DIVERGENT THINKING IN MUSICALLY GIFTED PRACTICES: A REVIEW

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Abstract. Divergent thinking is one of the criteria that needed in digging knowledge. It, furthermore, is identified as an innate element and implanted in every gifted individual's identity especially those who are musically talented. Divergent thinking is nurtured through giftedness features that existed in a gifted individual, including a unique neurological system. This study is to provide understanding towards the process of divergent thinking that happen in musically gifted minds. This study is to review the evolution of a creativeness in gifted practices with the exploration on neurology paradigm. This study also proposed a stringent interpretation on how musically gifted individuals think and the importance of divergent thinking to stimulate creative domains. An exploration towards this matter will ensure understanding between gifted and musically gifted individuals to make a good consequence for their future.
Keywords: *music, gifted, neurology, divergent thinking, creativity*

Introduction

The ability to create multiple ideas or solutions from a single concept or piece of knowledge is divergent thinking (Wignall, 2018). It is considered as one of, if not the most, creative factor. Creativity is the ideational production of "creative germs" (Dimkov, 2018) The creative intuition guided by creative motivation or inspiration creates it. Creativity may be a creative process or a constructive one. The phenomenal, logical, causal and correlative aspects of creativity exist. Creativity refers in neurobiological terminology to the degree of entropy, perceived randomness and chance (Dimkov, 2018). It applies existentially to genuineness, creativity, originality and uniqueness. Accordiing to the fountain of the flowing water of human culture, imagination is not only connected with social growth, but also with virtually all aspects of our daily lives. Researchers have long been concerned with the issue of whether creativity can be created through training or not. Various approach and preparation paradigms, for example modeling strategies, structuring group interactions, and offering opportunities, have been apllied to promote divergent thinking (Scott et al., 2004; Smith, 1998). One way of enhancing creativity has shown among the various strategies studied is cognitive enhancement involving an introduction to the ideas of others. Finally, imagination applies philosophically to the interpretation of thought, to clarity and to existential independence. Creativity must be further clarified and objectivized, as it is essential for all human activities, especially at present; in our information and technology epoch. Thus, a synergetic multidisciplinary interaction is needed to overcome the riddle of the process of human creativity.

Several studies have shown that the skills behind imaginative success could be very task-specific, and this suggested possible limits on the potential benefits of varying cognitive training (Baer, 2012). One response to this particular challenge was to develop divergent thinking programs which involved practice in a wide range of divergent, task-specific thinking abilities. The effect of enhancing imagination in different areas has proven to be universal for this method (Baer, 2013). An alternate solution would be to concentrate on different types of creativity; however, no research has been performed on the narrowness of such divergent thought. Previously neuroimaging research investigated the neural creativity based on a wide variety of tasks (for example divergent thinking, perception problems and tasks of artist creation) and measurement methods, for example: task-based fMRI, voxel-based morphometry, resting state fMRI and diffusion tensor imagery. Previous study showed that creative thinking is not connected to a specific region of the brain but to a large brain area. It has been identified from the neurobiological perspective that the dopaminic pathway of mesolimbics is linked to creative drive and motivation (ventriatum, particularly nucleus acumbens), as is known to be linked to motivation (Salamone and Correa, 2012). Flaherty (2005) had previously postulated this hypothesis.

The divergent thinking idea is omnipresent. It is used all over and it has specific connotations. For example, narratives, poetry, dance, and music are among those artistic works in a socio-cultural sense (Pinker, 2003; Spalva, 2013; Md Jais, 2017).This review intends to investigate the effect of a specific, but closely connected, training based on one task on a creative output of that task. The wider objectives are (a) to help creativity scholars understand the essence of divergent thought, which affects creative success and (b) to help educators develop training programs more tailored to specific training goals. Guilford (1956) classical theory of divergent -convergent thinking provides a further development of variability. Divided thought is characterized by various ways of thinking, and no completely full decision can be. Under this respect, a former debate emerges as to how imaginative thinking and intellect contribute. This question could be seen conceptually, as Guilford (1956, 1967) put it, in terms of diverging and converging thought. One may question if there is a difference between varying thought and different intelligences. In comparison, the difference of intelligence and of divergence should be shared when the divergent minds and intellect are strongly interwoven. It seems fitting to research connections between innovation and its variability by embracing a principle of diversive thought outlined in Guilford (1967). Of example, divergent thought is neither synonymous with innovation nor necessary. Thinking differentially is a creative thought, but it applies to imaginative thought (Runco, 2008). The capacity to produce several different ideas in different directions is divergent thought (Runco, 2008). Then it would lead to variability, at least theoretically. We believe that contrasting opinions and differences can still be separated into two different groups.

The root of divergent thinking as such lies in different ideas and directions. The basis of transition is expanded. The goal is to take into account all different ideas and their relationships. These lead to artistic differences because of differences of viewpoint and the links between different ideas. Usually, but not together, they complement one another. Surprisingly, no clear quantitative evidence exists that there is a connection between divergent thought and variability in thought. The analysis of the impact on cognitive ability of background music is found as inconsistent. Many studies confirmed performance changes, for example, music has boosted the imagination and IQ (Ismail et al., 2018; Schellenberg et al., 2007; Mammarella et al., 2007). But many reported a decreased efficiency for example, music discovered by Crawford and Strapp (1994) detrimental to associative and long-term memory learning. In Kämpfe et al (2011) a new meta-analytic study found that background music has overall zero impact on cognitive performance. It has been pointed out by the researchers that this zero effect may be attributable to the average outcome of specific effects and should not be taken in terms of value. The incoherent results of Schellenberg and Weiss (2013) focused on three aspects of music which could have been beneficial or detrimental effects on cognitive performance: music taking on minimal cognitivity, music which can trigger mood and affect rates of excitement. As most gifted students are believed to possess unique traits and asychronous development, an exploration of study on divergent thinking is crucial to set forth a guideline for music practitioners and community members to understand gifted thinking patterns. This is also an advantage for musically gifted students to understand themselves and get ideas to widen musicality, sharpen cognitive and further jump as high as they can.

Identification of musically gifted students

Gifted is one or more areas of ability as exceptionally above average abilities (Gojkov, 2003). She pointed out that some researchers differentiated giftedness from talent. Talent in a certain field is, according to them, a form of gifted created. Based on the above-named expert views, it is clear that the art field (visual, music and theatre) and sports are easier to be recognised as talent. Across all fields in which it is known, the development of talent requires the learning of certain skills. The structured monitoring and encouragement of musical talents and other forms of dovetail are used to build skills that allow the gifted to concentrate on their abilities in the innovative , highly productive task. Musically gifted kids will show their musical skills, their love to music and an overall musical ear at an early age. These features will inspire parents and children to pursue musical education. Md Jais et al. (2018b) proved gifted students prefer specific musical activities to fulfil their needs. Thus, monitoring on the development of music activities for gifted students should be often carried out in schools in which music teachers encourage children to improve their ability through some didactical methods. Assessing the acomplishments and consistency of their skills that the gifted students have learned during each educational process is a basis for recognizing the growth of their creative talent (Ismail and Anuar, 2020; Bogunovic, 2006). Teachers who are teaching gifted students will typically face huge challenge to inspire children, to encourage children to take part in projects, and to develop their talents critically. Teachers are therefore expected to learn about the emotional and cognitive characteristics of a gifted child and to alter the curriculum. In the development of musical skills, the pedagogical style and nature of the relationship that the teacher develops with the gifted students and their parents is always pivotal (Bogunovic, 2006; Md Jais et al., 2020).

It can be a demanding task to recognize musically gifted students. For instance, such students may or may not participate in school music programmes (Welch, 2019). For example, they may play guitar or piano, instruments for which formal bands, orchestras or chorus programs. Highly talented music students would devote regular hours for ensembles, private practice and private lessons. They participate in state competitions or school activities, some of which take place almost every weekend, particularly during the fall semester. In addition, solo and small group competitions usually take private lessons with local experienced musicians to train students individually. Usually, the parents or guardians of the pupils pay for these classes. In some cases, the band, orchestra or choir may have full, partial bonds to help pay for these children, depending on the needs of the family. Generally, two basic strategies are employed to classify musically gifted students: evaluation of shown performance achievement or identification of musical ability. The former is basic, but its process and results are variable. In comparison to the intuitive mode of skills, otherwise called ability, it is the organized part of attaining achievement.

Musically gifted refers to individuals, who seem "more musically" than most other persons, for some reason. In other words, they are more musically conscious, have a better memory, discern rhythmic and tonal patterns more easily, are more articulate and emotionally suited to music (Persson, 2011). There is also a social consciousness of commercial benefit implicit in the word, which may not be an issue at the early development of a musician but definitely becomes an issue when musical performance is a career. Fiddyment (2020) listed the traits and behavior that always shown by musically gifted students as *Table 1.*

Table 1. *Musically gifted students traits and behavior.*

Domain	Traits and behavior
Motivation	Willing to learn music instruments. Commitment to practice. Want to perform perfectly. Willing to learn more than one music instrument, multiple ensemble, music participation, performing opportunities. Enjoys sharing music knowledge and skills.
Interest	Deeply love to music. Musical instrument interest. Listen to music with curiosity and passion. High focus during musical listening or playing. Early age curiosity in music. Actively involve in musical activities.
Communication skills	Very sensitive to sound. Music is used to heal emotional problem. Attracted to the differentiation of harmonic progressions with tension, dissonance, suspension, and resolution. Creatively interprete music.
Problem solving ability	Innovate music using technology. Understand music by exploring interval. Create new ways to cater technical problems such as fingering.
Aural acuity	Can identify perfect pitch. Can play music instrument based on inner hearing. Ability to notice melody or harmony. Ability to create chords into single notes by ear. Ability to “hear” music from reading notation.
Inquiry	Experiments with rhythmic patterns. Imitates a favorite musical genre. Improvises on melodies and harmonies.
Insight	Can read music without training. Comprehend advanced concepts in music theory and harmony. Can apply theoretical knowledge in analyzing a music masterpiece.
Reasoning	Understands the use of musical patterns.

	Understands the functions of complex harmonies.
	Incorporates the rhythm division by measure and note.
Imagination	Knows how to harmonize song without training.
	Ability to compose songs.
	Utilize non- musical items as artistic/musical norms.
Memory	Can reproduce melodies from listening to music from young age.
	Can memorizes melody line in a short time.
	Ability to learn new songs.

Source: Fiddyment (2020).

Inculcate divergent thinking through music

A research which reported that participants who heard music composed by Mozart had a superior space capacity compared to those who sat in silence aroused scientific interest in the potential benefits of music for cognition (Rauscher et al., 1995). The perceiver's excitation level and mood, which can influence output in different cognitive tasks, is believed to be the "Mozart Effect," which is known as this finding (Phillips et al., 2002). Even if the influence of music on cognition has been explored extensively, only very few studies deal with the effects of music specifically on creative cognition are accessible to our best knowledge. Adaman and Blancs conducted a study using the music to create either a "depressed," "elated" or "neutral" mood, followed by a subject that completed a divergent task of creativity. The results were important when compared to the 'neutral' mood increased (i.e. the amount of uses generated) for both 'depressed' and 'elated.' There was a substantial increase in score for the originality of produced uses for 'depressed' mood, but not 'elated.' The stimuli used was however notably a sequence of 20 minutes of music tapes developed by Pignatiello et al. (1986), validated by monitoring the heart rate and diastolic condition and testing the reliability of the inter-raters in mood induction. It is not clear exactly what kind of music has been submitted, yet importantly, so we are going to come back to this topic later in the article. Importantly, there was no requirement for silence and only one dimension of creativity was calculated by divergence of thought. Ilie and Thompson (2011) analyzed the output of participants on the task of creative insight following introduction to music varying in pitch height (high or low), speed (fast or slow), strength (loud or soft). Participants listening to the high-pitch musicians were more effective in solving their insight than participants listening to the low-pitch music, and mediation analyzes showed the full emotional valence associated with their music mediated by the influence of pitch height on insight task results.

Eventually, Yamada and Nagai (2015) performed an experiment comparing participants who did a task of imagination when listening to cheerful music from a group that listened to the Japanese Constitution. New names for rice were demanded from participants. There have been five examples of non-existent names, all of which end with the word hikari. Names produced that ended with hikari, which represent fixed and restricted thought processes (i.e., convergent thinking), were regarded as common ideas and atypical ideas while names which did not end with hikari, represent free and uncompromising thoughts (i.e., divergent thought). The amount of convergent ideas was not affected by the sound being played before the creativity tasks, but for a community that listened to positive music before the creativity challenge, the amount of divergent ideas was greater. The writers have interpreted that being in a good mood allows flexible thought and thus contributes to unconventional or atypical ideas.

The dual path to the creativity model claims creative thinking is based on persistence or flexibility and situational variables can influence creativity either by affecting persistence, flexibility or both (Nijstad et al., 2010). For instance, a detailed review of a variety of possibilities and perspectives can be carried out. But it can be fine to search elsewhere when you get caught in a rut, instead of digging deeper. In developing countries, neonatal kill rates are high because they are due to the unavailability of resources to repair high technology incubators. As seen in the following question, a flexible thinking style can contibute to well-being. "Digging deeper" options may be to improve the technology further, so that incubators are not breaking down and educating local people to fix those high-tech appliances. An incubator from car parts is a innovative way of thinking flexibly and searching elsewhere, because developing countries have mechanics with knowledge of car equipment. A versatile way of thinking does not only apply to a certain creative field but also to artistic and verbal creativity and scientific creativity (Mednick, 1962). In the previous research, participants helped to generate more innovative ideas on the divergent thought tasks. It is noteworthy that listening to happy music did not lead, contrary to divergent expectations, to greater success in convergent creativity tasks – given previous results, to promote convergent thinking (Buisonjé et al., 2017). After listening to happy music, the increase in divergent but not convergent thought can be explained by the fact that the converging tasks depend less on fluency, versatility than on the appropriate solution.

Additionally, early music training can lead to changes in brain structure (Gaser and Schlaug, 2003). The variations in grey matter volume between professional musicians and amateur and motor, auditory and visual-specific music were noticed in the use of voxel-based morphometry (VBM). Gaser and Schlaug (2003). More precisely, the musician status was positively associated with the volumes of the precentral gyrus, the gyrus from the left and the parietal cortex from the right. Although there were no white matter variations in this research, there were also records of large corpus callsus studies on individuals with comprehensive music training (Lee et al., 2002) and more effective white matter organisation (Schmithorst and Wilke, 2002). Thus, music training in both hemispheres seems to be likely to raise grey matter volumes, and there is some evidence to suggest that musicians can even alter the interaction of the two continents. Compared with non-musicians, musicians own a behavioral discipline and may have an anomalous cognitive predominance in their hand training and use of a nondominant hand in their training because most instruments required that the artist works with both hands (Hassler and Gupta, 1993; Hassler, 1990). Such results indicated that skilled musicians can do better in cognitive tasks than non-musicians, as the essence of their long training involves two brain hemispheres, effective inter-hemisphere interactions and the integration of distributed neural networks. The increased IQ scores of musicians, which is significant in itself, were important findings in the previous research. Studies have shown that music is advantageous for improved verbal control (Chan et al., 1998).

Music cognition in gifted mind

The relationship between the "Musical Mind" and general cognitive processing has long been of empirical interest in the context of the cognitive psychology of music. Inherently multidimensional is this area of science. Although some research areas concentrated on the connections between musical skills and other domain skills-including language, space awareness or math, other studies explored the hypothesis that music can improve the general domain skills-such as concentration , memory, and other skills as schooling, or simply as parallel processing of other cognitive acts. Although some research concentrated on the impact of music training, it was less common to examine how musicality and giftedness can affect cognition and behavior (Ismail and Anuar, 2020; Md Jais et al., 2018a). The neuroscientific findings concerning the giftedness related to Hoppe and Stojanovic (2009) that provides optimum performance at (individual) arousal levels. Our hypothesis is that the initiation of frontal activation may be a sign of the crucial transition from optimum medium excitation to tension, as revealed in neuroimaging studies (i.e. mental overloft). The theory is that frontal activation does not directly contribute to the task, but instead suggests unspecific neurocognitive behavior with ability limitations that is potentially harmful and unspecified. Thus, gifted and non-gifted individuals are frequently subjected to the same activities regardless of their different skills (for example, in school lessons). Maybe with very little or modest effort in these activities, the former achieved good performance, which improved positive attitudes and practice (Hoppe and Stojanovic, 2009).

The effect of the three modalities of "musical mind" expression deciding the musical activity – musical interpretation, development of music, and musical composition – has been explored in the field of musical listening and music expertise. Several studies have gathered evidence to support music's causal role in affecting other fields, while others have concentrated on correlation. In addition, given the wide range and differential nature of musical associations with non-musical cognition, some studies have examined the role of music in human mind development and how music affects human knowledge. Due to neurophysiological differences, which influence neuronal performance, gifted children can learn quicker and more efficient than others (Ismail and Annuar, 2020). This hypothesis is backed by the results of several neuroimaging studies. Whereas the psychological explanations for other scientific methods (e.g. working ability of memory), psychosocial (e.g. earnings), biological (e.g. gender) or genetic (e.g. complex polymorphism) are used to describe giftedness, neuroscientists have searched for structural and functional brain covariant causes. The mental causes of loss of control in neurologically patients investigated (and continue to be examined) by classical neuro-psychology; modern brain science was intended to explain the intact cognitive function. Non-invasive (e.g. EEG and MRI) approaches can track the structures and functions of the brain in healthy persons during their cognitive activities (Hoppe and Stojanovic, 2009).

Taking into account that music cognitive is neurologically distinct from others (Peretz and Zatorre, 2009), which has identified systemic differences and changes in brain activation patterns by the use of electroencephalographic (EEG) and neuroimaging techniques when contrasting musicians with non-musicans. However, when imagining music and composing (Gaser and Schlaug, 2003; Münte et al., 2002; Petsche et al., 1993), there are intra-group differences which indicate that an amazing performer doesn't have the skills to be equally amazing composer. There is also positive but more conclusive evidence that qualitative disparities occur when contrasting general musical cognition with talents in music (Shuter-Dyson and Gabriel, 1981). The processing of musical data is inherently complex and has additional functions for a musically gifted person. A musical product is actively and deliberately produced, reproduced, developed, analyzed and/or transmitted. Lower order musical thought can become more organized, provided the existence of the required conditions. The genetic potential (Hunt, 1997), a substantial ability to easily and efficiently handle and learn everything musically, and socio-emotional support during development of skills (Manturzewska, 1990).

A research of this sort may also explore cognitive and behavioral improvements in combination with brain changes in music training. There is a common perception that learning to play a musical instrument in childhood promotes cognitive growth and contributes to skills enhancement in a wide variety of extramusical areas, which are commonly regarded as transmission (Bangerter and Heath, 2004). A closely resembling domain and the transfer domain (normally called "near transfer," e.g. fine engine skills that developed when learning the play of a Musical Instrument lead to improved speed and accuracy in the typing) is the most frequently observed transmission type. Although near-transfer effects are fairly normal, "far-transfer" is notoriously difficult to show, in which the relation between training and transference areas is far less apparent (e.g., reading and executing correctly from musical rhythm and mathematical fractions). There are suggestions that the performance of a space, statistical and intellectual quotient (IQ) (Chan et al., 1998; Forgeard et al., 2008) is far from instrumental musical training, but these results have been controversial (Steele et al., 1999).

As demonstrated in human and animal studies (Dahmen and King, 2007; de Villers-Sidani et al., 2008) and musical study begins before birth (Huotilaine and Naeetänen, 2010), auditory experiments have influered early brain development. Music perception can cause various limiting and paralyzing structures in children and adults, and enhance the communication network. Music modulates the synaptic plasticity in human and animal brains and facilitates neurobiological processes, neuronal learning and change (Rickard et al., 2005; Fujioka et al., 2006). A study by Haslbeck et al. (2020) proved that brain structure namely as thalamocortical synchronization was found centered at the temporal lobe and prefrontal cortex and extended to orbitofrontal areas and previous sections of the left additional drive region. It is believed that music rhythmic training will promote breathing, imitation and movement synchronization, not only in premature infants, but also in pre-term babies. The finding indicated music processing can have an early impact on broad brain networks and even affect higher cognitive networks. In the other hand, Limb and Braun (2008) studied improvisation in professional jazz pianists using functional MRI in order to explore the neural substrates underlying the spontaneous musical output. Through two paradigms commonly differenced in musical sophistication, they found that music improvisation was reliably distinguished by a dissociated activity pattern in the prefrontal cortex compared to development of overlearned musical sequences: substantial disabilities of prefrontal and lateral orbital dorsolateral regions based on media prefront (frontal) cortex as shown in *Figure 1*.

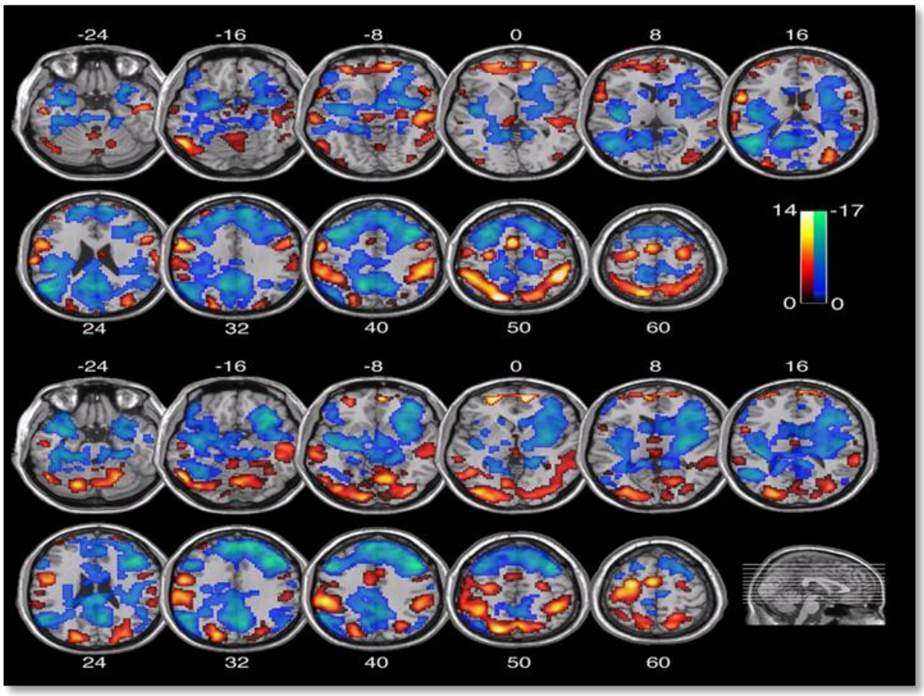

Figure 1. *Brain paradigms associated by music improvisation.*
Source: Limb and Braun, 2008

A deep passion for music is typical in children with ASD, as indicated by Temple Grandin (Grandin and Cook, 2004). In seven of 11 individuals who were diagnosed with this condition, Kanner (1943) registered exceptional musical memory. The first systematic attempt to define superior output in a musical task found that reproducing atonal melodies in children with ASD was superior, as compared to IQ matching children normally developing (TD). In children with ASD, there have been frequery studies in children since the study of musical pitch and timbre increased, including absolute pitch. Until now, these atypical musical abilities have been interpreted as an improved perceptual transformation of the music structure that is characteristic of this condition, on the premise that children with ASD the dominance does not achieve a cognitive understanding of music (Mottoron et al., 2006). Recently however, neurological evidence was raised against the theory (Gebauer et al., 2014). In that study, the emotional response neuronal correlated to music were compared with the neurotypical controls for adults with ASD using functional MRI scans. The findings showed that the neural networks were identical in both groups when emotional music was being processed. Nevertheless, increased activity in the ASD group was found in the reaction to joy compared with sad music in the dorsal prefrontal regions as in the rolandic operculum/insula, indicating improved cognitive awareness and physiological anticipation in the reaction to the emotions in this group of musicians (Masataka, 2017). Such results indicated that an artistic emotional response may occur on its own if music was heard in individuals with ASD, of whom some exceptionally musically gifted individuals were identified.

Intelligence neuroanatomic development is complex. Evidence analyzed over 6 years showed that the pattern of improvements in cerebral cortex space thickness, rather than cortex size, was closely correlated with intelligence levels in a retrospective IRM analysis of intellectual ability and cortic growth in 300 kids and teenagers (Shaw et al., 2006). More interestingly, in the high IQ community, the thickness of the cortex became smaller, but rapidly increased so that the cortex became substantially thicker than normal, especially in the prefrontal cortex, as the gifted children reached their adolescence. So, the neural structure of the gifted brains of infants, at least in the frontal cortices, may be hypothesized that varies from those of their peers. The precocious academic success of gifted children can be linked to an early maturation of their frontal lobes. This is consistent with previous evidence. A diffusion tensor imaging (DTI) analysis of the white matter ties of creativity, as assessed in the Torrence Test of Creative Thinking (Samco et al., 2005), offers additional evidence of more synchronised hemispheres recruitment by gifted individuals. Creative individuals in frontal networks have more structured white matter that serves semantonic processing, work memory and focus. Conversely, less imaginative individuals had more ordered white content in a temporal network that was primarily connected to syntactic processing and memory recovery. The findings from an earlier ERP study by Carlsson et al. (2000), which found substantial discrepancies between frontal behavior of high and low creative subjects, were also clarified by the results of this analysis, consistent with Duncan's 2001 adaptive frontal function model: the high creative group used bilateral prefrontal regions, while the weak creative group had the predominance of frontal functions. The highly innovative bilateral utility is compatible with O'Boyle 's bilateral model of mathematical ability (O'Boyle et al., 2005).

Conclusion

In summary, the findings of this review analysis have shown the existence of divergent thinking in musically giftedness. While not the entire the areas of the brain exhibited functional changes that suit grey matter, our review offer insight into the function and structure of the divergent thinking as the main element in musically gifted students' forte. It is promising to find that divergent thinking can be accomplished not merely through preparation, but also by means of complex cognitive abilities such as imagination, such as physical training (for example, juggling, golf, balancing). Of course, it is exciting to develop human imagination through well-designed programs that can contribute to social development and human civilization. Extrapolating the inherent third process dynamics with regard to divergent thinking process enables qualitative miniatures in border situations to be evaluated by themselves in theory implies collecting phenomenal data by means of questionnaires (qualitative studies). This will build on many levels an idiosyncratic continuum or a phenomenological set, inhabited by both psychological and cognitive phenomena of creativeness, due to their presence and their reciprocal differences from dialectic leaps. Therefore, the phenomenological, psychological, causal and related elements of the creative process may be associated. The effect is the development of a single creative variable does reflect a specific person's creativity level in general. The creativity variable is then used by statistical techniques to calculate creativity in quantitative ways. We also proposed a shared room in the artistic variation. For fewer creative people, divergent thinking should be created to stimulate creative domains. This is why the variability is increased. In addition, motions and changes between remote ideas may occur in the larger mental room.

The subjective interpretation of musicians and their instructors as well as audience is absolute and exceedingly measurable. Any empirical model of musical talent must accommodate such a subjective fact, so that musical talent would not become a construct of little value and ecological validity. The influence of music must also be interpreted in differentiating between gifted and non-gifted musically cognition, on the basis that gifted musicians are more emotional than the general public. Hence, their consequences must also be considered.

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