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Identifying and Developing Talent in Contemporary Dance

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Abstract: Theories within talent development are well established within sports psychology; further adaptation of this research into dance is required, however. This article explores the application of Gagné's Differentiated Model of Giftedness and Talent (1985, 2000a) in a contemporary dance context. The model's six factors are examined from the viewpoint of other theories within talent development. The article concludes that future research into dance talent development would benefit from a longitudinal study where usefulness of the DMGT could be mapped over time.

Keywords: talent identification, talent development, giftedness, contemporary dance

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Talent development is a troublesome field of research among dance and sport academics because defining talent is difficult. Because the identification of talent is problematic, the best or optimal procedures to develop talent are also surrounded with uncertainty. Talent development is considered to be provision of access to high-quality learning to aid the fulfilment of potential (Williams & Reilly, 2000). While many models of talent development exist for both general populations and domain-specific usage, these were mostly created for talent in academic, musical and sport domains. Although some research does exist within the dance domain, further research is required to reframe current talent development models for use within contemporary dance. This article sets out to suggest some of the benefits and limitations of applying talent development models to contemporary dance.

What constitutes talent in dance has been discussed at length in recent years (Ureña, 2004; Walker et al., 2010). It is generally accepted that talent in contemporary dance is a combination of artistic, physiological, and psychological factors, although there is uncertainty around their importance in relation to giftedness (Gagné, 2000b). Artistic components of talent include creativity, musicality and expressive ability. Redding and colleagues (2011) also found that because dancers are now expected to be more involved with the creative and choreographic process, dancers who show natural gifts in developing artistic ideas are more successful.

Physiological components consist of factors such as aerobic fitness, flexibility, hypermobility and functional skills. Flexibility is typically the first physical fitness parameter associated with dance. Although a key element in executing many challenging dance movements, flexibility is not the only important characteristic dancers need (Angioi et al., 2009). Research has suggested that physical fitness components, including muscular endurance and jump height, are important aspects in attaining artistic ability within dance (Angioi et al., 2009). Most physical fitness parameters, such as aerobic fitness, can be optimised with training and thus, arguably, are not the most important factors in identifying potential (Kozai, 2012; Koutedakis et al., 2007).

Psychological factors that are seen as important factors when identifying giftedness and talent are motivation, passion, determination, self-confidence, focus

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and concentration (Baker & Horton, 2004). The current interest in identifying drive in dancers may be due to new research within the dance field that correlated change in aspiration to dropout amongst young talented dancers (Walker et al., 2012). The research conducted by Walker and colleagues (2012) also reported lack of commitment as a potential cause of dropout, although specific reasons behind this lack of commitment were not given. There is also significant research that suggests psychological skills such as self-talk, imagery and relaxation techniques all assist in the development of talent (Nordin & Cumming, 2008). Elite dancers have been found to use more imagery techniques than their non-elite counterparts (Nordin & Cumming, 2008).

Perceptions of talent

In dance, it is typical for talent to be identified based on current ability and not on the potential to become talented. This emphasis on identifying talent from a dancer's current ability is potentially futile as it does not consider what training dancers have done. Results from the HERITAGE study suggest that individuals respond differently to training in relation to genetic factors (Bouchard et al., 1999). This may mean that a dancer who appears to have low levels of aerobic fitness may have the capacity to improve greatly, in comparison to a dancer who shows comparatively better aerobic fitness but may be less responsive to further aerobic training.

Although identifying talent based on dancers' current ability is typical, it is not the case in all dance talent identification procedures. For example, the Centres for Advanced Training in Dance prioritise 'raw talent' and potential when accepting 10- to 18-year-old dancers to their programmes (Centres for Advanced Training in Dance website, accessed 2015). The practical implication of searching for young dancers who demonstrate potential is difficult, although an overriding theme within recent dance talent identification research is the crucial presence of a drive to dance, as noted above.

Characteristics that are prioritised in identifying talent are susceptible to changes in wider cultural influences (Walker et al., 2010). Research into identifying and developing talent in dance is always going to be problematic, due to the continually changing perceptions of talent. Identifying talent in an 11-year-old dancer who fits the current perception of talent may become difficult when the field of dance is continually shifting: the preferred aesthetic qualities and movement range may change dramatically over the student's years of training. One way to align potential talent with the changing conditions of contemporary dance performance may be to consider talent as a continuous developmental process and not as a destination that is achieved once vocational training is completed.

Gagné's Differentiated Model of Giftedness and Talent

First conceptualised in 1985, Françoys Gagné's Differentiated Model of Giftedness and Talent (DMGT) is divided into six components: giftedness,

developmental process, chance, environmental catalyst, intrapersonal catalyst, and talent. Gagné (1985) defines talent as the systematically developed skills which situate an individual within the top 10% of professionals within the field. His model (2000a) suggests that natural abilities, once identified, can be developed through formal and informal practice, which can be affected by environmental and intrapersonal factors, which are both affected by chance. If the catalysts provide a positive environment for harmonious development, then the individual may progress into the realm of talent. Since 1985, Gagné has updated the DMGT several times; the 2000 update of the model is discussed in this article.

Giftedness

The idea of natural abilities and gifts being a predecessor to talent is an important characteristic of the DMGT, but the classification of giftedness and talent is not universal across the literature. In the British education system, for example, 'giftedness' refers to students who excel in academic subjects, and 'talented' refers to students with excellent practical abilities, such as in the performing arts and music (Service Children's Education, 2008). In contrast, Gagné (1985) defines 'giftedness' as being in the top 10% of an age-specific population in intellectual, creative, socioeffective and sensorimotor skills. This is clearly a dramatically different definition. The identification of this top 10% is problematic in itself, and questions arise as to which procedures should be in place to measure these skills.

Identifying giftedness based on comparisons between children and their age-matched peers has a multitude of uncontrollable variables, such as maturation. Baxter-Jones and Helms (1996) found that successful swimmers and football players had birthdays early in the selection year. This is an example of the 'relative age effect', where older athletes were selected as gifted in sports where the characteristics of maturity were preferred, such as physical size, muscular development and gross motor skills (Baxter-Jones & Helms, 1996). Musch & Grondin (2001) found that athletes whose birthdays fell shortly before the upper age cut-off date for grouping in sports had a greater chance of success. Thus, larger, more mature athletes were deemed more gifted (Musch & Grondin, 2001).

This is one limitation of Gagné's classification of giftedness in relation to age as physical size can affect the perception of giftedness. There is the potential for a young athlete to be wrongly identified as gifted due to his rate of maturation, for example. In gymnastics, pre-pubescent athletes are preferred for talent identification as their small, slender shape fits the aesthetics of gymnastics (Baxter-Jones & Helms, 1996). In dance, however, relative age effect has not been established (Van Rossum, 2006), although some research has suggested a preference towards late maturing dancers (Hamilton et al., 1997). Consequently, late maturing dancers may have greater chances of being identified as gifted in relation to their earlier maturing peers. Maturity is considered within the DMGT's intrapersonal catalyst, but the relative age effect could also be included within the chance factor. Although maturation and physical development are essential to consider throughout the developmental process, they are also confounding factors when identifying talent and thus may need to be considered when identifying giftedness.

Developmental process

Gagné (1985) defines the developmental process as informal and formal learning and practice. In dance, this learning process typically takes place within a dance studio environment where repetitive practice is commonplace. For Ericsson and colleagues (1993), practice that is purposeful and structured specifically to improve performance in a singular domain is termed 'deliberate practice'. One of their studies on talent development in music, for example, concluded that the number of hours spent practising predicted the level of expertise (Ericsson et al., 1993). A comparable study of 200 professional ballet dancers showed a similar conclusion, where 'expert' dancers had accumulated 7,000–8,000 hours of deliberate practice by age 17 (Ureña, 2004).

Ureña (2004) has suggested, however, that in dance simply practising a skill that has already been mastered does not constitute deliberate practice. This could be problematic, as any dance class with a great deal of repetition and little opportunity to develop the material would not count as deliberate practice. Repetition, it could therefore be argued, is a waste of time in the development of talented dancers. Ureña's research (2004) also found that the ballet dancers she studied preferred performing, socially interacting with other dancers, and using artistic expression over deliberate practice, which included taking class, body conditioning, rehearsing, and making technical corrections. This order of preference somewhat agrees with the DMGT in the sense that creating meaningful relationships with peer dancers can work as a catalyst in the developmental process. There is also the opinion that deliberate practice is only a small part of developing, as wider social and cultural influences can help the talented dancer enjoy her individual development experience. While Ericsson and colleagues (1993) conclude that deliberate practice is the single most important factor in talent development, this is contested by opposing research that suggests that natural ability is required in order to develop talent (Gagné, 1985).

Ureña's research (2004), like many other talent development studies, relies on the retrospective memory of talented individuals. This requires a highly subjective data collection procedure that has many methodological limitations due to the issues surrounding memory. Another potential limitation with current talent development research is that talented individuals who may have dropped out prior to the start of the research are not included in these projects. A research population consisting solely of continuing dancers could potentially depict an overly positive experience of the talent development process, whereas a population that includes prior dropouts from a talent development scheme could provide essential information on the experience of the individuals.

Chance

Bailey's concept of the relationship between luck, effort and rewards suggests that if an individual has a genetic advantage for an activity, then he is deemed to be lucky. This natural luck coupled with hard work is the best combination for successful talent development (Bailey, 2007). The next best combination is luck

coupled with not putting in vast amounts of effort, followed by not having been lucky enough to be born with talent but working hard (Bailey, 2007). Bailey's concept is closely related to Gagné's view that an individual cannot become talented without first having natural abilities. The notion that natural talent is derived from the luck of genetics is not something that sits well with the ethics of talent development, however. It is preferable to promote effort and hard work as opposed to genetic luck that compensates for low levels of effort. Emphasis on hard work and effort is supported by theories which advocate effort and hard work through the use of individual goal setting to function as a catalyst towards task mastery (Ames, 1992).

Without chance or luck, gifted individuals may never find that they have the potential to develop talent within a particular domain. The practical implementation of chance and luck is difficult, however. As it is impossible to introduce chance into a talent development process, trialling different activities potentially increases the occurrence of a chance involvement within an activity where the individual shows natural abilities. Coté and Hay highlighted the importance of the 'sampling years' (2002:484), when children should be encouraged to engage in purposeful activity, with an emphasis on enjoyment, across a variety of activities.

A critique of Gagné's DMGT shows that it does not consider the effects of early diversification of activities. Gagné (2008) discusses the importance of enrichment opportunities for developing talent in relation to academically gifted children. Thus, it can be assumed that a gifted dancer who has access to enrichment opportunities would reap benefits. Considering that Coté and Hay's developmental model of sports participation advocates the benefits of sampling years in comparison to early specialisation, it seems somewhat naïve for early diversification not to be included within Gagné's DMGT.

Environmental catalyst

As noted above, luck and chance may occur in an activity-rich environment with many opportunities. The environmental factors in the DMGT incorporate the individual's social context. It is not new to suggest that external factors have implications on the development of talent. For example, research has concluded that growing up in a town or city with a population of between 1,000 and 500,000 is the optimal size to support talent development (Coté et al., 2006). Coté and colleagues (2006) suggest that growing up in an area with a population of less than 1,000 or more than 500,000 people significantly reduces the likelihood of becoming talented.

When considering physical environment, population size appears to make sense as small communities are likely to have greater outdoor space for sports (Kytta, 2002). For dance talent development, the need for outdoor space is not of paramount importance, but the cost of hiring a village or school hall is likely to be less in a small city than in a large one. Thus, these venues are more appealing to freelance dance teachers or small dance schools. Moreover, classes in a large city may be overcrowded, meaning participants receive less one-to-one help from the

teacher (Elgar et al., 2003). One-to-one time is important for the coach or teacher to gain insight into the specific needs of the talented individual.

Other literature has acknowledged the importance of the parents for financial and emotional support (Holt & Dunn, 2004). It is important for parents to value the activity in which their child has a natural aptitude in order to encourage and support development, but family support adapts and changes over time (Coté, 1999). Parents should adopt a leadership role in the younger years of sampling activities, Coté suggests, but then shift to become supporting figures as the psychological needs of their athletes develop (Coté, 1999). Gagné's DMGT contains little explanation of the changing role of catalyst factors over time, and this could potentially be a useful development for future research.

Intrapersonal catalyst

The intrapersonal section of Gagné's DMGT refers to the internal factors that can assist or hinder the development of talent. By considering physical and mental characteristics, Gagné goes further than past models such as Renzulli's three-ring concept of talent (1978), which includes only ability, creativity, and task commitment. Although task commitment is undoubtedly a crucial element within talent identification and development, other factors identified by Gagné such as maturity, motivation, and personality traits are also fundamental in the development of dance talent. Motivation is particularly important and can be affected by many things, such as age. At a young age, motivation is more likely to be from external sources such as parents and teachers (Treasure & Roberts, 1994). As the individual becomes older, motivation may become intrinsic so that she loves participating in the activity for the sake of it, without external influences such as parents (Weiss et al., 2009). This relates back to the importance of the parental support system adapting and changing throughout the process of talent development. The existence of intrinsic motivation increases the likelihood of continued commitment (Walker et al., 2010).

The DMGT also mentions the importance of self/other awareness (Gagné, 1985) because perceived competence is a vital element in the development of talent. Primary school-aged children are likely to be goal-orientated in their approach to learning, meaning they focus on their own personal achievements (Treasure & Roberts, 1994). As they get older, they start noticing the ability of others, and comparisons and competitive attitudes towards peers develop (Treasure & Roberts, 1994). Perceived competence is already known to affect talent development, and some research even correlated low perceived competence to dropout amongst dancers (Walker et al., 2012).

Considerations for practical implementation of the DMGT

Gagné proposes the following hierarchy of importance for the DMGT: giftedness (most important), intrapersonal catalyst, developmental process, environmental catalyst (least important). This hierarchy of components was created with regards

to talent development in academia and thus has limitations in its application to a dance-specific developmental process. Therefore taking into consideration the issues discussed in this article, I suggest revisions to Gagné's DMGT (see figure 1). These revisions aim to incorporate talent identification and development factors which are specific for use within the dance domain.

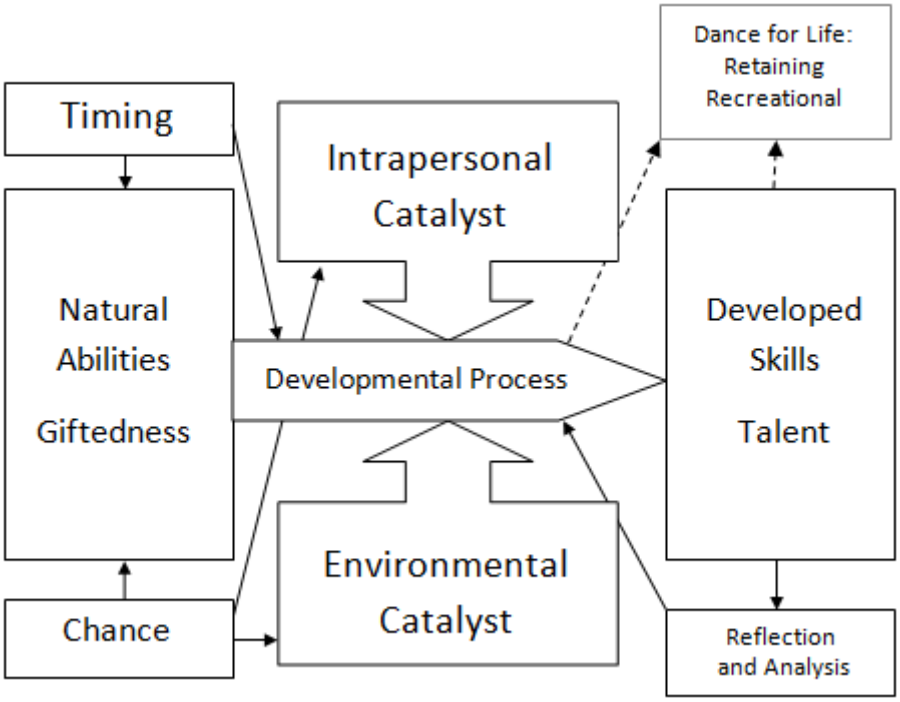

Figure 1. DMGT adapted by the author for use within the dance domain

As noted earlier, a criticism of the DMGT is its lack of consideration of timing, aside from the inclusion of maturation within the intrapersonal catalyst. As discussed, it would be beneficial to include findings from other studies, such as the relative age effect and early diversification. Timing has been added to the modified DMGT in figure 1 to cover problems surrounding maturation and the child's age when specialising in dance.

Another criticism of Gagné's DMGT diagram is that it suggests that talent is an end destination that comes as a result of a positive developmental process. Due to the fact that dance talent is a continuous development, 'reflection and analysis' has been included on the revised DMGT (figure 1). Dance-specific research has noted that psychological demands change for dancers when they become talented (Walker et al., 2010). Once a dancer has been identified as the best in a company and offered a principal role, strategies for coping with self doubt and anxiety may need further development (Walker et al., 2010). Kreiner-Phillips and Orlick (1993) also suggest that talented individuals require more support to cope with additional stress from higher expectations and learning more dance repertoire than their less

talented peers. It is more appropriate to suggest that being talented is a continuous working progress whereby elite dancers continue to develop their abilities.

Thinking further into what happens once talent has been achieved, Bennett (2009) highlights the reality of typically short careers in dance performance. Organisations such as Dancers' Career Development in the UK offer training to dancers who have limited knowledge of a career beyond professional performance (DCD website, accessed 2015). Therefore, retraining and recreational dancing has been included in the revised DMGT (figure 1). In addition, performers and choreographers tend to gain recognition, whereas teachers are often undervalued within the dance field (Burns & Harrison, 2008) despite the need for dance companies to offer workshops and educational programmes alongside their artistic work (Castle et al., 2002). For this reason, teaching should be a pathway throughout the developmental process for dancers.

Future research

Gagné (2000a) proposes that the most useful practical implementation of the DMGT is as an analytical tool to classify information regarding an individual's developmental process. This is of use to researchers who are discussing talent development but of little use to coaches and teachers due to the complexity of the model. There are also issues surrounding the subjective nature of giftedness. It may be easier to implement ideas within the DMGT through set milestones and goals to measure development.

Further dance-specific research within the field of talent development would be beneficial in addressing unanswered questions surrounding the continually changing perceptions of talent. Future studies should be longitudinal in order to follow the progression of talented individuals. Walker and colleagues' groundbreaking research (2011, 2012) into dance talent development was conducted over three years on participants in the Centres for Advanced Training in Dance, and it would be beneficial to have a greater understanding of how the talent of the dancers was measured when they arrived at the programme and how they progressed following the CAT scheme.

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