ARTICLE

Motivating musical learning

Jane Davidson, Robert Faulkner and **Gary McPherson** on how to create the right conditions to take our natural interest in music to the next level

Music is an absorbing and stimulating activity. In the West, listening is the major form of engagement, with the many cognitive and motor skills associated with musical instrument playing being achieved to a very varied standard, typically by only a small proportion of the population. How does instrumental learning in the Western context occur and what shapes the degree of engagement and attainment?

The discussion is informed by a 12-year biographical study of 160 children traced from primary through to post-secondary school experiences. The article suggests that more knowledge about socio-emotional and personal needs and forms of engagement are necessary if we are to account for the very varied nature of musical engagement across Western culture.

questions

What accounts for the very uneven distribution of musical instrument skills in our society?

resources

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No human society has existed without music, and many people experience music as a crucial aspect of their everyday lives. Music offers numerous personal and social benefits, including improvements in cognitive-emotional awareness, enhanced self-regulating behaviour, and enhanced social responsibility (Hargreaves & North, 1999; North et al., 2004). Perhaps because music is one of the most demanding tasks for the human central nervous system, we are affected by it and intrigued by it.

As a performance skill, music is so multi-faceted and absorbing that its challenges seem limitless. Certainly we know that learning music has effects on brain plasticity that are more pronounced in instrumental musicians the younger they learn, and that this is quite different from other skilled activities (Altenmuller et al., 1997). Relatedly, practising an instrument during childhood is thought to enhance not just musical skills, but intellectual ability more generally (Schellenberg, 2004), while very recent evidence links music training to enhanced verbal ability and nonverbal reasoning (Forgeard et al., 2008).

Given these positive effects, it is all the more unfortunate that the numbers of students who take up musical instruments is very small (Lamont & Maton, 2008; McPherson & Davidson, 2006). The proportion of us able to play a musical instrument is minuscule when compared with the number of us absorbed by it as listeners. In today's iPod culture, music can be self-selected and used according to daily requirements (see Bull, 2006), but so few Westerners attempt to recreate the music they listen to. In fact, our school music education is in a state of international crisis, with the proportion of learners electing music within schools remaining extremely low and a majority of instrumental music learners ceasing before they have completed high school (Lamont & Malton, 2008; Hargreaves & North, 2001; Walker, 2008).

Here, we investigate the types of investment required to acquire musical performance skills, what these skills permit us to do, and what motivates people to invest in the power of music.

Learning to play an instrument

Musical skills development is based on developing a range of complex and interactive cognitive, perceptual and action processes, and these processes rely upon internal representations in the memory of the performer. Such representations are situation and task-specific (see Lehmann, 1997), with the level of fluency in the production and use of the mental representation being a function of knowledge and practice. A novice clarinet student might have a representation system comprising laborious fingering and blowing combinations, while a more advanced player might have a representation of fluent blowing and fingering along with some expressive information, and aural image of the sounds, and a visual representation of the score.

A range of independent studies have calculated that expertise on a Western instrument tends to require some 10,000 hours of accumulated practice. Indeed, students on a music teacher course were found to have done less than half of the cumulative practice over their lifespan than those on a performance major (Ericsson et al., 1993; Sloboda et al., 1996). This suggests the importance of practice, but it is important this is *efficient* practice. The efficiency of the time spent depends on what is being practised and how. Musical experiences are inextricably

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linked with the power of the emotion (Sloboda et al., 2001). When a person is learning a musical instrument, if these feelings are positive they can provide the fuel from which students develop a commitment to their musical participation, even when working through mundane repetition tasks like those required to develop motor programs. When negative, they can be a powerful disapproving force that limits musical involvement (Davidson & Borthwick, 2002). How many people can't bring themselves to do the practice because it is 'boring', 'lonely', or 'I wasn't improving'?

Research with young school-aged musicians both in Australia and the United States demonstrates that a single-minded immersion or flow experience associated with feeling positive and energised contribute to securing students' commitment to music practice and so future involvement (Davidson & Borthwick, 2002; McPherson 2000/2001). Thus, understanding the emotional climate in which young people learn music and the array of emotions they experience whilst engaged in these learning experiences are crucial in helping us to broaden the appeal of music as an area of learning.

Certainly social status has a considerable role to play in this. If we look outside of Western culture, we can identify many ways in which the emotional climate is intrinsically bound to social structures that nurture musical participation. In the Anang Ibibo of Nigeria, there is a societal force that expects musical participation, with certain codes of behaviour only being relayed through music. This means that there is a positive social ambience surrounding musical practice. Indeed, from infancy, children are encouraged to participate. Living with the Anang Ibibo people, Messenger (1958) discovered that despite his best efforts to find the contrary, all children had amassed a repertoire of hundreds of songs and knew many intricate dance and drumming patterns by six years of age. Similarly, Blacking (1974) who studied the Venda of South Africa found that the incentives for music practice were high: everyone was participating, and again many specific social codes for shared meanings were being conveyed through these music-making sessions. This sort of value and support evidently encourages participation and investment in the practice required to achieve musical instrument competency. Indeed, amongst the Anang Ibibo, Messenger could not find an unmusical person. Blacking could not find a Venda person who was not able to participate in the daily musical activity. Rather than believing themselves to be specifically musical, they perceived music-making to be an everyday activity to be undertaken by all.

We all have the capacity to make music, but not the same belief system surrounding musical ability

Clearly, we all have the capacity to make music, but not the same belief system surrounding musical ability. If we are to enjoy the benefits of musical participation in Western contexts, we need to recognise that we are all capable of developing performance skills and competencies and that environments can be created in which to achieve this aim.

Music and motivation

Studies concerned with self-beliefs are so prevalent in psychology research that they dominate the field (Graham & Weiner, 1996). Not surprisingly, research on self-beliefs and music in Western contexts reveal that learners experience greatest psychological needs satisfaction when they are highly engaged in music. They are least engaged and least satisfied at the time they make the decision to cease playing (McPherson & Davidson, 2002). At the time of ceasing, they feel less capable and less autonomous, and relate less to their music teachers (McPherson, 2009). So, given the African examples, it would be fair to say that in Western culture some of the negative beliefs about music could be generated because music performance is often a subject of choice divorced from everyday contexts and even seen as irrelevant to them. Indeed, numeracy and language literacy are placed at the forefront of competencies required for gainful employment in Western settings, music is not (McPherson & Davidson, 2006). Some of the greatest challenges for music education in Western contexts concern how students' beliefs in their own abilities are shaped and change over time, and why so few are able to move from the initial sampling stage of experiencing music for fun, through to greater technical and musical competence as they begin to specialise in music or even make choices that might lead to a lifelong engagement as recreational, amateur or professional musicians.

The decisions about musical capacity in Western contexts are also directly shaped by parents' aspirations and teachers' predictions about their future performance (Davidson et al., 1996; Davidson et al., 1998). Parents are crucial to a child's ongoing beliefs, and results

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from a longitudinal study of 160 learners traced over 12 years show that within the first few months from commencement parents make an assessment of their child's ability to cope with music studies, as well as of their own capacity to devote energy into regulating their child's practice through continual reminders and encouragement to practise an instrument (McPherson & Davidson, 2006). Some parents withdrew support at an early stage on the basis of this assessment. It is not surprising, therefore, that wide differences in performance ability and intrinsic motivation appeared soon after the children started learning their instruments.

So, in order to learn an instrument, time and effort is inevitably required, but the beliefs underpinning that investment are crucial: the power of motivating musical engagement being somewhat dependent on cultural values and beliefs, from the broadest concepts down to those held by a parent and how these are relayed to a child. Many studies in the past 20 years have emphasised the role of practice, parental support and motivation, with a tendency to conclude that if these factors are present in a blend that moves from external support and motivation by a teacher or parent, the learner is likely to experience intrinsic rewards associated with the positive emotions of musical engagement as the musical skills develop, and that these rewards of music-making per se – its self-regulating effects – are sufficient to sustain investment in engagement.

But can we be sure that opportunities we believe may be sufficient to encourage musical engagement actually work? Over a period of 12 years we have been able to follow 160 children who took up a school band instrument at the age of seven or eight (McPherson et al., 2009), in order to investigate who has persisted and why. Somewhat to our surprise, it is not typically the child who was well supported and highly motivated in initial learning who has gone on to an adulthood of devoted engagement with music. Some do fit that case: for example, the young man who scored highly in all tests of musical ability, who outperformed nearly all his classmates in his rate of musical progress and whose mother is a piano teacher. He found that by learning music he could take on his own students to pay for his university fees. This man certainly loves music and he believes that playing the trombone affords him very many positive personal and social experiences, but for him the power of earning a living to support his studies has outweighed his love of music, and he ultimately sees poor remuneration and the boredom of conventional music teaching contexts as deterrents. He is not studying music at university, and whilst he intends to keep up an amateur interest he is not sufficiently committed to music to regard himself as a professional, even though he has achieved highly in examinations and won a national soloist competition.

Also, there's the young woman who scored even higher than the trombonist on early tests of musical ability and whose initial practice, commitment and progress were exceptional by any standards. On commencing high school, the student, not owning a clarinet of her own, was unable to audition at the assigned time. Eventually an instrument was found for her, but by then the best school ensembles had already been filled with individuals less able than her. Assigned to the least able ensemble, which, predictably, turned out to be de-motivated and disruptive, the young woman felt her achievements had gone unrecognised, there was little hope for challenge and improvement, let alone positive emotional engagement. Deflated, she rebelled and gave up completely. Her parents failed to appreciate the real issues behind the problem and after a period of painful conflict resigned themselves to what they saw as a terrible waste of talent. More than five years later, she has picked up the clarinet again and within months has risen to levels at the top of measures of musical achievement used in the research project.

Another young woman who had acquired distinctions in music examinations at the highest grades on two instruments almost immediately gave up, confessing that her primary motivation and parental expectations were linked to the status of this achievement on her university application form for a place to study medicine. Interviews with her failed to reveal any intrinsically musical motivation based on the power of emotional engagement. At best, playing in the school band had provided social connections that all kinds of other activities at university might now facilitate.

In dramatic contrast, take the boy who scored particularly low on early tests, did little practice, and his attainment was extremely limited. He maintained a commitment to playing in the school wind band throughout high school because of the social connections and emotional satisfaction it provided him. Moreover, this student has even taken up the piano, pays

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for his own lessons and obviously derives important personal satisfaction from what were revealed to be extremely basic keyboard facilities, but facilities that were believed to be of value because they were fit for emotional and personal purpose.

Finally, a young woman, passionate about singing from pre-school age, appears to have been coerced into learning the horn. Conscientiously attempting to conform, this young woman made limited progress until the absence of a specialist teacher provided her with an opportunity to reject the horn to find her own musical love. Now, at the age of 20 she is a regular performer on a large and highly competitive gig scene, a self-taught bass-guitarist, singer-composer and visual artist. Her iPod contains the most extraordinarily eclectic play-list and she is a regular concert-goer. For her, life, art and music are 'inseparable' and rather like the examples of the Anang Ibibo and Venda cited above: '[my] life is about music!'

Conclusion

So, music is a powerful force for us. We are motivated to engage with and experience it. Playing it gives us a closer and more special relationship with music, and perhaps a deeper experience of ourselves and others around us. There are varying levels of musical engagement from passive listener through to active performer, with participation varying from being able to engage in a simple and direct manner to find self-expression through limited technical skill – like playing basic chords on the guitar or singing in a community group. This can continue on to very high levels of skill engagement where it seems that love of expression and self-regulation are still core motivators for learning, but additional external factors continue to play a role in directing engagement: winning competitions, playing extremely challenging instruments and playing extremely difficult repertoire.

Given the findings of the 12-year study described above, it would seem necessary to develop a detailed understanding of contemporary life experiences of young people in Western society in order to begin to address the different needs and types of engagement individuals could have with music in education contexts. Rather like sports, everyone should be taught the basics, have the chance to learn a range of styles and forms and then take their skills to a level commensurate with their desire. In so doing, individuals may be able to develop skills that are fit for personal and social purpose and greatly enhance music's power and potential for everyday life.

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