

The pathway to excellence: the role of psychological characteristics in negotiating the challenges of musical development

Áine MacNamara¹, Patricia Holmes² and Dave Collins³

¹Department of Physical Education and Sport Science, University of Limerick, Ireland

²Faculty of Academic Studies, Trinity College of Music, King Charles Court, Old Royal Naval College, Greenwich, London SE10 9JF, UK

³UK Athletics, Blythe Valley Park, Solihull B90 8AJ, UK

Aine.macnamara@ul.ie, pholmes@tcm.ac.uk and DCollins@UKAthletics.org.uk

The pathway to excellence is turbulent and aspiring musicians must cope with the 'ebb and flow' of development if they are to realise their potential. With this in mind, internationally renowned musicians were interviewed in order to identify the challenges of each stage of musical development and the psychological characteristics that can enable aspiring musicians to sustain this developmental process. Results suggest that while certain psychological characteristics are salient throughout the career and facilitate continued development, others are especially important at key stages and critically at key transitions. This research satisfies more than academic interest, as findings should sensibly inform music educators about the skills and characteristics required by aspiring musicians at key stages during the learning process.

Introduction

In recent years there has been considerable debate about the balance of genetic inheritance and environmental factors that might contribute towards the manifestation of musical talent (Sloboda & Howe, 1991; Howe *et al.*, 1995; Gagné, 1999). In the context of music education, 'talent' can be a somewhat contentious term but it is typically conceived as the ability to perform at an elite level. However, since little consideration has been given to the capacity that an individual needs in order to negotiate the pathway to excellence, it is the development rather than the origin of such talent that forms the basis of the current discussion.

The pathway to excellence is rarely smooth, and the aspirant musician must be able to adapt to setbacks (e.g. slumps in performance) and developments (e.g. selection; demands for increased practice; full time study) encountered along the way. There have been many documented cases of extraordinary musical talent manifesting itself earlier in one person's life than even a favourable environment alone could make possible (Gagné, 1999), but in the absence of contrary genetic evidence the environmental view has apparently predominated (e.g. Sloboda & Howe 1991). Since this is, as yet, an unresolved debate, it would seem reasonable to broaden the field of study and seek further understanding of the personal

characteristics required and their relationship to the challenges that will be met, as key determinants of achieving optimal development.

The development of talent

By investigating the personal characteristics of internationally renowned musicians, rather than speculating on the existence or nature of innate talent, we hope to identify developmental pathways through which exceptional levels of expertise are achieved. For example, a sophisticated conceptual approach, as well as motivation and dedication to communicating emotions, are all characteristics identified in expert performing musicians. That such characteristics are less highly developed in less expert performers, particularly in approaches to analysing music, the structure of practice, the degree of abstract representation and the detail of decision making is not surprising. But if such characteristics could themselves be identified and nurtured it could be a positive step towards creating a favourable environment for the developing musician. For an appropriate model to test the viability of this aim we look towards Talent Identification and Development (TID) Schemes recently developed within sport psychology.

From a psychological perspective, music performance and sport performance appear to be similar. It is therefore worth taking a closer look at recent developments in sports performance psychology, particularly the implications of developments in TID. Existing models found in sport (e.g. Sport Interactive (Scotland) and Talent Search (Australia)) have unfortunately failed to distinguish between current performance (i.e. how well someone can perform at a given time) and an individual's capacity to develop. Furthermore, since these models select young performers based on a limited range of discrete variables within a linear performance model they fail to recognise the dynamic nature of talent. Thus they overlook those characteristics which might enable an individual to cope with and manage the 'ebb and flow' inherent in the general trajectory of development.

Similar selection and assessment methods are common within the world of music, including examinations, auditions and competitions, yet these methods of assessment and selection do little more than give an indication of a current level of achievement. Reflecting these concerns, thinking in TID has moved away from the premise that potential can be identified from performance 'snapshots' (Abbott & Collins, 2004), and more recent research in Talent Development (TD) appears to acknowledge the central role of psychological characteristics as 'promoters' of talent (Kunst & Florescu, 1971; Russell, 1990). In short, and reflecting the role played by such characteristics in the realisation of elite performance (Williams & Krane 2001; Gould *et al.*, 2002), the latest approaches stress the initial possession and subsequent development of Psychological Characteristics for Developing Excellence (PCDEs) as the best way to identify, and then realise through systematic development and facilitation, latent potential. Again from an elite sport performance perspective, and building on a base of work with both elite and developing athletes, Abbott and Collins used an interview-based methodology to identify the PCDEs that facilitate development, as opposed to those that 'merely' perpetuate excellence. As described by Abbott and Collins (2004), PCDEs can encompass trait characteristics (the tendency to...) and state related skills (the ability to...when...), both of which have been shown to play a crucial role in the development of potential. These factors, equally applicable to

musical development, are clearly more reliable indicators than 'snapshots' of achievement or performance.

The developmental pathway

Since the developmental pathway is unlikely to be smooth, it may well be that different skills are required at different stages, for different activities, or even idiosyncratically for different individuals. Research exploring the development of expertise has shown that performers from a wide range of domains pass through various stages of development as they progress from novice to expert (Bloom, 1985; Manturzevska, 1990; Sosniak, 1985). In his seminal study, Bloom identified three stages of talent development (Early Years, Middle Years, Later Years) and clearly highlighted the non-linear nature of the development of expertise, rather than the 'all or nothing' phenomenon it is sometimes held to be (van Tassel-Baska, 2001).

The challenges of different stages, such as increased deliberate practice during the Middle Years (Ericsson, 1996; Sloboda, 2000), clearly have an impact upon the performer. Evidence suggests that such deliberate practice is difficult, not inherently motivating, nor easy to do well and there is strong evidence linking it with individual differences in development of both technical and interpretative skills (Sloboda, 2000; Ericsson *et al.*, 1993). Ericsson and colleagues' theoretical framework suggests that the accumulation of deliberate practice depends on how well individuals satisfy constraints of resource (time and energy), motivation (viewing motivational practice as instrumental to improving) and effort. Furthermore, significant others, master teachers during the Middle Years for example, play an important role in guiding practice (Moore *et al.*, 2003). Without this significant input, inexperienced performers may engage in ineffective practice, repeatedly playing through entire pieces without forming strategies to work on problematic sections (Gruson, 1988, cited in Sloboda, 2000) or fail to maintain an effective practice schedule (Sloboda, 2000; Sloboda & Howe, 1991). Clearly, if these challenges are anticipated and appropriate skills developed, it will enhance the possibility of the performer realising potential. Thus there is a clear need to identify PCDEs appropriate to expected time or incident-specific challenges, as well as those that give more generic support.

Transitions

Unfortunately, the challenges of each stage may seem slight when compared to the pressures associated with negotiating the critical transitions between stages (Tebbenham, 1998). In fact, dropout from activity is prominent during such transitions (Gyurcsik *et al.*, 2004; Sloboda *et al.*, 1996). The adolescent years, for instance, have been identified as a crucial stage for development, but the transition to what Bloom termed the 'Middle Years', with its associated deliberate practice and greater demands in performance and competition, is essential for further development. Csikszentmihalyi *et al.* (1993) noted the tendency for many young musicians who demonstrate great early ability to abandon their studies during this stage, leading to a 'disengagement from talent' (Bamberger, 1982). Consequently, if realisation of potential is to be maximised, it is vital to equip young musicians with the PCDEs necessary to negotiate transitions; particularly valuable, since

the same characteristics can also transfer to other talent domains, for example academic music (Moore *et al.*, 1998).

Finally, the degree to which the most appropriate skills vary across stages and transitions may be further complicated by differences between activity-related developmental pathways. A young musician must engage in highly technical and demanding practice before he or she can perform with any degree of authority and confidence. Interestingly, Jørgenson (1997) found a significant difference in starting time for formal instruction between classical instrumental musicians and other performers. Moreover, Harnischmacher (1997) suggests that advanced instrumentalists use different and more complex practice methods from other musicians. Accordingly, before the substantial benefits of PCDE-based selection and development can be realised, there is a clear need to establish time and environment-related differences (if any) in the set of characteristics required.

In pursuing these fundamental issues, it is necessary to make careful methodological decisions. While longitudinal studies would provide useful insights into the developmental process, time and funding constraints inhibit the conducting of such research. However, investigations have shown how retrospective interview studies with expert performers can provide significant insights into attributes perceived to impact upon talent development (Thomas & Thomas, 1999; Lidor & Lavyan, 2002). Nevertheless the limitations of such retrospective research (e.g. self-report bias, truthfulness, reliability) should also be acknowledged (Sloboda & Howe, 1991; Patton, 2002).

The purpose of the current investigation was to understand the challenges of each stage of musical development and to test the degree to which PCDEs shown as necessary for effective development were phase, activity or individual specific. Given the inevitable variability across different instruments in the age at which deliberate practice can realistically commence, we purposefully sampled male and female musicians from different instrumental and vocal backgrounds.

Method

Participants

Data were collected from a purposeful sample of top-level musicians ($n = 8$; 4 female, 4 male). The performers ranged in age from 35 to 58 years and had begun participating in their activity at between 3 and 5 years of age (Fig. 1).

Procedure

Initially, a graphic time line of each musician's career was developed which allowed an exploration of the pathway to excellence. Through guided discussion, the music career was segmented into stages and transitions. Evolving from this, a semi-structured interview (Fig. 2) was conducted to explore the stages and transitions of music development identified by each participant, together with their use and the efficacy of PCDEs during these stages and transitions. This particular interview guide approach (Patton, 2002) was employed since it specifies topics to be covered during the interview, but does not necessarily dictate the exact sequencing of the questions. Pilot interviews were conducted with performers of similar

Musician	Instrument	Background	Music Education
A	Percussion	Co-principal in leading orchestra	Music college
B	Harp	Internationally acclaimed performer Head of Faculty	Junior music College University
C	Guitar	Internationally acclaimed performer Professor music college Composer	Music college
D	Violin	Principal Violin Internationally renowned	Music college
E	Vocal	Head of Faculty Internationally renowned	Music college
F	Flute	Principal Flute with leading orchestras Internationally renowned	Music college
G	Oboe	Head of Faculty Internationally renowned Soloist	Music college University
H	Piano	Soloist Plays with leading international orchestras Head of Faculty	Music college

Fig. 1 Participants' biographical information

standard to ensure that the interview structure allowed valuable information about the developmental pathway to be elicited (Patton, 2002). Clarification and elaboration probes and prompts allowed participants to expand on answers, and provided the interviewer with an in-depth understanding of the meaning of their responses. All participants completed an informed consent form that explained the purpose of the study and the extent of their participation. Anonymity and confidentiality was assured. Interviews lasted between 43 and 62 minutes.

Analysis

All interviews were transcribed verbatim. The timeline and associated stages and transitions for each musician were clarified, and data from the interviews were analysed and thematically grouped. Subsequently, the challenges and skills associated with each stage and transition were identified. Resulting from this, a report of the music career of each performer was compiled. Inductive content analysis, allowing themes and categories to

- Interview Questions
1. On the timeline, can you draw a 'progress chart' describing what you went through, and when it happened, to get to where you are today?
 2. Describe what happened here...here...here...here...? (Different stages)
 - a. What were you doing here...here...here...here?
 3. What enabled you to get to the next stage?
 4. How did you differ from less successful musicians at each of the stages / transitions?
 5. Did challenges change within stages (from stages to transitions) as you progressed?
 - a. Do PCDEs change during different stages...transitions...describe?

Fig. 2 Interview guide

emerge from the data (Scanlan *et al.*, 1989) was employed, with musicians' quotations used to depict the raw data themes that formed the first level of analysis. This analysis enabled our understanding of the characteristics and challenges of the stages of development and the PCDEs associated with overcoming these to emerge from the data itself. Entire quotations that represented participants' perceptions of the challenges of each stage of development and the PCDEs used to cope with the challenges were selected. A summary statement of each quotation was produced to create raw data themes. Consistent with the recommendations of Sparkes (1998), exemplar quotations are presented here to illuminate the themes that emerged.

Results and discussion

The purpose of this retrospective study was to explore the characteristics and subsequent challenges of each stage of musical development and the extent to which the PCDEs shown as necessary for effective development were phase, activity or individual specific. Therefore the information is organised into three main sections. The characteristics and challenges of each stage of development (organised according to Bloom's classification previously discussed (Early, Middle and Later Years)¹ are presented along with an exploration of the PCDEs that helped the participants to cope with the challenges of developing in music.

Early Years

Firstly, the participants reflected on the characteristics of their initial involvement in music. Figure 3 illustrates the major characteristics apparent at this stage of development.

All the participants reported that they had had an early introduction to music, with each typically commencing involvement at around 3 or 4 years of age. This involvement was

THE EARLY YEARS

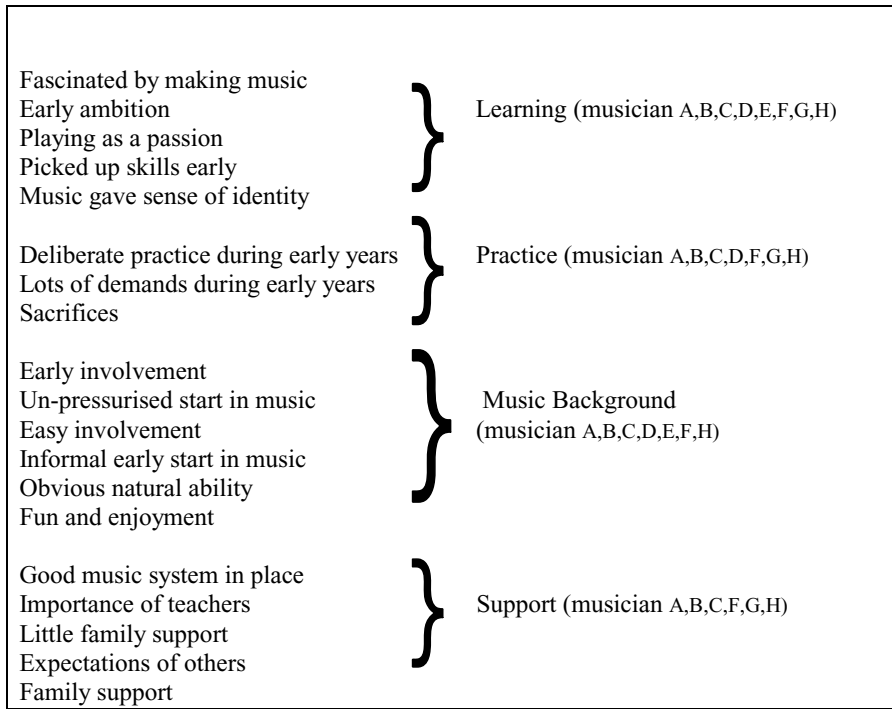


Fig. 3 Characteristics of Early Years of development

generally fun in nature, with most reporting that they did not feel pressurised to take part in musical activities (Bloom, 1985). Indeed all participants suggested that they experienced an early fascination with music (Manturzevska, 1990), that they found the process of making music completely absorbing, and that much of their early involvement instilled in them a love and passion for music. Personal sacrifice and dedication is essential to developing talent to its fullest potential and such commitment is more likely if one is passionate about the pursuit (Csikszentmihalyi *et al.*, 1993).

Despite the literature suggesting the importance of family support early in development (Bloom, 1985) a number of our participants reported that family members were not a significant influence at this stage (van Rossum & van der Loo, 1997). However, the financial predicament of 50% of them did impinge directly upon their early development.

I mean I really wanted to start on the piano but my parents were divorced and I really couldn't afford to do that, they couldn't so I ended up getting that a couple of years later. (Musician C)

Fortunately, most of the participants were able to report that this absence of financial support within the family was compensated for by effective music systems being in place in the school and the community.

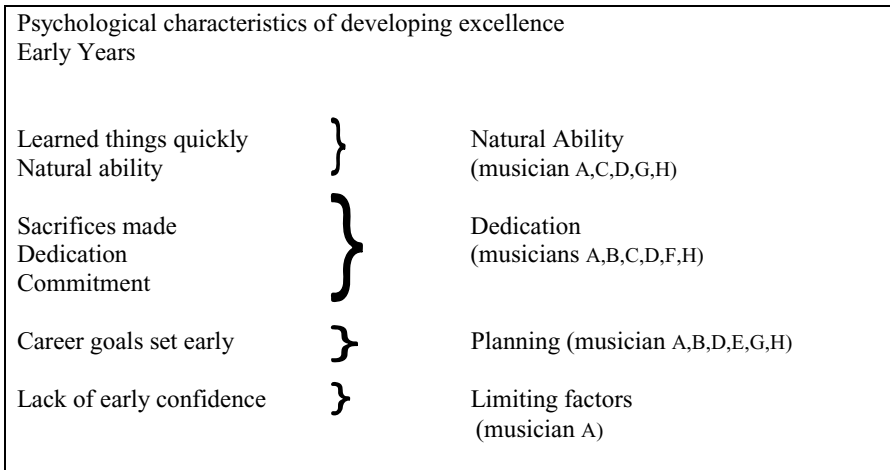


Fig. 4 PCDEs Early Years

I think that that was seminal. [Local Education Authority A] has a fantastic tradition for music and I was just lucky to be in the borough, if I had lived two miles away in [Local Education Authority B] then I wouldn't have got that opportunity, it would have been a completely different story, [Local Education Authority A] had this set up of different orchestras, different standard of orchestras, wind bands and I was able to, I was dropped in it really, I mean they had all these bands and orchestras of different standards but they didn't have many percussionists so I got to play in all of them straight away. (Musician A)

Challenges during the Early Years were negligible for our musicians. Though they were all aware, at least reflectively, of the need and importance of dedication and hard work, and indeed were engaging in considerable amounts of practice, they suggested that raw talent and natural ability were enough to succeed during the Early Years. In fact our guitarist suggested that he 'coasted along' without having to apply himself to the rigours of large amounts of practice.

I had kind of coasted along on natural ability during my teen years and I used to play piano and guitar nearly equally but I got more serious about it around then. (Musician C)

In light of the ease and pleasure that the participants associated with their initial experience they reported few difficulties with coping with this stage of development (Fig. 4). In fact, a recurring theme was that their natural ability, love and passion for music were enough to achieve and satisfy during this stage of their development. However, as suggested previously, they were reflectively aware of the hard work, dedication and commitment necessary to achieve in a musical environment. For some of the participants this awareness

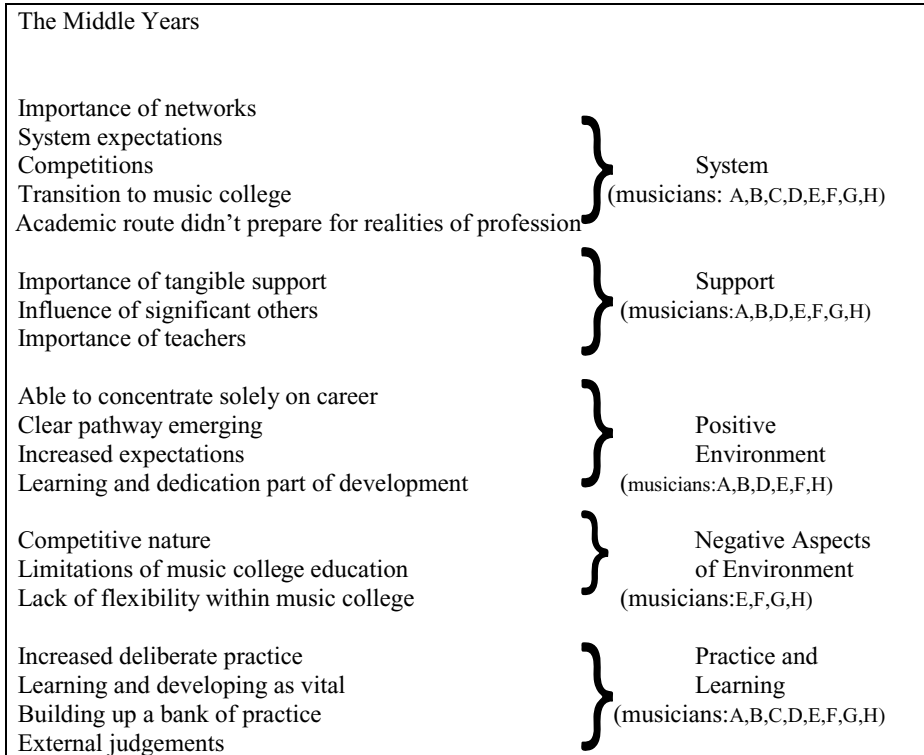


Fig. 5 Characteristics of Middle Years of development

came from their family background:

It was evident that something was going to happen, something big on the flute, and once I got the smell of that in my nostrils and coming from a house where my father practised all day as well, I mean if he wasn't out all day playing the violin he was practising it so I kind of knew that the implication was that that was the level of work so by the time I was 13 it was hours I was spending on practice. (Musician D)

For others, it came from a sense of having to achieve and having clear goals and ambitions. Thus, during these Early Years, it was their enthusiasm for music making that motivated them to devote considerable time to practice.

Middle Years

In contrast to the ease associated with the Early Years of music involvement, the Middle Years presented considerable challenges for our developing musicians. Figure 5 illustrates what was occurring during this stage of development.

The transition into full time music education was a turning point in the careers of these musicians, and it was at this time that they really began to realise what was needed in

order to achieve in music: 'the wheat was sorted out from the chaff in music college'. There came a realisation that natural ability, or musicality, was not enough and the increased expectations and standards required in the conservatoires were paralleled by a marked increase in deliberate practice. Reinforcing the importance of dedication and practice at this stage of development, many of the musicians suggested that some peers, several with less natural musical ability, were able to succeed by being completely focused and determined, such that hard work and practice compensated for lack of natural ability.

Some of the guys who I was thinking oh god you are really not up to much, oh my god they really had the determination. There were a couple of them, they were damned determined and through sheer hard work and grovelling around to ask everyone, what do you think of this bit, tell me about this, what do you think about that? They actually desperately pulled themselves up above their standard, above where they naturally deserved. (Musician D)

Most of the participants suggested that the music system was hugely important for successful development.

The Royal College of Music junior dept was very important for my development, I mean looking back on it I was at an elite training institution and I was very lucky to be at that, and I continued to train at elite places all the way through. And of course the important thing that students get from music colleges is networking (Musician B)

This was especially salient for those musicians who came from non-musical, and often financially strained backgrounds. However, the college environment was not a completely pleasant experience for many of the musicians, with one violinist commenting:

It is a very competitive culture that cannot deal with failure and non-achievement. [...] And it is very difficult when you are at music college to believe that you can do it and then at the same time make yourself do enough work if you think that you are never going to make it. The environment itself was pretty uncongenial. (Musician E)

The adequacy of the learning environment is crucial to the development of talent and therefore music students need to be equipped with skills and competencies that enable them cope with, and thrive in the music college environment. An inability to cope with the stressors of full-time music education can lead to burn out and an inability to fulfil a promising future (Fimian & Cross, 1986). Furthermore, one participant, who now holds a significant appointment at an acclaimed conservatoire, asserted that the 'rigidness and lack of flexibility in music college education' limited the development of many musicians.

You went onto a treadmill and the unspoken goal at the end was if you were a singer you would be an opera star, if you are an orchestral musician you would be in a main orchestra and if you are a pianist you would be a concert soloist, and none of us really challenged that, we weren't really thinking about oh there are 30 pianists this year and there are 30 pianists every year and there are 4 or 5 colleges in London, we are all going to be soloists? NO! (Musician G)

However, despite the increasing expectations and standards demanded during these years all the participants still reported being 'in love' with the whole process of music and

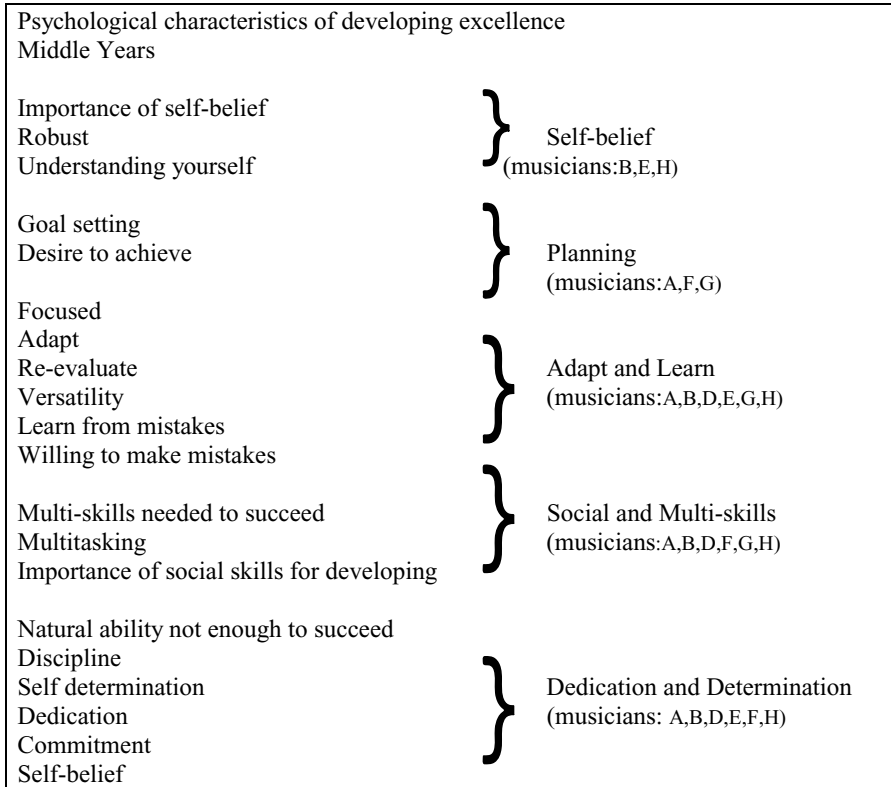


Fig. 6 PCDEs Middle Years

developing in and within a musical environment. Clear pathways emerged for many of them during this time and strategic steps were taken to pursue the goals set. Participants reported a number of characteristics that helped them cope with the exacting demands of developing in music. These are depicted in Fig. 6.

All participants suggested that they were completely determined and committed to the process of developing in music in order to realise their ambitions:

I don't know probably determined, that weird determination that you know that you can do it. (Musician C)

The demands of music college made it necessary for the participants to be disciplined, completely focused on their goals and have self-belief.

Certain amount of confidence in your own ability and I don't think that I ever was in any doubt about that but I was encouraged to believe it too and it was reinforced for me too. (Musician D)

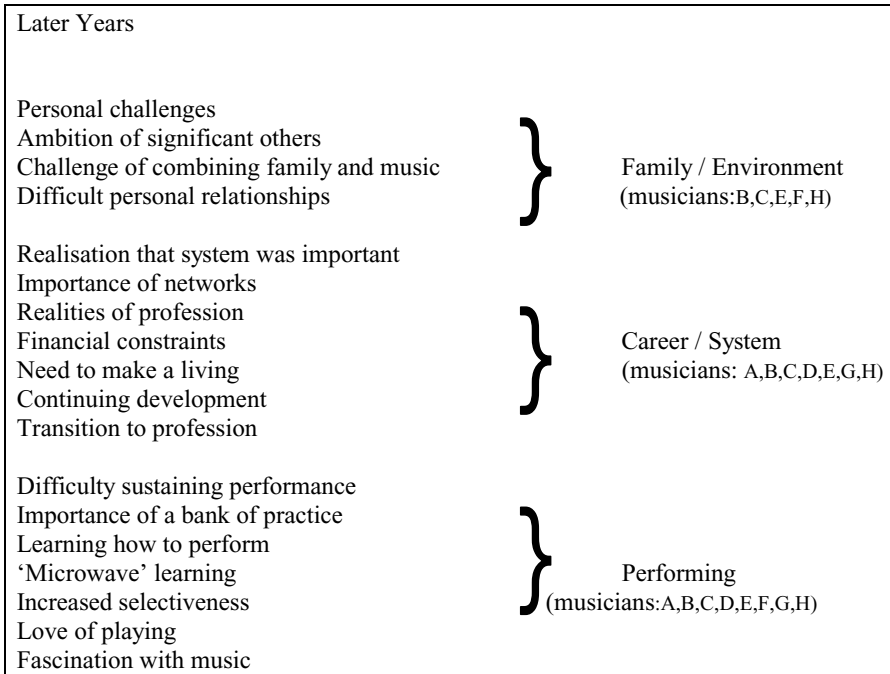


Fig. 7 Characteristics of Later Years of development

It was clear from the interview data that during the Middle Years, self-belief and focus were crucial for coping with the often-competitive nature of music college. Indeed, it has been suggested that those musicians who succeed in pursuing professional music careers have developed successful methods for coping with the competition and pressure of the conservatoire (Burland & Davidson, 2002).

Later Years

Upon leaving the structured environment of music education, the challenges (Fig. 7) of forging a career in music were apparent for all but one of the participants.

This participant had been very successful during her Early and Middle Years gaining international acclaim for her playing. Subsequently upon leaving music college she was given the opportunity to study abroad and a position in a leading orchestra was hers upon her return. For the others, however, the priority during the first years in the music profession was 'survival', with the realisation that there was 'a need to make a living out of playing'. Subsequent financial pressure was a theme that was consistent throughout the professional career of the participants. Thus there was an acknowledgment that ability to play well was not going to be enough to succeed in the music profession and that other qualities are important.

I would say looking back that although I have got, particularly I have got a lot of talent I think that I really really worked hard (Musician F)

You can't go on raw talent, it has to be trained and developed, you have to go to somewhere and you have to learn from someone (Musician A)

As the musicians got older and more established, different challenges presented themselves. For the participant who had been 'somewhat of a child prodigy' there was the challenge of being 'back in the pot' with everyone else. Furthermore, this participant had, until this stage, made a linear upward progression in music and found it difficult to cope with not being able to focus solely on her career when she had a family. This challenge of combining family and playing in the Later Years was a recurrent theme for all the participants. They remarked that the bank of practice and learning that they had built up during their development helped them sustain their playing when they were not able to devote as much time as they would have liked to practising and learning.

I find that if I prepare, if I prepare and manage to convince my subconscious and if that person does stand up in the audience and suddenly the spot light does go on me and they say do you actually know what you are doing I will be able to say yes because I have practised for this really hard for the last week and I actually know a lot about it and I think that if you it's the old 'if you fail to prepare you prepare to fail' . . . (Musician A)

This suggests the importance of sustained deliberate practice during the Early and Middle Years to manage the challenges of these Later Years. In further efforts to sustain the often 'multitask' nature of their playing during the Later Years the participants reported being more selective in what they chose to do. Their career, rather than it being the whole encompassing thing it was in the Middle Years, became much more 'project based'.

Yes and it means that the concerts that I do even though they are fewer, they are really exciting events, I mean two weeks ago I was up at Skye with a trio and I think that we did 12 pieces and 10 of them were world premieres, at a concert in Dartington I had three world premieres with three different composers, now I am not doing things like that on a weekly basis but when they are happening they are really special to me, and you know that is what I want to do . . . (Musician G)

The typical length of a top musician's career is considerable, and the participants noted difficulties in sustaining their levels of performance over this length of time. This factor was highlighted by all the participants, as were the continued expectations, real or otherwise, that were placed upon them to succeed.

However, they were also able to profit from a number of factors that they perceived to underpin successful development at this stage of development (Fig. 8).

One participant, also a teacher in a music college, remarked that only 3% of music college graduates are accepted into orchestras upon graduation. In light of this, all participants remarked that natural ability, though vital, was not enough to succeed at this stage and that perseverance, self-belief, determination, dedication and commitment

Psychological characteristics of developing excellence	
Later Years	
Ability to re-evaluate	} Versatility Adaptability (musicians: B, D, E, F, H)
Versatility	
Creativity	
Uniqueness	
Ability to adapt	
Flexibility / employability	
Looking outside the box	
Striving for new things	
Importance of self-belief	} Self-Belief (musicians: A, B, D, E, F, H)
Stay positive	
Understanding yourself	
Selectivity in later years	} Planning (musicians: A, B, E, F, G, H)
Strategic positions taken	
In control of career	
Determination	} Determination / Dedication (musicians: A, B, D, E, F, H)
Robust to sustain career	
Dedication and commitment	
Personality important	} Multi-skills (musicians: A, B, D, F, G, H)
Social skills	
Multi-skills / multi-tasking	
Discipline	} Discipline (musicians: B, D, H)
Self discipline	
Underlying drive	} Drive (musicians: A, B, H)
Persistence	
Perseverance to maintain progress	

Fig. 8 PCDEs of Later Years

were also crucial. In fact, this compares with earlier development where natural talent and ability were sufficient in order to succeed.

Perseverance and hard work, some people just haven't the commitment to put the work in all the way, not the whole hog (Musician D)

I think that confidence is immensely important especially when you go into recordings and into an orchestra of the top players in London or a top rank conductor then you

really have to go in there fully charged with confidence because if you doubt yourself for a minute you won't survive (Musician F)

In order to cope with the demands of trying to forge a career in music, all participants remarked on the need to be able to adapt and be flexible in their approach to music in order to maximise opportunities. There was also a need to 'look outside the box' and continually strive for new things to extend beyond the 'comfort zone'. In fact, all participants remarked that this ability to offer something different, something unique was vital in order to be differentiated from peers and succeed in the competitive music profession.

So I was always searching and looking for something that little bit different. That wasn't about being different to be different but it was more about a thirst to continue exploring (Musician G)

All participants had played in very high profile orchestras or equivalent and reported several factors that underpinned their success within that environment, where the development of social and interpersonal skills was shown to be particularly salient. One participant noted that until he was able to develop these skills and learn how to interact effectively in an orchestral setting he was not successful in this environment. Indeed these interpersonal skills appeared to be most important at the transition into the full-time music profession.

You have to understand what else is required socially, interaction with colleagues, giving out the right communication, and I think that it becomes really important once you are earning your money doing it actually. (Musician D)

In a similar way to the Middle Years, the Later Years took place within a cauldron of expectation. In order to succeed in these conditions the musicians noted that self-belief was crucial, as was the need to remain positive and engage in realistic evaluation of progress. As one pianist remarked, 'you need to be a perfectionist in practice and a realist in performance'.

Developing within music is clearly not a linear process as is shown in the descriptions provided by our participants. As Bloom (1985) suggests, the process of development is dynamic and complicated, and so the possession of characteristics and skills that enable the best management of that development is crucial. This seems especially apparent at key transitions in development. The most pertinent of these for the participants appeared to be the transition from music college to a professional career, and the literature suggests that this transition is critical for maintaining participation. Indeed, the musicians in this study recognised the personal cost associated with leaving the relatively safe environment of full time music education (with its associated support structures) and the fear and frustration often associated with beginning a career as a performer.

Because of course you have the pressure of earning a living and if you are earning your living just on performance then that is a tremendous pressure. To be self-employed is ghastly it really is, and to be a self-employed performer is really worse (Musician H)

This lack of preparation within music education for the realities of the music profession is a theme found in other research (Burland, 2005) and the musicians suggested that formal

music education did not equip them with the skills and characteristics necessary to thrive in that environment. Indeed, it was suggested that the lack of these psycho-behavioural factors in their peers led to potential not being realised.

This stage was characterised by a sudden awareness of the reality of the profession and importantly, the financial and practical constraints of forging a career in the music industry. Both environmental and personal factors were cited as reasons that the musicians were able to cope, indicating that certain PCDEs are particularly significant at this stage. Specifically, the need to be flexible and adaptive was shown to be an essential element in this transition to a career in music.

The artistry that you require will just keep growing because if it doesn't you will just stagnate and won't get any further it just has to keep growing, you have to keep looking at the way you do things and be prepared to do it differently (Musician E)

Conclusion

This study adds to both the literature and understanding of the relationship between an individual's developmental processes and their environment. Specifically, we are now better able to observe musical development through the structure of current education systems. As such, we are afforded insights into the challenges that musicians typically encounter as they develop, and then sustain their positions within the music profession. This study also illustrates the crucial role played by Psychological Characteristics of Developing Excellence as a means by which these challenges can be overcome. The significance of psychological characteristics (rather than musical talent or expertise) is particularly evident at transition points, the most testing of which is entry into the music profession. The role played by PCDEs certainly merits further research since it is at these points that difficulties are most likely to occur.

Notably, the current results suggest that while some characteristics are indeed generic (e.g. dedication, planning and commitment), successful development in music is also governed by the phase-specific application of certain PCDEs. The data also give a very strong indication of the range of non-musical skills (e.g. interpersonal skills, realistic performance evaluation, goal setting and confidence) that are necessary to gain positions in top class conservatoires and orchestras.

While the current study provides us with an understanding of the challenges of musical development taken to the highest levels, it also demonstrates the clear advantages of the optimal encouragement of PCDEs in a more universal way. It could therefore be particularly productive to discover not only the nature of such PCDEs, but also how they might be fostered. To this end, we can see no reason why the approach successfully tested in sport education (i.e. Developing the Potential of Young People in Sport; SportsScotland), should not serve as a model for music education. This curriculum-based approach to developing and systematically equipping aspiring musicians with PCDEs could well be adapted within a musical context. If the importance of developing key psychological attributes alongside musical skills is recognised, the deliberate development of extra-musical skills necessary for the realisation of individual performing potential becomes a real possibility.

Note

- 1 For the purpose of this study, Early Years will include childhood up to entry into full time Music Education, Middle Years will encompass full time music education and Later Years will refer to the years after leaving Conservatoire or University.

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