One objection to taking an integrated approach might be that the AT may not be a good fit for an individual instrument teacher's teaching practice. While more research is needed on this notion, the project's findings point to the different ways in which teaching practices successfully responded to the integration. Doing so required an initial effort on the main-instrument teachers' part to do some work to integrate the AT perspective to their practice in a meaningful way, both to their students and to themselves; this investment, however, seemed to pay off when the teachers reported that they appreciated the competence development and the availability of new tools in their teaching.

It is thus up to the judgement and discretion of the reader to take a stance about the importance and relevance of such an exploration in music performance studies. Why should we bother? As the project's findings illustrate, gaining the learning outcomes outlined in this report took time and sustained effort, as well as a developed ability to tackle uncertainty and confusion. With the world's ever-increasing number of different methods and general overload of information, I would argue that leaving students alone with the judgement about which method to choose (as well as leaving them the tasks of the sustained effort and focus over time that are required to acquire an in-depth understanding of that method) is unfortunate and seems to too often leave students stuck in their learning journeys. The curriculum designers therefore play an important role as the curators of the teaching/learning environment. Given the prevalence of AT courses in conservatories

internationally, it seems reasonable to propose the further development of an integrated approach and a further exploration of the actual insights that the AT offers for instrument pedagogy. Further research will be necessary on how we can understand the different learners' trajectories of the students, and how different teaching practices respond to integration.

Further research

To conclude this report, I will outline five points that might be relevant for further researchers in light of this project's findings. First, an even better understanding of the AT and its insights is necessary to achieve, as well as a further elaboration on the habitual nature of human activity. How can the body as 'actor' be understood? Would it be pertinent to define the AT as a study of habit, or more precisely a study of embodied habit?

Second, we should develop an understanding of music performance as an embodied discipline. What about the AT is relevant to main-instrument study? In what sense is playing an instrument a bodily discipline?

Third, the processes of learning need to be further investigated. How can the learning processes of learning the AT be characterised? The project's findings indicate that students typically encounter practical and conceptual obstacles. How can learners be supported in their pursuits in order to overcome these barriers? How can the transformation of understanding be understood, and what constitutes that transformation?

Fourth, the characteristics of the learning environment should be explored. What characterises the learning environment where these learning outcomes are likely to emerge? A few characteristics for exploration include teacher qualities, student qualities, and the prevalence of resources, such as people, materials and rituals, and relations between them. What factors bring about (or prevent) learning outcomes? What characterises the participating teachers and students? What makes such a practice work, and what stands in the way?

Fifth, researchers should explore the interplay between shared practices, curriculum design, and institutions as a whole. What are the implications for curriculum design? What are the implications of the approach on an institutional level? What are the benefits/shortcomings and opportunities/challenges of an institution-wide implementation?

What institutional limitations and cultural obstacles would a collaborative, interdisciplinary approach face?

During the course of this project, we saw an expansion of the notion of main-instrument studies and what constituted these studies. We hope this report contributes to a better understanding of music performance and its challenges, and that the proposed common points for shared practices will provide the impetus to support the teachers to collaborate across disciplinary boundaries and to evolve shared practices.

Acknowledgements

Looking back at the time during which the project took place I am struck by how large an undertaking this has been. The project documented in this report would not have been completed without the efforts, support and commitment of several fantastic people.

First and foremost, I would like to express my deepest gratitude to Stephen Parker whose passion for, and unrelenting commitment to student learning and the development of shared practices has made this project at all possible. He has immensely contributed to every aspect of the project.

I would also like to thank Matz Pettersen and Isabelle Perrin for their insights, vision and contributions throughout the project.

I greatly appreciated the support from Jon Helge Sætre and John Vinge during the documentation process and preparation of this report.

The fact that this report has been written at all is very much due to the encouragement from Harald Jørgensen and Ingrid Hanken to engage with writing in the first place, and their support when I had taken my first steps.

I am indebted to Morten Carlsen who acknowledged and accepted my early attempts to think in a systematic manner, even though my first attempts to present those thoughts were messy and barely intelligible. His support gave me the confidence to proceed and to attempt to clarify things.

I would like to thank all the students and teachers who had participated in the project for their contributions and open-mindedness to engage with a new practice.

Last but not least, my partner Rachelle Esterhazy has patiently supported me emotionally and intellectually throughout the project. Her insights and constructive criticisms pushed my thinking forward for which I am deeply indebted to her. Her practical help writing this report was invaluable.

References

Association of European Conservatories. (2010). Instrumental and vocal teacher education: European perspectives. Retrieved from https://www.aec-music.eu/userfiles/File/aec-handbook-instrumental-vocal-teacher-education-european-perspectives-en.pdf

Burwell, K., Carey, G., & Bennett, D. (2017). Isolation in studio music teaching: The secret garden. *Arts and Humanities in Higher Education*. 0(0), 1–23. doi: 10.1177/1474022217736581

Carey, G., & Grant, C. (2014). Teachers of instruments, or teachers as instruments? From transfer to transformative approaches to one-to-one pedagogy. In G. Carruthers (Ed.), *Relevance and reform in the education of professional musicians*, pp. 42-54. *Proceedings of the 20th International Seminar of the ISME Commission on the Education of the Professional Musician (CEPROM)*, 15-18 July 2014, Belo Horizonte, Brazil. Retrieved from the authors' ResearchGate page

Carey, G., & Grant, C. (2015). Teacher and student perspectives on one-to-one pedagogy: Practices and possibilities. *British Journal of Music Education*, *32*(01), 5-22. doi: 10.1017/S0265051714000084

Carey, G., & Grant, C. (2016). Enacting transformative pedagogy in the music studio: A case study of responsive, relational teaching. *ISME Commission on the Education of the Professional Musician*. In *Proceedings of the 21st International Seminar of the ISME Commission on the Education of the Professional Musician (CEPROM)*, 20-23 July 2016, Saint Andrews, Fife, Scotland. Retrieved from the authors' ResearchGate page

Carey, G., Harrison, S., & Dwyer, R. (2017). Encouraging reflective practice in conservatoire students: A pathway to autonomous learning? *Music Education Research*, *19*(1), 99-110. doi: 10.1080/14613808.2016.1238060

Carlsen, M. (2015). Practice as self-exploration. In F. Pio and Ø. Varkøy (Eds.) *Philosophy of music education challenged: Heideggerian inspirations*, pp. 229-242. New York: Springer.

Clark, T., Lisboa, T., & Williamon, A. (2014). Learning to be an instrumental musician. In I. Papageorgi and G. Welch (Eds.), *Advanced musical performance: Investigations in higher education learning*, pp. 287-300. Farnham: Ashgate.

Creech, A. (2014). Understanding professionalism: Transitions and the contemporary professional musician. In I. Papageorgi and G. Welch (Eds.), *Advanced musical performance: Investigations in higher education learning*, pp. 349-364. Farnham: Ashgate.

Creech, A., & Gaunt, H. (2012). The changing face of individual instrumental tuition: Value, purpose and potential. In G. E. McPherson and G. F. Welch (Eds.), *The Oxford handbook of music education*, vol. 1, pp. 694-711. Oxford: Oxford University Press.

Eastop, P. (2001). Teaching self-teaching. In C. Paechter, M. Preedy, D. Scott and J. Soler (Eds.), *Knowledge, Power and Learning,* pp. 128-134. London: SAGE. Retrieved from https://eastop.net/classical-hornplaying/teaching-self-teaching/

Ericsson, K. A., & Chamess, N. (1994). Expert performance: Its structure and acquisition. *American Psychologist*, 49(8), 725-747.

Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, *100*(3), 363-406. doi: 10.1037/0033-295X.100.3.363

Farruque, S., & Watson, A. H. D. (2014). Developing expertise and professionalism: Health and well-being in performing musicians. In I. Papageorgi and G. Welch (Eds.), *Advanced musical performance: Investigations in higher education learning*, pp. 319-332. Farnham: Ashgate.

Fuks, L., & Sundberg, J. (1999). Using respiratory inductive plethysmography for monitoring professional reed instrument performance. *Medical Problems of Performing Artists*, *14*(1). Retrieved from https://www.sciandmed.com/mppa/journalviewer.aspx?issue=1097&article=1077

Gallagher, S. (2005). *How the body shapes the mind*. Oxford: Clarendon Press

Gallagher, S. (2012). *Phenomenology*. 2012 ed. London: Palgrave Macmillan.

Gaunt, H. (2004). Breathing and the oboe: Playing, teaching and learning. *British Journal of Music Education*, *21*(3), 313-328. doi: 10.1017/S0265051704005819

Gaunt, H. (2007). Learning and teaching breathing and oboe playing: Action research in a conservatoire. *British Journal of Music Education*, *24*(02), 207. doi: 10.1017/S0265051707007425

Gaunt, H. (2008). One-to-one tuition in a conservatoire: The perceptions of instrumental and vocal teachers. *Psychology of Music*, *36*(2), 215-245. doi: 10.1177/0305735607080827

Gaunt, H. (2010). One-to-one tuition in a conservatoire: The perceptions of instrumental and vocal students. *Psychology of Music*, *38*(2), 178-208. doi: 10.1177/0305735609339467

Hallam, S. (2014). Developing and maintaining motivation in advanced music performers. In I. Papageorgi and G. Welch (Eds.), *Advanced musical performance: Investigations in higher education learning*, pp. 333-348. Farnham: Ashgate.

Hallam, S., & Bautista, A. (2012). Processes of instrumental learning: The development of musical expertise. In G. E. McPherson and G. F. Welch (Eds.), *The Oxford handbook of music education*, vol. 1, pp. 658-676. Oxford: Oxford University Press.

Hanken, I. M. (Ed.). (2016). *Å lære sammen: Forsøk med gruppeundervisning som supplement til individuell hovedinstrumentundervisning*. Norges musikkhøgskole. Retrieved from https://brage.bibsys.no/xmlui/handle/11250/2378793

Heidegger, M. (2010). *Being and time*. Albany, NY: SUNY Press.

James, I. (2003). Survey of orchestras. In R. Tubiana and P. C. Amadio (Eds.), *Medical problems of the instrumentalist musician*, pp. 205-211. London: CRC Press.

Johansen, G. G. (2018). Explorational instrumental practice: An expansive approach to the development of improvisation competence. *Psychology of Music*, *46*(1), 49-65. doi: 10.1177/0305735617695657

Jørgensen, H. (2015). *Teaching about practising*. Oslo: Norges musikkhøgskole.

Jørgensen, H., & Lehmann, A. C. (2012). Practice. In G. E. McPherson and G. F. Welch (Eds.), *The Oxford handbook of music education*, vol. 1, pp. 677-693. Oxford: Oxford University Press.

Merleau-Ponty, M. (2013). *Phenomenology of perception*. Oxford: Routledge.

Nerland, M. (2007). One-to-one teaching as cultural practice: Two case studies from an academy of music. *Music Education Research*, *9*(3), 399-416. doi: 10.1080/14613800701587761

Shoebridge, A., Shields, N., & Webster, K. E. (2017). Minding the body: An interdisciplinary theory of optimal posture for musicians. *Psychology of Music*, *45*(6), 821-838.

Watson, P. J., & Hixon, T. J. (1985). Respiratory kinematics in classical (opera) singers. *Journal of Speech, Language, and Hearing Research*, *28*(1), 104-122. doi: 10.1044/jshr.2801.104

Wolfe, J. (2018). An investigation into the nature and function of metaphor in advanced music instruction. *Research Studies in Music Education*. 1-13. doi: 10.1177/1321103X18773113

Appendix A: Interview guidelines for students in Iteration 1 (March 2016)

The Alexander technique (AT) as a method for teaching breathing

The questions in this appendix have been edited very lightly for clarity in English; the original transcripts are available upon request.

Pre-interview talk

This is not an exam; I'm not testing what you've learned. I'd like to know more about your experiences.

Background

Before you started taking the AT lessons this fall, what previous experience did you have with the technique?

How did you feel about taking the AT lessons as part of the main-instrument lessons before we started?

Was it clear from the beginning what you would learn during the AT lessons?

What approaches have you previously tried for breathing training?

Influence and transformations

Tell me about the way you scheduled or organised your lessons with [the AT teacher]. Did you try to have all the lessons as often (or as far apart) as possible? What did the timing depend on?

How did you perceive the frequency of the lessons? Were they frequent enough, too often, too infrequent? How would you do things differently?

And the number of the lessons? Was that a good number, too many, too few?

How would you describe the content of the AT sessions? What happened during these sessions?

Have the things you do during your daily practice changed as a result of taking AT lessons? If so, how have they changed?

Do you feel differently now when you perform as a result of taking AT lessons? If so, how?

Have you noticed anything in regard to your breathing, both in terms of practice and performance?

Have you noticed any changes in your confidence, or the feeling 'Yes, I can do this'? And if so, could you describe those changes?

What about the sense of freedom? Have you noticed any changes to your sense of freedom, either physically or mentally?

After taking several AT lessons, have you noticed any changes outside of the practice room? [In case the interviewee needs prompting: sitting, moving, or walking.] Could you describe these changes?

Have you noticed any changes besides the physical changes? Any changes in thinking, for example? In the way you perceive the world?

Imagine you're playing your horn now. [May even get into the position of playing.] Could you show me which parts of your body you feel are involved in playing your instrument? What would have been your answer before you started the AT lessons? Do you think this has changed as a result of taking these lessons? What has changed?

Insights

What would you say were the most important things you learned from working with the AT?

What insights about yourself have you had during and after taking the AT lessons?

Was there anything that was difficult to understand, or that you found strange or surprising?

Method of working

The idea behind using the AT as a part of horn teaching was to try an approach where the teachers of both subjects [i.e. horn and AT teaching] would work together, as opposed to having the AT as a side subject. How did this setup work for you?

Have you discussed your AT work outside of the lessons with your peers? If yes, what was the content of such conversations? If no, what do you think prevented you from discussing this work?

We worked on a few AT-related topics during the group lessons. What insights have you gained from the observation of your peers working on the AT principles?

Suggestions

Would you like to continue working with the AT? If so, what would be the most useful and productive way of doing that?

If you were asked to help in restructuring the study programme, would you include the AT?

If yes, where would you include the AT – as a part of the main-instrument lessons (the way we did last semester), or as an elective course?

In which year do you think students should start learning the AT?

Any last comments?

Thank you!

Appendix B: Interview guidelines for students in Iteration 2 (May 2017)

1. Jeg forstår at dere har vært med på et prosjekt sammen med deres hovedinstrumentlærere, der man kombinerer hovedinstrumenttimene med en lærer i Alexanderteknikk. Kan dere beskrive, med deres egne ord, hvordan hovedinstrumentundervisningen har foregått i år.

    - Se for deg en typisk undervisningstime, hvordan ser den ut?
    - Hvor mange lærere er i rommet samtidig?
    - Er det bare én til én, eller er det grupper eller mesterklasse?
    - Hva skjer mellom disse timene? Hva jobber dere med?

2. Hvilke deler av denne måten å drive undervisning på har vært særlig betydningsfullt for dere, hva er det dere har tent på her? Hvis dere sammenlikner den undervisningen dere fikk før prosjektet og under prosjektet, hva opplever dere som de vesentligste forskjellene?

3. Hvordan opplever dere at lærerne har endret sin praksis, på hvilken måte?

    - *Alexanderteknikk*
    - *Lærersamarbeid*
    - *Studentinvolvering*
    - *Lærerrolle*
    - *Undervisningsdramaturgi*

4. Har dere endret måten dere jobber med instrumentet, øving, fremføring, på hvilken måte?

    - *Gruppeundervisning (peer feedback).*
    - *Alexanderteknikk (hva er det dette handler om/ på hvilken måte).*
    - *Eierskap (studentenes eierskap til egen læring).*
    - *Maktstrukturer lærer-student.*

- Hvordan forklare dere disse endringene?

5. Nå har dere fortalt om mange positive og gode sider ved denne undervisningen. Er det noe ved denne undervisningen som dere opplever som utfordrende, krevende eller til og med negativt?

    - Er det viktige ting dere ikke får tid til lenger?

- Må dere prioritere annerledes?

6. Er det ting ved denne formen for undervisning dere mener kan utvikles til det bedre?

7. Har dere noen kommentarer eller innspill som intervjuet ikke har dekket?

Appendix C: Interview guidelines for teachers in Iterations 2 and 3 (May 2017; June 2018)

1. Kan du beskrive, med dine egne ord, hva *Integrated Practice* er og hvordan det foregår (mål, innhold, arbeidsmåter, vurdering)?

   - Se for deg en typisk undervisningstime, hvordan ser den ut?

   - Hva skjer mellom disse timene? Hva jobber studentene med?

2. Hvilke deler av dette prosjektet har vært særlig betydningsfullt for deg?

3. Hvis du sammenlikner din undervisning før prosjektet og under prosjektet, hva opplever du som de vesentligste forskjellene?

   - Hva mener du prosjektet har gitt deg og din undervisning?

   - Hva fra dette prosjektet ønsker du å ta med deg videre i din undervisning?

   - *Alexanderteknikk*

   - *Lærersamarbeid*

   - *Studentinvolvering*

   - *Lærerrolle*

   - *Undervisningsdramaturgi*

4. Hva opplever du som de vesentligste endringene hos studentene dine i prosjektet? Hva har de igjen for sin deltakelse?

   - *Gruppeundervisning (peer feedback).*

   - *Alexanderteknikk (hva er det dette handler om/ på hvilken måte).*

   - *Eierskap (studentenes eierskap til egen læring).*

   - *Maktstrukturer lærer-student.*

5. Hvordan ville du forklare disse endringene?

6. Nå har du fortalt om mange positive og gode sider ved prosjektet. Er det noe ved prosjektet som du opplever som utfordrende, krevende eller til og med negativt?

   - Er det viktige ting du ikke får tid til lenger?

   - Må du prioritere annerledes?

7. Er det ting ved prosjektet du mener kan utvikles til det bedre?

8. Har du noen kommentarer eller innspill som intervjuet ikke har dekket?