

# DAP-Developing the Ability to Perform

Investigating the field of higher education and expertise development  
for learning and performing the doublebass

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The aim of the DAP - "Developing the Ability to Perform " project was to find out if there were significant differences between the learning student, the supervising professor and the expert performer working in a Symphony Orchestra regarding the development of their ability to perform. Results attained from the survey pointed out that all groups showed a secure level of understanding of concepts of deliberate practice and self-awareness, while those of metacognition were practically unknown. While students did the most practice time of all groups, they rarely record themselves or use computer technology. All participants were highly supported by their parents especially at that time when they decided to become a professional. The instrumental diversity of size, *scordatura*, playing postures or bowing schools was seen as an advantage rather than a disadvantage, overruling statements of previously undertaken research. The study highlighted the importance of early pre-professional learning for the University Student. This paper introduces the preliminary results of the project.

*Keywords:* doublebass; skill; practice; pre-professional learning; expert performance

Over the past decade researchers have taken numerous approaches to studying how musicians acquire and refine their skills as performers (e.g. Hallam 1997, Jorgensen, 2000). While many of these studies have provided new perspectives to instrumental learning (e.g. Hallam 1997), it remains unknown whether its findings found a way back to the benefits of its population (Bastian 1998). What has been noticed is that the results that came out on studio research only very slowly establish themselves as the

“learning to learn” concepts to “professional practice” in higher education (Pertzborn,2007). If these links still remain disconnected to instrumental practice, they may not give the student the means to achieve maximum proficiency. However, and also in some way confirmed in this investigation, most of the doublebass students are still advised to study from method books published in the XIX<sup>th</sup> century . It seems somehow awkward that also more recent method books have excluded an in-depth exploration of the processes of skill acquisition as guidelines to professional instrumental practice.

## METHOD

### Participants

The field of investigation contained 14 Professors (PROF), 82 Students (STUD) from 13 Universities, 33 Doublebassists (ORCH) from 7 Symphony Orchestras from seven countries placed in three continents participated in the DAP survey, as it is shown in figure 1 below. Principals from Symphony Orchestras collaborated in handing out the questionnaires to their section colleagues, University Professors to their students respectively as well as in sending back the filled out questionnaires. The total number of participants was 129; the response rate was 85 %.

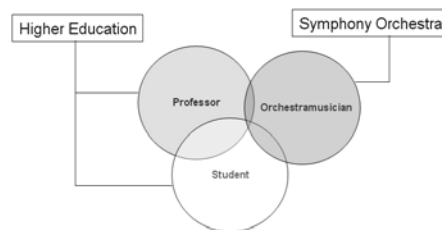


Fig.1 Field of investigation and group of participants

### Materials

Together with the empirical approach adapted to this study, literature was reviewed comprising the areas of the learner (1) and the instrument (2). The first part focused on practice, expertise, task requirements, and biographical issues. A second part reviewed the history of the doublebass, its performer and their influences on the development of expertise of the instrument and its role in the repertoire. Many of the findings that came out of the historical

review like e.g. the diversity of at least two bow schools, different playing postures and tunings are still subject to controversial discussion until today. These concerns were included in the survey to examine the impact of history and tradition on the present generation. The blueprint of the survey like illustrated below was based on a multidimensional learning model to instrumental practise conceived by Hallam (1997) as it is shown in figure 2:

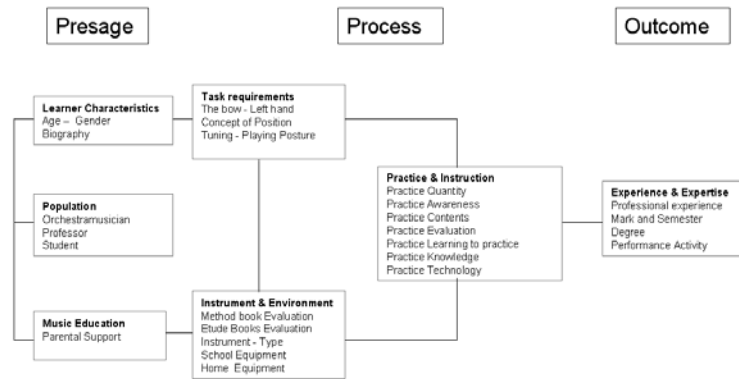


Fig.2. Blueprint of the DAP survey

Thirty-four questions were organized in Presage, Process and Outcome factors assembling a wide range of topics: Learner Characteristics, Population, Music Education, Task Requirements, Environment & Instrument, Processes of Practice, Performance Experience & Expertise, Methods, Biographic Information, Professional Experience, Health and Well Being and Life Style. Four different types of responding were used: (1) Rating form 1-5, (2) Multiple Choice, (3) Selecting between Yes - No – Rarely and (4) numeric indication of e.g. “Years of Playing”. Five open end questions were used to assemble individual opinions or different views. The surveys were elaborated in English, German and Portuguese language.

### Procedure

The data collected from the survey were processed through the statistical program SPSS 17.0 taking into account the most adequate statistical technique to the involved variables. The data were organized according to the nature of variables, most of them qualitative and descriptive techniques. The

Principal Component Analyses was used to reduce the dimensionality and to identify profiles considering biography, education etc. To compare the results, parametric ANOVA or non parametric Kruskal Wallis techniques were used. For the other topics some independence chi-squared tests were performed to evaluate the association between the different groups of PROF, ORCH and STUD and the correspondent item. The decision rule used consists in detect significant statistical evidence to probability value (*p value* of the considering test) inferior to 0.05.I. In addition, the survey provided 204 individual comments to open-ended questions which were assembled for further discussion according to the topics and group of population.

## RESULTS

Results that came out of the survey revealed that the doublebass is still a male dominated instrument. Male representants were in the group of the PROF (79%), and the STUD (72%), and ORCH (100%). No female orchestrabassist participated in the survey. The mean age of PROF was (50 years-old male; 41 years-old female); ORCH (41 years-old, only male); STUD (23 years-old male; 21 years-old female). The average age for starting the doublebass for all groups was between 14 and 15 years. However, in some cases the starting age varied between 3 to 20 years. A high percentage of all groups previously gained experience on other instruments, which they learned for 4 to 7 years before moving to the doublebass at the age of 13 -15. The late and most diverse starting age reveals a relative inconsistency when comparing to other instruments like e.g. the violin. These findings confirm those from a similar study undertaken by Langner (2003).

The majority of the ORCH (52%) practises regularly only when they have important performances, while this is done less by PROF (36%) and STUD (25%). This may be because PROF and STUD might have a different time frame to build up repertoire in advance. They may also have more freedom in choosing their repertoire, while the group of the ORCH normally has to deal with an intense and pre-given performance schedule. Additional comments were made on these issues which confirm these views. The PROF (78%) and ORCH (76%) reported that they practise between 1-3 hours daily, while this was assumed by 60% of the STUD; 35% of STUD reported practising 4-6 hours per day. In all groups between 54% and 67% of the participants tended to maintain a practice free day through the week. STUD (73%) unlike PROF and ORCH (38%) consider studying *Etudes* as a key point of their practice.

The landscape of “Practice Contents” was fairly even and consistent in all groups and showed a high percentage in “Learning new repertoire”, “maintaining or re-learning already performed material”, “maintaining or improving technical issues”, and “preparing performance.”

PROF obtained the highest scores of factual knowledge of practice issues (80% - 100%), followed by the ORCH (50% - 85%) and the STUD (35% - 84%) except for the concepts of Metacognition. Here, the groups PROF (58%), ORCH (50%) and STUD (64%) reported that they were not familiar with these concepts. This fact may well indicate that concepts of practice are widely known to most of the participants and that topics of instrumental research have the potential to find their way back to the practicing musician.

Only a minority of all groups recorded themselves on audio: PROF (43%), ORCH (18%) and STUD (30%); the usage of video was still much lower than the usage of audio: PROF (21%), ORCH (14%) and STUD (7%). The usage of computer software as a practice aid has been indicated by PROF (50%), ORCH (26%) and STUD (20%). A much lower score has been attained for the usage of MIDI accompaniment: PROF (29%), ORCH (11%) and STUD (25%). These results illustrate a low rate of usage of audio, video and computer technology in all groups. In the century of almost unlimited access to recording and music technology, one might have expected a higher usage of these media. Listening to CD audio recordings and instructional DVD'S received a higher score of appreciation: PROF (57% for DVD – 71% for CD), ORCH (44% for DVD – 59% for CD) and STUD (35% for DVD – 69% for CD). It is noted that CD recordings received a higher score than DVD'S.

Indications on Life Style revealed that all groups highly enjoyed their profession as a doublebassist (95%-100%). Nevertheless, ORCH (48%) STUD (27%) and PROF (22%) already thought at some point of their careers about doing something else. The PROF was the most active in performing sports regularly, while the ORCH and the STUD showed less activity in this domain. In addition to this, 43% of the PROF, 32% of the ORCH and 19% of the STUD reported to have another professional qualification, activity or expertise.

## DISCUSSION

Results of this study revealed a strong relation and influence between teachers and their students. The group of the PROF was the most experienced in all performance domains and had also the highest academic qualification when compared to the ORCH and the STUD. The last, however, seemed to follow their PROF in being active in all domains, although professional

opportunities e.g. performing in festivals are yet rather more limited for them.

Early instrumental learning on the doublebass has been identified as one of the potential key factors to a prospective professional career. This has obvious implications in early learning methodologies and in providing adequate instruments for the young learner. The low use of technology, while making such a high investment of practice time to achieve a competitive level of performance, is a second point that needs further investigation. The proposal is that a wider perspective of learning, practice, self-evaluation in combination with the use of technology as a support for practice and feedback should be taken into account to form efficient venues to move forward on the road of excellence for the doublebass. By providing better and more challenging concepts to expertise and (early) instrumental learning, future generations of doublebassist might break down more rapidly the technical barriers of the instrument and will use the whole range of the instrument as an advantage rather than a limitation.

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