"Played it till my fingers bled":

Domain-related fields of practicing and gaining expertise in popular music

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1. BACKGROUND

Expert performance is generally explained by the accumulated amount of deliberate practice (Ericsson, Krampe & Tesch-Römer, 1993; Gruber & Lehmann, 2014). While research on musical expertise exclusively focusses on the prerequisites of European classical music, little to nothing is known about the role of deliberate practice in the field of popular music (Kaczmarek, 2012). We follow the premises that there are noticeable differences between popular music and classical music regarding concepts of musical ability and practicing processes (Gembris, 2014) and that existing findings about musical expertise cannot be applied to the culture of popular music without revision. This notion is supported by findings by Creech et al. (2008), showing different attitudes of classical and non-classical musicians towards the necessary skill set for musical performance.



2. AIMS

Our aims are to identify domain-related fields and practices of gaining expertise in popular music and to explore the differences in musical expertise and deliberate practice in comparison to classical music. It should be examined which abilities are trained and how much effort is spent on practicing. Environmental and sociodemographic factors as well as professional status are taken into account.

3. METHOD

As a first step, a questionnaire was developed by participants of a seminar at Paderborn University. It was administered to 55 rock and pop musicians who had been recruited from the students' personal networks. This first study served as a prestudy for the present study, which was carried out in a seminar with music students in early 2017.*

In the present study, 540 musicians (rock and pop, classical music) were interviewed using an online survey methodology. Respondents were recruited via social media channels and from social media groups on musical activities as well as from students' ensembles and personal networks. The questionnaire included questions concerning the typical amount of practice, the use of electronic media as a tool for practicing, and questions concerning the engagement with other musical activities like performance and composing as well as the knowledge of musical artists and genres

Sample

60% of the participants identified the music they played as popular music, 17% as classical music, and 22% stated they played both types of music likewise. For 67% of the respondents music was a hobby. The others referred to music as an additional (19%) or professional (14%) occupation. The average age was 30.39 years (SD = 12.71, min. = 12, max. = 76). 65% of the respondents were male, 34% female. Due to recruitment, the level of education was high: 31% of the respondents held a university degree, 38% were studying.

The group of the classical musicians was predominantly female (69%) while the pop musicians were predominantly male (78%). On average, the classical musicians were five years older (M = 33.74, SD = 14.03) than the musicians in the field of popular music (M = 28.86, SD = 11.24).

4. RESULTS

4.1 Deliberate practice

Tab. 1: Starting age and period of taking lessons

М	SD	F	df	р	η^2			
age when starting playing music (incl. singing)								
8.65	5.37	9.52	1, 416	.002	.022			
10.87	6.28							
age when starting playing the main instrument (incl. singing)								
10.54	7.48	7.02	1, 416	.008	.017			
12.85	7.35							
period of taking lessons on the main instrument in years								
10.48	5.59	79.25	1, 304	.000	.207			
5.67	3.56							
	8.65 10.87 n instrum 10.54 12.85 ain instrum	8.65 5.37 10.87 6.28 n instrument (included 10.54 7.48 12.85 7.35 n instrument included 10.48 5.59	8.65 5.37 9.52 10.87 6.28 10.54 7.48 12.85 7.35 10.48 5.59 79.25 10.48 5.59 79.25 79.2	ncl. singing) 8.65 5.37 9.52 1,416 In instrument (incl. singing) 10.54 7.48 7.02 1,416 sin instrument in years 10.48 5.59 79.25 1,304	ncl. singing) 8.65 5.37 10.87 6.28 9.52 1,416 .002 10.54 7.48 7.48 12.28 7.35 7.02 1,416 .008 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10			

Based on the crucial role of deliberate practice in theory of expert performance, starting age, tuition (see Tab.1) and practice time (see Tab. 2) were recorded. Data show that the musicians in the field of classical music started about two years earlier with playing their instrument, 90% of them took lessons (compared to 69% of the pop musicians) and they did so for a significant longer period of time. If they pursued music as a profession, they spend about three times as many hours practicing as the musicians in the field of popular music. Thus, the classical musicians have accumulated a significantly higher amount of deliberate practice.

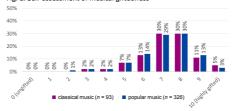
Tab. 2: Practice time in hours per week

	М	SD	F	df	р	η^2		
music as hobby								
classical music (n = 59)	3.51	4.11	.818	1, 270	.366	.003		
popular music (n = 213)	4.08	4.31						
music as profession								
classical music (n = 19)	17.68	16.56	13.35	1, 52	.001	.204		
popular music (n = 35)	5.33	8.38						

4.2 Self-assessment of musical expertise

When self-assessing their musical giftedness the musicians show a high degree of self-esteem, indicating a positive self-concept (Hemming, 2002). On a 10-point scale, the respondents reach an average of 7.17 (SD = 1.47, see Fig. 1). No significant differences could be found between genres.

Fig. 1: Self-assessment of musical giftedness



The level of performance on their main instruments was also selfassessed as high by the respondents: 24% of the classical musicians regarded themselves as "very good" and further 48% as "good". They showed slightly different ratings than the pop musicians (15% "very good" and 55% "good"). Thus, the higher degree in deliberate practice of the classical musicians does not seem to determine the musicians' perception of their own giftedness and talent, indicating a different understanding of musical expertise. Accordingly, 85% of the classical musicians report "very good" or "good" knowledge of musical notation, compared to 32% of the pop musicians



4.3 Ways of practicing and learning

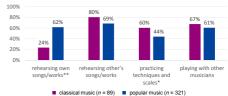
Tab. 3: Media used for practicing and learning

	(very)	occasion-	(very)
	frequently	ally	rarely
scores or tabs of songs or works			
classical music (n = 92)	84%	9%	8%
popular music (n = 322)	44%	20%	36%
books			
classical music (n = 91)	18%	15%	67%
popular music (n = 321)	6%	16%	78%
video tutorials, e. g. on YouTube or DVD			
classical music (n = 91)	10%	11%	79%
popular music (n = 325)	33%	27%	41%
applications or software			
classical music (n = 88)	2%	13%	85%
popular music (n = 323)	29%	21%	49%

easured on 5-point Likert scales, all differences between musical genres are signifi

When focusing on the usage of media for practicing and learning significant differences can be found between classical and pop musicians (see Tab. 3). Digital tools such as video tutorials or applications are still not commonly used, but receive larger attention by the pop musicians. This is in line with the finding that 43% of the pop musicians report "very good" or "good" knowledge of music production software, compared to 7% of the classical musicians. In their ways of practicing, classical and pop musicians significantly differ in rehearsing own material as well as in practicing techniques and scales (see Fig. 2), which perfectly fits the artistic ideals of reproduction and interpretation in classical music and creativity and authenticity in popular music (Kleinen, 2003). Furthermore, popular musicians show a greater autonomy in the selection of the works rehearsed in tuition: While only 31% of the classical musicians had a say when the material was selected, this was reported by 51% of the pop musicians. The melting of practicing and playing with other musicians as described by Green (2003) is common for both, classical and popular musicians

Fig. 2: Ways of practicing



5. CONCLUSIONS

Deliberate practice, practice behavior, and domain-related knowledge clearly differ between classical and pop musicians. Concepts of musical giftedness and talent should be discussed in the context of the specific cultural context. Also, prevalent concepts of musical expertise should be rethought and differentiated. Further research is required regarding the characteristics of the practicing processes in their relationship to different instruments and (popular music) genres as well as investigations of possible differences in the functions of collaborative learning.

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