



Art Competitions as a Tool for Students Creative Growth: Neuropedagogical Factors

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Abstract: *The article discusses how gifted and talented students and youth represent a valuable resource for every country, enabling effective development and the constructive resolution of current economic and social challenges. Gifted students' identification, support, and mentorship have become particularly important today. Art competitions foster creative growth, offering students opportunities to nurture their talents and skills. When designed with neuro-pedagogical principles, these competitions become powerful catalysts for creativity. They stimulate neurocognitive processes that boost dopamine levels since the expectation of winning, recognition and rewards activates brain systems associated with motivation and pleasure. This, in turn, encourages the generation of new ideas and innovative solutions. The article explores neuro-pedagogical factors that enhance students' creative development, outlines the traits for identifying gifted students for participation in art competitions, confirms that such competitions foster creative growth, and provides practical recommendations for teachers and organizers on designing these events in line with neuro-pedagogical insights.*

Keywords: *gifted youth; art competitions; creativity development; neuro-pedagogical factors*

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1. Introduction

Artistic creativity as a component of art competitions serves as a powerful mechanism for spiritual transformation and a catalyst for self-realization within the cultural sphere, shaping one's cultural awareness. The results of arts education and creativity are frequently demonstrated in various competitions, exhibitions, and festivals.

The variety of competitions across social and cultural fields indicates the rise of a unique form of activity, namely, a competitive one. This highlights the need to study competition as a form of cultural engagement that stimulates personal involvement, where creative potential is realized, and abilities and interests are developed.

Domanska (2012) suggests that an art competition can be seen as an evolving system of social interaction that develops through competitive activity. Behavioural patterns observed in competitions reflect one's innate drive for achievement and self-realization. Thus, competition can be viewed as a specific method of organizing activity within a socio-cultural framework.

Karpash (2019) believes that cultural activity, as part of art competitions, supports self-realization, including that of one's abilities, needs, talents, and creative potential. Cultural activity lacks fixed parameters for each person or type of activity and is characterized by creativity, freedom, and imagination. Creativity is seen as a process of personal self-realization, uncovering one's abilities and talents and manifesting them in the values created by the individual.

Cultural activity within art competitions is not the work of a single individual or a dispersed group, but rather a distinct form of integrated collective activity, always marked by an evaluative aspect. Assessing whether a social activity is cultural or non-cultural involves evaluating its impact on individual development and essential capacities. In today's context, social activities that positively influence the comprehensive and harmonious growth of individuals are considered cultural. Conversely, activities that impede the development of one's abilities and talents, or hinder personal growth and self-realization, are deemed non-cultural.

Cultural activities within art competitions are regulated, with relevant frameworks established by social institutions. Thus, art competitions can be qualified as cultural activities, given that they meet all the criteria for evaluating such activities.

As noted by Chittick (2011), not all competitions facilitate personal self-realization; only those where individuals are active participants offer this potential. The process of achieving success is seen as a chain: motivation – activity – self-realization – result – achievement. A competition is considered activity-based if it follows this structure.

Understanding the specific features of art competitions is crucial for exploring other aspects of competitive activities in additional education settings for students. Identifying key concepts that characterize art competitions helps in analyzing the essence of the “art competition” concept.

Art competitions are structured as activity-based processes designed to help participants understand and transform their surroundings. According to the definition of activity as a specific form of human interaction with the world, it encompasses purpose, means, results, and the process itself.

Chi & Snyder (2011) illustrate the application of neuro-pedagogical principles in art competitions and provide examples of their effective use across various educational settings. Ongoing research in this area is expected to uncover the full potential of neuro-pedagogy in enhancing the creative capabilities of children and youth. Additionally, Hasson & Honey (2012) have created practical guidelines for teachers and competition organizers on how to structure these events based on neuro-pedagogical concepts.

This article aims to study the neuro-pedagogical factors that support students' creative development, identify traits for recognizing gifted and talented students and youth for art competitions, demonstrate how art competitions can promote students' creative growth, and, finally,

offer practical recommendations for designing these events in alignment with neuro-pedagogical principles.

2. Neuropedagogical factors enhancing students' creative development

Creativity, from a neurobiological standpoint, involves the ability to produce new ideas, unique solutions, and unconventional connections. This process relies on the interaction of various brain regions, each fulfilling distinct roles. Key neural mechanisms underlying creativity include 1) the default mode network (DMN) which is activated during daydreaming, fantasizing, or free association and frequently gives rise to original ideas; 2) the ventral parietal cortex which integrates diverse information and fosters new neuronal connections; 3) the medial prefrontal cortex which is essential for decision-making, risk assessment, and emotional regulation; 4) the striatum which is associated with motivation and pleasure, driving creative activity (Jung-Beeman et al., 2004).

Art competitions act as powerful stimulants for creative processes rather than merely being contests. They engage neurocognitive mechanisms that boost dopamine levels since the anticipation of success, recognition, and rewards triggers dopamine systems linked to motivation and pleasure. This process encourages the generation of new and unconventional ideas. Competitions also provide an environment that promotes intensive divergent thinking, crucial for idea generation, activating brain regions such as the prefrontal cortex, parietal lobe, and temporal lobes (Chi & Snyder, 2011).

Regular engagement in creative activities through competitions helps form new neural connections and fortify existing ones, enhancing the brain's flexibility and adaptability. Moreover, the creative process within a competitive setting can effectively combat stress through the release of endorphins, which act as natural painkillers and mood enhancers.

Art competitions can be a powerful catalyst for students' creative development, with neuro-pedagogical factors playing a vital role. Neuropedagogy explores the relationship between brain function and learning processes. When organizing art competitions to foster students' creative growth, it is imperative to consider the following aspects (Sternberg & Williams, 1998):

- *Creating a stimulating environment.* Engaging in creative projects through competitions can help develop neural networks linked to creativity and innovation. A stimulating environment enhances students' emotional and motivational states.
- *Supporting individual needs.* Recognizing and addressing students' unique characteristics can optimize the learning process. Neuropedagogy highlights the importance of accommodating different learning styles and individual traits to achieve optimal results.
- *Activating creative thinking.* Structuring competition tasks to encourage creative thinking can positively affect brain activity, particularly in the right hemisphere, which is crucial for generating innovative ideas.
- *Fostering positive emotions.* Participation in competitions can trigger positive emotions such as joy from accomplishments, ambition, and self-realization. These feelings can boost dopamine levels, which are beneficial for learning and creativity.
- *Applying multisensory learning.* Incorporating various sensory inputs (visual, auditory, tactile) into competition tasks can enhance material comprehension and activate multiple brain regions.
- *Ensuring discussion and feedback.* Reflecting on and receiving feedback about students' work can support their development, especially in brain areas related to self-evaluation and self-awareness.
- *Stimulating innovative thinking.* Competitions can challenge students to find new solutions and ideas, aiding the development of brain structures involved in innovation.

Therefore, art competitions can be highly effective for nurturing students' creative growth, particularly when designed with neuro-pedagogical principles and adapted to participants' individual needs and learning styles.

3. Practical recommendations for teachers and competition organizers on designing events with neuropedagogical principles

Neuropedagogy examines how one's brain functions during the learning process. Applying these principles to the design of art competitions can create a more effective and stimulating environment.

There are some key strategies: 1) *fostering a positive emotional climate* implies making the competition engaging by incorporating elements of play, competition and rewards, as well as acknowledging and celebrating all participants' achievements, no matter how small, to enhance their self-esteem and motivation; 2) *promoting a supportive atmosphere* means creating a comfortable and non-threatening environment where participants feel safe to make mistakes and take risks (Lustenberger et al., 2015); 3) *providing diverse tasks* incorporates a mix of individual and team tasks to develop various skills and includes movement activities to improve concentration and memory (it is also advisable to use a blend of music, visual arts and literature to stimulate different areas of the brain); 4) *encouraging various types of thinking* involves designing tasks that engage divergent, convergent and critical thinking skills (Hasson & Honey, 2012).

While direct research connecting neuro-pedagogical principles to art competitions is still limited, there are many successful examples of them being applied in educational settings. Further research should uncover the full potential of neuro-pedagogy in enhancing the creative abilities of children and youth.

4. Discovering Gifted and Talented Students and Youth for Art Competitions

Gifted and talented young people are a crucial resource for any country, fostering its development and helping to address current social and economic challenges. They also play a key role in achieving personal fulfillment and social integration.

The growth of such talent is driven by critical factors such as cognitive skills, creativity, and personal attributes. However, creative potential does not arise on its own and must be cultivated. Several elements shape the development of creativity: heredity, structured education, self-motivation, enjoyment of the creative process, and the influence of one's environment (parents, teachers, peers).

Discovering these talented individuals for participation in art competitions is vital to helping them unlock their full creative potential (Yashchuk, 2013).

Below are strategies for discovering talented students (Sternberg & Williams, 1998):

- *School and University Competitions.* It is essential to host regular competitions within educational institutions, covering diverse artistic disciplines such as painting, music, dancing, and literature. A panel of professional artists and educators should be employed to ensure a fair evaluation of participants' creative work.
- *Creative Workshops and Seminars.* It is crucial to organize workshops and seminars with established artists, allowing students to display their talents and refine their skills. These events provide an opportunity to observe and identify standout individuals.
- *Partnerships with Art Organizations.* It is important to collaborate with both local and national art organizations to co-host events and competitions. This gives students the chance to perform for larger audiences and attract expert attention.
- *Establishing Art Clubs and Groups.* It is imperative to involve students in various art clubs or groups where they can develop their abilities under the mentorship of experienced teachers or artists. Monitoring their participation helps to identify gifted individuals.
- *Hosting Exhibitions and Performances.* It is advisable to organize exhibitions, concerts, and similar events where students can showcase their work to the public. These platforms provide an excellent opportunity to spot talented students for future competitions.

- *Collaboration with Teachers and Parents.* It is vital to engage teachers and parents in the talent identification process since they can offer valuable insights into students' achievements at home and in school. Most importantly, it is necessary to ensure a supportive and nurturing environment to encourage the growth of creativity and talent.

According to Berehova & Volkov (2019), key approaches to developing children's talents for participation in art competitions are the following: 1) nurturing curiosity as the foundation of learning; 2) strengthening cognitive processes; 3) cultivating creative imagination; 4) broadening understanding of the surrounding world; 5) encouraging creativity; 6) enhancing communication skills; 7) fostering empathy, kindness, negotiation abilities and the capacity to compromise, while overcoming egocentrism.

To support this, it is crucial to establish an environment that a) provides the child with diverse aesthetic experiences, b) fosters creativity, c) sparks a desire to experiment, d) lays the groundwork for various types of children's activities within a unified cultural framework, e) creates opportunities for success through participation in festivals, competitions, city events, conferences, seminars and olympiads (Berehova & Volkov, 2019).

Before all else, it is important to define creativity, as well as a creative individual. Creativity involves the urge to accomplish something never done before or to achieve it in a new and improved way. In essence, creativity always seeks progress, advancement, and perfection. It is a purposeful human activity that generates new, socially valuable ideas and solutions.

As stated by Ros (2017), the traits of a creative personality are as follows:

- They identify and question established knowledge and explore new possibilities.
- They are flexible thinkers, with diverse perspectives and a broad outlook.
- They tend to blend various discoveries and ideas.
- They gain satisfaction from the creative process.
- They are persistent and energetic.
- They are confident in their assessments, filtering out promising ideas and finding successful solutions.

Positive experiences in art competitions can inspire a lifelong active and engaged lifestyle. By creating opportunities that encourage an active approach to life, competitions, and festivals play a vital role in the development and socialization of students.

Socialization refers to the process in which one becomes integrated into society, actively acquiring its social experiences, roles, norms, and values essential for leading a successful life in that society. If creativity does not become a core value during adolescence, its development may stagnate in the future. Failing to nurture personal creative potential at this stage can lead to significant difficulties later in life. Therefore, one's creative development is vital, serving as a lifelong journey of understanding one's place in the social structure.

Competitions and festivals, therefore, serve as highly effective means of encouraging a child's creative engagement. One of the main aims of these events is to discover and foster gifted, creative, and talented students. For organizers, it is essential to unveil new talents and support their creative growth.

A gifted child displays remarkable, often outstanding, achievements in a particular area (or demonstrates the potential for such accomplishments). In today's art and psychological education, there are two opposing perspectives on giftedness: gifted students are extremely rare against all students are gifted (Dean, 2010).

Proponents of the first view see giftedness as a unique phenomenon, while others argue that nearly any healthy child can develop into a gifted individual under the right circumstances. Each viewpoint has its merits and drawbacks.

There are many ways to define giftedness: early and late, actual and potential, general and specialized, among others. Many agree that giftedness in students is not a fixed concept but a dynamic one. The extent, nature, and development of giftedness are always shaped by a complex

interaction of heredity (natural predispositions) and the socio-cultural environment, facilitated by the child's activities (play, learning, work).

There are several categories of students commonly identified as gifted: 1) students who achieve high scores on specialized intelligence tests (intellectual giftedness); 2) students with notable creative talents, such as young musicians or artists (creative giftedness); 3) students who consistently excel in academic performance (academic giftedness). (Flôres & Ginsburgh, 1996).

Most students possess the potential to develop some form of giftedness, which is often a blend of different abilities. Creative giftedness, in particular, is not solely about high-level achievements but also about the continuous transformation and growth of those abilities. Creative activity, initiated by the child, naturally evolves as they develop new ideas through their work. At the same time, the child's initiative is especially crucial in fostering this development.

Competitions play a vital role in students' personal growth and development. When organized effectively, they can contribute to a child's overall development and help build important qualities, including willpower, character, and resilience.

Through participating in competitions, children gain a better understanding of their abilities, build self-confidence, learn to take calculated risks, and experience their first steps in measured risk-taking.

Positive experiences in competitions can have a long-lasting impact, influencing an active and engaged lifestyle for many years (Gong, 2018).

Creatively gifted youth tend to be sociable and open to broader social interactions. They should be encouraged to engage in both social and creative activities, particularly since they often exhibit emotional resilience and handle criticism and personal setbacks more calmly.

Thus, participating in creative festivals and competitions can significantly enhance the development of both individual students and their peer groups, especially during their school years.

According to Sternberg & Williams (1998), several personal traits can influence the development of giftedness, both positively and negatively: a) *positive traits* include strong cognitive motivation, a developed achievement drive, healthy self-esteem, low anxiety levels, self-confidence, and emotional stability; b) *negative traits* that hinder the realization of creative potential include an underdeveloped motivational sphere, a strong desire to avoid failure, low or overly inflated self-esteem, heightened sensitivity, fear and lack of self-confidence.

Therefore, when working with students, it is crucial to follow the principles of humanistic psychology, providing an environment free of judgment and fostering acceptance, security, and support, as these are essential for nurturing creative giftedness in school-aged children.

At this stage, one of the key goals is to help students build self-confidence, believe in their abilities, and develop a positive outlook toward themselves and the world around them.

5. Competitions as a Pathway to Student Creative Growth

Competitions and festivals serve as powerful tools for sparking and enhancing a student's creative potential. One of the most effective ways to inspire creativity is by encouraging participation in artistic events, such as concerts, performances, festivals, or competitions (Nerubasska & Maksymchuk, 2020). Students are eager to both showcase their talents and observe the talents of others. While taking part in creative competitions is important to them, the recognition of their efforts, particularly the opportunity to win, holds equal significance. The teacher's role is to guide students in their self-expression and ensure that this phase of their creative journey is successful.

Competitions fulfill multiple purposes, with one of the primary objectives being student development. Achieving success in a competition reflects the outcome of a close collaboration between the student and the teacher, offering a valuable indicator of the quality of their joint efforts. Unlike traditional school assessments such as exams, tests, or public performances, competitions introduce a unique competitive element that demands a higher level of skill and effort from both students and educators.

Participating in competitions provides students with the opportunity to step outside the regular classroom environment, experience new interactions with peers, expand their professional horizons, compare their achievements with others, and evaluate the overall standard of artistic performance among their peers.

Given that there are different types of competitions, it is crucial to distinguish between a competition and a festival. Additionally, it is essential to establish a gradual, well-thought-out plan for participation in these events. Many factors need to be considered, such as the student's actual abilities, level of preparation, and competitiveness, to realistically assess their chances of success.

The word "competition" is derived from the Latin "concurrere" and means merging, collision, or meeting. A competition is designed to identify the best among participants.

This inherently involves a struggle. The higher the level of the competition or festival, the greater the level of competition; it becomes increasingly challenging, requiring participants to have not only professional skills but also substantial experience in public performances.

A festival is a broad public celebration that includes a review of achievements in a particular art form (Nerubasska et al., 2020). Participation in a festival offers the chance to gain experience in creative communication within the context of the celebration, enjoy the creative process, and interact with peers in a relaxed setting.

Competitive festivals, which have recently grown in popularity and significantly refreshed current competitive practices, better address the cultural and educational needs of society. By merging the elements of both festivals and competitions, these creative projects provide more freedom and flexibility in their organization, a fuller representation of children's creativity, and the chance to hold workshops for students with the involvement of experienced professionals.

Besides, these events are excellent starting points for students, involving more participants and teachers compared to traditional "academic" competitions, and serve as valuable additions to the educational process.

The primary focus of such programmes is the development of students' creative personalities. Equally important is the involvement of parents, who may not always fully understand the goals and significance of competitions for young artists but play a crucial role in the child's artistic growth in line with the festival's objectives (Nerubasska & Maksymchuk, 2020).

Festival competitions create an environment that avoids harming the child's psyche, which is often a problem in traditional competitions. The key for a participant is to experience the stage, feel their presence on it, observe others, and receive feedback and advice. Performing on a large stage boosts confidence but also demands higher levels of knowledge, skills, and mastery, providing an additional incentive to improve.

Art competitions and festivals offer a condensed, intensive experience in skill-building over just 3-5 days. Experience shows that participating in these events helps both students and teachers significantly enhance their qualifications, gaining valuable impressions, information, and practical experience.

For students, these events are an opportunity to showcase their achievements, gain audience feedback, and potentially receive invitations to local and international competitions. Participation helps students evaluate their skills, understand the level of others, and expand their repertoire with works they enjoy. The next step in developing creative confidence and experience, and gaining additional motivation for active self-realization, is performing on a larger stage, such as a festival.

Winning a creative competition acknowledges artistic abilities; it opens up broad opportunities for winners to realize their creative potential and provides not just moral satisfaction.

Teachers are responsible for shaping the form of a student's participation in a competition. Although a teacher's influence is evident in the student's work, the goal is to ensure this influence remains subtle so that the competition material highlights the student's talent rather than the teacher's ambitions. However, festivals and competitions are memorable not only for the victories

but also for the interactions, connections, and impressions gained. The atmosphere of the festival affects the competition results and contributes to each participant's creative growth.

6. Conclusion

The significance of the article lies in its demonstration that participation in competitions is a vital component of a student's creative life, offering substantial educational benefits when effectively used. For students, especially children, knowing that their creativity is recognized and valued is crucial.

Given that success matters to them, it is vital to ensure that their experiences in competitions and festivals are engaging, rewarding, and conducive to success. Selecting and preparing for olympiads involve daily, demanding tasks for teachers, often with varying levels of success. The essential challenge is to persist and remain committed to the educational mission, namely, guiding students through the world of art.

The article also highlights that art competitions can be a significant tool for fostering students' creative development, with neuro-pedagogical factors playing an important role in this process. Neuropedagogy is the study of how the brain interacts with learning processes.

By fostering an environment that encourages active life stances in the younger generation, competitions, festivals, and celebrations serve a crucial role in the development and socialization of students.

Despite advancements in neuro-pedagogy, applying its principles to art competitions presents certain limitations. It is difficult to pinpoint which changes in participants' behaviour and outcomes are specifically due to neuro-pedagogical principles and which are influenced by other factors such as age, experience, or motivation. Conducting neurocognitive research with children involves ethical constraints, particularly concerning invasive methods. There is no universal approach to studying the neurocognitive underpinnings of creativity and differing methods among research groups complicate result comparison.

Broader implications of applying neuro-pedagogical principles to art competitions include the potential for creating individualized development paths based on participants' neurocognitive profiles. Insights into how the brain processes information can lead to more effective teaching and training methods. Implementing neuro-pedagogical principles may enhance the development of creative abilities in children and youth. Understanding neurocognitive mechanisms can also lead to more inclusive and accessible artistic programmes. Neuropedagogy has the potential to become an interdisciplinary field that connects researchers, teachers, and artists.

Future research areas might include the application of virtual and augmented reality technologies, the creation of interactive environments for developing creative skills, exploring the effects of neurofeedback on creativity, developing personalized creative development programmes based on neurocognitive data, studying the long-term impacts of participation in art competitions designed according to neuro-pedagogical principles.

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