Assessing the experience of individual music practice: self-regulation and flow questionnaires

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Marcos Vinícius Araújo

Universidade Federal do Rio Grande do Sul – marcosviniciusaraujo@ufrgs.br

Abstract: Maintaining individual practice motivation can be difficult when an important audition is approaching or when we are playing the same repertoire for a long time. The aim of this paper was to present two questionnaires assessing self-regulatory practice behaviors and flow experience in skilled music students, two psychological constructs that can improve musicians' personal experience of music practice. The research was part of a doctoral project that investigated associations between musicians' self-regulatory practice strategies and dispositions to experience a state of flow during individual practice.

Key-words: Music practice. Motivation. Flow. Self-regulation. Guitarists.

Avaliando a Experiência da Prática Musical Individual: Questionários de Autorregulação e Fluxo

Resumo: Manter a motivação para a prática individual pode ser difícil quando uma audição importante está se aproximando ou quando estamos tocando o mesmo repertório por um longo tempo. O objetivo deste artigo foi apresentar dois questionários que avaliam comportamentos autorreguladores da prática musical e experiências de fluxo em estudantes de música competentes, dois construtos psicológicos que podem melhorar a experiência pessoal de músicos na prática musical. A pesquisa foi parte de um projeto de doutorado que investigou associações entre as estratégias de autorregulação da prática dos músicos e suas disposições para experimentar um estado de fluxo durante a prática individual.

Palavras-chave:

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1. Literature review

Like other instrumentalists, classical guitarists practice regularly in order to sustain the necessary performance skills. For professionals from the Western classical music tradition, practice is usually a solitary and effortful activity, focused exclusively on deficiencies and aiming for high levels of proficiency in performance (ERICSSON, KRAMPE, TESCH-ROMER, 1993; LEHMANN, SLOBODA, WOODY, 2007).

Research on music practice demonstrates that individuals with high levels of expertise in musical performance (i.e. experts) usually can get optimal results of their practice routines, making it more efficient. Practice is deliberate (ERICSSON et al., 1993), and carried out exclusively towards goals and performance improvement. Musicians usually have well-

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defined tasks, representing musical challenges to overcome. Through intense concentration, skilled musicians rely on their personal strategies when trying to accomplish difficult elements within the task. The practice of professionals is also defined as efficient because it achieves a desired end product in as short a time as possible (HALLAM, 1997). In this kind of practice, expert musicians rely on self-regulation (ARAÚJO, 2016; BONNEVILLE-ROUSSY, BOUFFARD, 2014). Self-regulated practice improves musical performance through the management and planning of practice, and metacognition plays a crucial role, since expert musicians are normally metacognitively engaged with their practice approaches, choosing, modifying and adapting practice strategies. Phases of self-regulation include planning, performance and evaluation of practice outcomes (McPHERSON e ZIMMERMAN, 2011). In view of all those efficient practice behaviors, one may suppose that efficiency in practice could explain why some musicians are positively engaged with practice, demonstrating some kind of inner drive to continue to enhance and develop it. But would those efficient practice behaviors used by expert performers contribute to make their practice more enjoyable?

Sustaining individual practice motivation can be hard specially when an important audition is approaching or when we are playing the same repertoire for a long time. A possible explanation for the motivation for hours of deliberate practice is 'flow', a psychological experience that occurs in challenging activities requiring skills (CSIKSZENTMIHALYI, 1990).

Flow is defined as a mental state in which an individual is completely immersed in an activity with a feeling of energized focus and full involvement, without reflective selfconsciousness but with a deep sense of control (CSIKSZENTMIHALYI, 1990). It includes 9 indicators or symptoms: 1) a balance between perceived challenge and skill to overcome it, 2) spontaneity and automaticity during the execution of task, 3) a strong sense of what to do, 4) a good perception of how well is doing during the performance of task, 5) concentration on the task at hand, 6) a sense of control, 7) loss of self-consciousness, not worrying what others think of oneself, 8) a sense that time passes in a way that is different from normal, and 9) feeling the experience to be extremely rewarding. In the music domain, several positive associations with flow has been found. Achievement in young music students (O'NEILL, 1999) and optimal or successful performances in reports of music students and professionals (CLARK, LISBOA, WILLIAMON, 2014; SAWYER, 2006) were related to flow in research. Flow was also related to creativity in music composition (BYRNE, MACDONALD, CARLTON, 2002; MACDONALD, 2006; SHERIDAN e BYRNE, 2002) and subjective well-being in music students (FRITZ e AVSEC, 2007). Another important association of flow and music is the negative relationship between music performance anxiety and flow in professional and amateurs (FULLAGAR, KNIGHT, SOVERN, 2012; KIRCHNER, BLOOM, SKUTNICK-HENLEY, 2008), in a way that as more flow one experiences during a musical activity, less anxious one will be. Taken together, studies indicate that musicians in flow may experience feelings of well-being during the development of their activities and derive enjoyment from within their musical activities, improving the experience in the musical activity itself.

If flow is relevant for music practice, what strategies one can derive to achieve flow? Little research has been conducted to investigate such a question. In my own research, however, we tested associations between efficient practice behaviors and flow dispositions i.e. how often one can achieve flow during individual practice, and found some self-regulated practice strategies related to flow.

2. Questionnaires assessing practice behaviors

Two questionnaires assessing flow and self-regulated practice behaviors were answered by 168 musicians (male = 50.0%; female = 50.0%) ranging in age from 18 to 74 years (m = 34.41, SD = 12.39). Musical instrument groups included keyboards (27.4%), classical guitarists (22.6%), woodwinds (17.3%), bowed strings (14.9%), also including singers (9.5%), brass (4.2%) and percussion (3.6%) players. At the time of this research, the majority of the musicians practiced at least 1-2 hours per day. Counting from their first public concert, the experience playing musical instruments were varied. This sample was used in the validation process of the self-regulated practice behavior questionnaire (ARAÚJO, 2016) and to investigate associations between self-regulation and flow (ARAÚJO e HEIN, 2016).

3. Self-regulated practice behavior questionnaire items as self-monitoring strategies

The self-regulated practice behavior questionnaire was one developed by Araújo (2016). Its main section includes 22 items related to three different aspects of selfregulation: Practice Organization, Personal Resources and External Resources. Practice Organization questionnaire comprises 10 items assessing behaviors related to the organization of practice (e.g. 'I set goals for my practice sessions'; 'I organize the physical environment of my practice sessions'; 'I plan the time of my practice sessions'). Personal Resources scale includes 7 items related to knowledge/regulation of strategies (e.g. 'I am aware of the strategies that I use during practice') and general self-efficacy for goal achievement in practice (e.g. 'I am able to achieve my practice goals satisfactorily'). Lastly, Self-Regulation Through External Resources scale are represented by 4 items measuring the influence of external aspects in the practice process (e.g. 'I seek information from several sources [books, CDs, videos, internet, biographies, arts, etc.] to support my study'; 'I request help from others [teachers, peers, composers, musicologists and specialists]').

The developed self-regulated practice behavior questionnaire can be used to understand students' strategies or our own practice strategies. Each group of items can be summed up which can be divided by the number of items in each item group. For instance, Practice Organization has a total score of 50 (5 x 10 items). As a result, we can verify to what extent we are adopting self-regulation through practice organization during individual practice (Table 1):

Factor	Practice behavior					
	1. I use specific strategies related to my practice	1	2	3	4	5
	goals					
	2. I understand that my goals are challenging	1	2	3	4	5
	3. I set goals for my practice sessions	1	2	3	4	5
	4. I set specific goals for my practice sessions	1	2	3	4	5
Self-regulation	5. I evaluate the progress made towards my goals	1	2	3	4	5
through	6. I set long-term goals (weeks, months, years)	1	2	3	4	5
practice organization	7. I organize the physical environment of my	1	2	3	4	5
	practice sessions					
	8. I set short-term goals (minutes, hours, days)	1	2	3	4	5
	9. I plan the order of the activities of my practice	1	2	3	4	5
	sessions					
	10. I plan the time of my practice sessions	1	2	3	4	5
	11. I understand the nature and demands of my	1	2	3	4	5
	musical activities					
	12. I understand my strengths and weaknesses	1	2	3	4	5
	13. I am aware of the strategies that I use during	1	2	3	4	5
	practice					
	14. I use strategies that have been effective in the	1	2	3	4	5
Self-regulation	past					
through	15. I know what I must do to in order to complete	1	2	3	4	5
Personal Resources	my musical activities satisfactorily					

	16. I know when and in which contexts my strategies will be most effective	1	2	3	4	5
	17. I am able to achieve my practice goals satisfactorily	1	2	3	4	5
	18. I practice in order to improve my musical skills	1	2	3	4	5
	19. I seek information from several sources	1	2	3	4	5
	(books, CDs, videos, internet, biographies,					
	arts, etc.) to support my study					
	20. I request help from others (teachers, peers,	1	2	3	4	5
Self-regulation	composers, musicologists and specialists)					
through External	21. I cannot reach my practice goals without the	1	2	3	4	5
Resources	support of some external factors (peers,					
	teachers, materials, environment)					
	22. I practice in order to achieve high ratings (e.g.	1	2	3	4	5
	grades) and positive feedback					
1-nev	er; 2-rarely; 3-sometimes; 4-frequently; 5-always					

Table 1: Self-regulated practice behavior questionnaire

4. Flow questionnaire to assess to what extent we achieve flow during practice

The flow questionnaire was the Dispositional Short Flow Scale-2 (MARTIN e JACKSON, 2008), a validated standardized measure of flow traits in music. The main section of the scale presents nine items each reflecting one of the nine flow indicators, e.g. challenge-skill balance ('I feel I am competent enough to meet the high demands of the situation'), clear goals ('I have a strong sense of what I want to do'), full concentration ('I am completely focused on the task at hand'). A flow summative score (Global Flow) was also generated to explore musicians' overall flow dispositions. Both measures (Self-regulation and flow) are rated on a 5-point Likert-type scale related to frequency of behaviors (1-never to 5-always) and levels of agreement (1-completely disagree to 5-completely agree).

Participants were invited to think about how often they experience each flow characteristic during practice:

1. I feel I am competent enough to meet the high demands of the situation		2	3	4	5
2. I do things spontaneously and automatically without having to think		2	3	4	5
3. I have a strong sense of what I want to do		2	3	4	5
4. I have a good idea, while I am performing, about how well I am doing		2	3	4	5
5. I am completely focused on the task at hand		2	3	4	5
6. I have a feeling of total control		2	3	4	5
7. I am not worried about what others may be thinking of me		2	3	4	5
8. The way time passes seems to be different from normal		2	3	4	5
9. The experience is extremely rewarding		2	3	4	5

Table 2: Dispositional Short Flow questionnaire

The total score is divided by 9, and we can verify to what extent we get in flow during individual practice or any other musical activity we choose. It is important to consider also the individual items. For instance, if we rarely feel competent enough to meet the demands of the situation, this may imply that the level of challenges during practice may be high.

5. Conclusion

Depending on the score achieved in these questionnaires, teachers can assess what self-regulated behaviors might be improved to make their students' practice processes more efficient, teaching them how to self-regulate their practice, and also assess whether they are getting in flow during individual practice, an important motivational component of practice. In a longitudinal perspective, both questionnaires might also be used to assess improvements and changes in the students' behaviors throughout a musical course. As stated before, musicians (i.e. instrumentalists and singers) can also use those questionnaires for self-assessment. There are individual differences in the musical practice processes, and thus musicians can fill in the questionnaire to assess what strategies could be adopted to improve their practice efficiency and motivation.

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