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Identity, stereotypes, and prejudices in intercultural education and the role of computers in ADHD

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Abstract

The educational area of primary education is faced with most issues and problems due to the linguistic, religious, and cultural diversity of students, which is constantly growing numerically. Suddenly, elementary schools have become places where students speak different languages with each other, bring different cultures and cultural elements due to their various countries of origin, and have special educational needs. Regardless of what the reasons are for a newly formed multicultural social reality, education as an essential institution of society in global, European, and local contexts is called upon to think about and find appropriate solutions, to initiate and implement actions to update itself, to change the educational philosophy, the general principles, its targeting by subject, the methodological-educational/teaching approaches, the educational material, printed and digital, and accordingly to train its teachers. The heterogeneity of the student population in terms of language, religion, or ethnicity is an indisputable fact for educational systems. During the educational process, we teachers are called to educate our students equally and equally, regardless of their country of origin and any of their differences, and this constitutes the pedagogical contract of morals and universal values for us. The goal of the current study is to gain an understanding of terms such as "identity," "stereotypes," and "prejudices," as well as therapeutic approaches used to help children from racial and ethnic minorities who are suffering from ADHD. These approaches include games using Computers.

Keywords: Attention Deficit Hyperactivity Disorder (ADHD); Social and Emotional Development; ICTs; Learning; Metacognition; Ethnic Minority Children; Multicultural Education

1. Introduction

The issue of otherness does not only concern schools that have foreign or minority students. In many different ways, otherness exists and manifests itself in every school context. No homogenous classes exist, even in schools with a purely ethnic student population. When arriving in a foreign country or cultural context, most immigrants must deal with the acculturation process (Schwartz et al., 2010). Comprehending the acculturation process is necessary to comprehend the experiences of minority children. One of the acculturation models that is most commonly cited is Berry's two-dimensional model, which focuses on acculturation at the individual level (Berry, 1980). According to this concept, a person's level of acculturation can be assessed in terms of two factors: how they feel about their community and the preservation of their original culture, as well as how they think about other communities and their desire to interact with their new surroundings (Berry, 2006). It is crucial to remember that these guidelines are flexible and flexible. By Berry's (2003) definition of biculturalism, an individual is considered bicultural if they can maintain their native ethnic heritage through language, behavior, and knowledge while still developing strong ties to and participation in their host society's culture. LaFromboise et al. (1993) clearly stated the concept of biculturalism. According to several studies conducted in recent decades, it is the most flexible and "ideal" stage of acculturation in terms of the mental health of

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adults and children (Berry 1997, 2017). It is essential to view acculturation as a multifaceted process influenced by various elements, such as socioeconomic status, geography, and life-changing events (such as political and legal developments about immigration). It can either hasten or impede the healing process in light of the previously described factors (Lopez-Class et al., 2011).

Attention Deficit Hyperactivity illness (ADHD) is a complicated neurological illness about which there is currently a shortage of scientific knowledge regarding its causes and available treatments, according to Drigas & Driga (2019). It has been established that several factors, including the mother's psychological condition, the family's socioeconomic standing, and alcohol and tobacco use during pregnancy, are significant. Lack of focus and impulsivity are the primary signs of ADHD, which are caused by abnormalities in the brain regions that regulate executive processes. The basis for an individual's organizational abilities, task focus, emotional regulation, and self-evaluation is laid by these cognitive processes, which include memory and attention. A dopamine system malfunction, an imbalance between the prefrontal cortex and the amygdala, or injury to the prefrontal cortex are the leading causes of difficulty with executive processes and, consequently, cognitive and metacognitive skills. Furthermore, the cerebellum is essential because, without input, the prefrontal cortical networks malfunction, preventing people from developing hierarchically ordered behaviors (Drigas & Mitsea, 2020; Heatherton & Wagner, 2011).

The "heart" of metacognitive skills, according to another study by Drigas & Mitsea [6–8] that offers a multilevel metacognition model, is attention, which takes part in processes like choosing, filtering, suspending, processing, storing, retrieving, predicting, monitoring, adjustment, adaptation, recognizing, distinguishing, remembering, and knowledge transformation. This paradigm states that every level represents a higher-ranking control system that defines the metacognitive development of the individual. A more complicated kind of self-awareness and self-observation are experienced as one advances from the lowest to the highest levels of metacognition, which results in developing a more advanced control system. As a structured assessment paradigm, this multilevel metacognition approach might be applied to meet the needs of students in different types of schools and at various levels. From this perspective, the student is seen as an accumulation of physical, emotional, cognitive, and spiritual needs that develop throughout time.

2. The concept of "Identity"

The concept of identity is difficult to define. "Identity," according to Vryzas (2005), is an ambiguous word. On the one hand, it means a) the absolute similarity or equality between individuals, groups, opinions, things, or symbols identified with each other. On the other hand, on the contrary, b) denotes the set of characteristics that differentiate someone or something from something else. "Identity" is an object of research in psychology, social psychology, and anthropology. Psychology deals with individual identity, the process by which the "self" is constituted about the "other." Social psychology investigates "identity" at the level of groups (collective identities). Anthropology, finally, studies the cultural differences between societies and how, in various cultural systems, human communities define their "self" about nearby "Others."

The answers are inexhaustible if we want to answer "Who am I?". They could, according to Zurcher (1977), be classified into four major categories: A) in the biological self, which includes physical characteristics, such as "I am tall," "I am dark," B) in the social self, which concerns a specific social position, such as "I am a student," "I am French," C) the psychological self, whose characteristics are given meaning solely by social status, although not related to a specific social position, such as "I am attractive, "I am a democratic person," and D) the universal self, which includes universal characteristics, i.e., common to all individuals, for example, "I am human."

Self-awareness and realizing our identity go through accepting the other's identity. Bragado (1992), in his book, formulates the position that: "identity is formed in part by recognition or non-recognition, and often by misrecognition by others," while non-recognition can create some threat to the existence of the another (Maratou-Alibrandi-Galinou, 2000). Damanakis (1989) underlines that in the socialization process of these groups, we should accept their intermediate culture as equal to the cultures of the country of origin and the host country and help the actors develop their identity and language in a bicultural and bilingual environment.

3. Individual and Social Identity

Damanakis (2007) argues that "individual (personal) identity" signifies the uniqueness of each individual and can be considered from at least two perspectives: A) from the subjective perspective, i.e., how the individual himself perceives his identity, himself (self-perception, self-determination, subjectivity) and B) from the objective perspective, i.e., how others perceive the person's identity and what kind of characteristics they attribute to it (hetero-identification).

Social identity usually places the individual in some social category, position, or status. In other words, self-image, how a person perceives himself, can depend to some extent on his belonging to various groups and specifically on the difference between his group and the group of others. Each person can simultaneously participate as a member of many social groups of different sizes. Such social aggregates are the family, the genus, the tribe, the nation, a professional group or class, a voluntary organization, a religious community, a political party, the football team fans, the whole of humanity, etc. According to Vryzas (2005), five essential characteristics can be distinguished in a collective identity:

- Continuity and transformation. There is no identity without transformations. However, it is about an internal transformation, constant renewal, and change.
- Within the identity, the subjective and the objective are connected at every moment. An identity other than mine is, for me, an object; it is objective about me. The subjective and the objective are two closely related aspects of identity.
- The identity is active. Each element it contains acts upon the others and is affected by the others.
- Identity is a totality. However, it is a whole that combines different elements and can be analyzed in an almost endless game of differentiated actions.
- Identity, finally, is characterized by the variability of all its aspects, factors, and categories.

These five characteristics are the constituent elements of a collective identity. However, only some things are found in every identity or presented similarly. Collective identities vary.

4. Stereotypes and prejudices as shapers of identities

Stereotypes and *prejudices* are two factors that play a decisive role in the formation of identities. Two of the most characteristic cultural constants observed in most communities worldwide are stereotypes and prejudices, the oversimplified but mostly distorted beliefs formed by community members, which have as their object of reference specific categories of individuals and groups (Fein, 1993).

The question posed as a goal, and a bet for Intercultural Education is how to weaken social stereotypes and prejudices. To answer this key question, we should first know the nature and essence of stereotypes and prejudices and their recent reconstitution in our new societies. "I am aware of the impasses and am fighting for their removal." More than mere knowledge is required here. Awareness is also needed to understand situations and the relationships between cause and cause (Dovidio, 1995).

Awareness of stereotypes and prejudices is essential for children to confront differences creatively. Awareness of stereotypes does not mean discovering a deficit in our knowledge about "others," but awareness and critical confrontation with the fact that children are receiving messages concerning the interconnection between specific characteristics, such as skin color, ethnic origin, gender, etc., with social power, social privileges, or social discredit. These processes characterize the "culture of dominance" (Gardner, 1994).

5. The stereotypes

Origins, principles, family and national, religious, educational ideals, and stereotypes of all kinds determine and shape the identity of individuals and societies. As stereotypes, we would characterize any categorical generalizations - not exclusively hostile - about people or social groups that ignore individual or social variety and difference. Filias (2000) points out that the term stereotype is used to describe ideas and images that are ready inside our heads and hinder the operation of judgment because of pre-formed judgment.

According to Niethammer (2002), identity is an absolute value easily connected to other absolutes, religion, mythologized history, and sovereignty. Stereotypes function as isolation fuses and landmark mounds of identification. During the school years, students form parts of their individual, national, collective, social, and cultural identity in the school space and alternative learning environments, such as museums, theaters, archaeological and educational spaces, art galleries, etc. However, it is now evident that our students are educated in multicultural classes, where diversity is - perhaps- now the norm and not the exception.

Consequently, as Hontolidou (2008) mentions, school classrooms function as spaces of cultural production, constructing identities. This allows the creative construction of a new discourse in the school, a challenge we can take advantage of. The teacher and the students can only change by producing new discourses through which they can read their actions, act differently, and construct different subjectivities (Walkerdine, 1981).

Negative prejudices and negative stereotypes as forms and contents of communicative practice reproduce and rationalize precisely this situation. As an example, we can mention Elias's (1994) research, which documented that the construction of the "dangerous" and "immoral" foreigner is a functional part of the efforts to preserve the monopoly management of social goods by the majority. It was also shown that the greater the inequality in power relations between groups, the stronger the prejudices and the greater the rejection of minority groups' efforts for social inclusion and equal treatment.

Through intercultural education, the elimination of discrimination and exclusion is sought, recognizing that different cultures do not stand side by side but come into contact, increasingly all having equal value. Children must, and it is necessary from an early age, be aware of their culture and perceive the presence of other cultures in their country or countries. Children need to feel their identities and differences, primarily through cross-cultural messages and values that emerge from the texts or individual descriptions of heroes and their book activities.

6. The prejudices

Prejudice is an opinion or view that has been formed in a non-objective/scientific manner. It is often formed due to a need for more information or reduced perception. Prejudices, for example, are various solid beliefs that man has, not through knowledge (i.e., from the truth), but from multiple superstitions, beliefs, mysticisms, superstitions, teleologies, eschatologies, metaphysical beliefs, racisms, nationalisms, etc. (Dovidio et al., 1995).

Markou (1996) emphasizes that prejudice, racism, and discrimination are still severe problems in our societies and that students come to school with negative attitudes toward their classmates from other ethnocultural groups. They also show that positive intervention efforts can reduce these attitudes and develop positive attitudes in school students. Families and the media can also play an important role. Most approaches to reducing prejudice in school emphasize certain factors of the school environment, such as teaching materials, training programs, etc.

Prejudice differs from stereotype in that it is an exclusively unfavorable attitude toward a group or its members. As noted by Kostoula-Makraki (2001), prejudice is characterized by stereotypical beliefs and stems from procedures carried out on those who hold this attitude rather than from verifying whether the group has the attributes attributed to it.

Depending on where we come from, we have many kinds of prejudices. There are religious prejudices, racial prejudices, social prejudices, cultural prejudices, and linguistic prejudices. By following prejudices, we isolate ourselves from other people. We develop phobic, defense, isolation, psychosomatic, and aggressive syndromes. The question is, "How can we weaken negative stereotypes and prejudices in today's multicultural school?"

Any positive or negative evaluations that are made based on the speech are part of what we mentioned above, while the identification of evaluative judgments concerning an entire group with those that refer to each member is a given. Within these frameworks, however, linguistic attitudes cannot be left out, as the assets of rationalized perceptions and values are intertwined with the value dimension of language (Moschonas, 2003). So, speaking of linguistic biases, we notice that the focus is now on the linguistic level of social representations, which are reproduced through linguistic elements taken as characteristics for the particular linguistic expression of the speakers of a specific group (Labov, 1972).

7. Causes of ADHD

Although the exact cause of ADHD is still unknown, numerous studies have been conducted recently to try and understand the disorder's nature. Countless genetic, neurological, environmental, and even psychosocial elements appear to be at play. Nonetheless, most research findings suggest that genetic and neurobiological elements are crucial (Barkley, 2003).

7.1. Genetic factors

Hereditary predisposition to ADHD is considered a significant contributing factor to the illness. Research has shown that children who have parents with ADHD diagnoses are 50 percent more likely also to have the disease, and siblings have a 33 percent higher chance of developing the disorder (Barkley, 2003; Kring & Johnson, 2019). Tannock (1998) states that numerous research using twins and adoption as models have demonstrated that hereditary factors cause 70–80% of ADHD cases through heredity. According to research on monozygotic twins, siblings of hyperactive children frequently exhibit the same hyperactivity. In contrast, dizygotic twins (DZ) have fewer symptoms (Barkley, 2003). These

studies show that the environment has little effect on the disorder's occurrence. Moreover, it has been shown that mental illnesses, behavioral issues, and substance addiction are frequently present in parents and other family members of children with ADHD (Kring & Johnson, 2019).

One of the main objectives of current molecular genetics research is to identify the genes responsible for ADHD. The study concentrates on two distinct genes associated with dopamine: the DAT1 gene, which is the dopamine transporter, and the DRD4 gene, which is the dopaminergic receptor (Kring & Johnson, 2019).

7.2. Neurobiological factors

Many investigations carried out in the 20th century have discovered parallels between individuals with ADHD and those who have suffered frontal lobe injuries or brain infections. Consequently, scientists have connected the illness to neurological origins (Barkley, 2003). Later, variations were discovered in the brain's left temporal lobe and frontal lobe using magnetic resonance imaging in kids with ADHD (Biederman, 2000). In particular, damage to the frontal lobe of the cerebral cortex causes cognitive problems with attention retention, emotional self-regulation, working memory, and behavioral organization. In contrast, the temporal lobes are responsible for auditory differentiation and processing issues. Sieg et al., 1995; Grattan & Eslinger, 1991).

Children with ADHD have been found to have substantially less blood flowing to their brains (Sieg et al., 1995). Additionally, studies using the PET (positron emission tomography) approach by Zametkin (1990) revealed that persons with ADHD had reduced glucose metabolic activity. It is also crucial to remember that the research's neuroimaging techniques failed to find any evidence of structural brain damage. On the other hand, it was noted that children without ADHD had smaller prefrontal cortex and basal ganglia, two brain regions linked to ADHD (Barkley, 2003).

7.3. Environmental factors

ADHD may have perinatal, postnatal, or prenatal origins. Numerous studies indicate that nicotine is harmful and increases the risk of ADHD in offspring born to smokers. Research by Milberger (1996) found that moms who smoked heavily every day while pregnant were responsible for 22% of children diagnosed with ADHD. As a result, a fetus's exposure to tobacco use may indicate when signs of ADHD may manifest. Studies on animals have revealed that while nicotine deficiency may result in irritability, enhanced dopamine release from nicotine ingestion may produce hyperactivity (Vaglenova et al., 2004). Lead and alcohol are two other hazardous substances to which the fetus may be exposed. According to Thompson et al. (1989), lead exposure may be linked to symptoms of attention deficit hyperactivity disorder.

Nutritional aspects have equal significance. Some claim that even basic meals like corn, milk, eggs, and sugar might trigger sensitivity, while others claim that certain foods' additives and dyes can stimulate the central nervous system of children with ADHD. Additionally, Grizenko et al. (2008) used interviews to gather information about the psycho-emotional states of pregnant women whose children had been diagnosed with ADHD. In light of their findings, they contend that the likelihood of severe ADHD symptoms in offspring increases with the level of stress a woman endures during her pregnancy.

7.4. Psychosocial factors

The most widely accepted theory about the genesis of ADHD places the most significant emphasis on genetic and neurological factors. On the other hand, several studies have concentrated on psychosocial variables and how much they influence the onset of symptoms. The results indicate that while psychological variables may not be the primary cause of the condition, they may amplify its symptoms (Barkley, 2003; Kring & Johnson, 2019). Genetic and neurological aspects are influenced, in turn, by the nature of the interaction that children with ADHD form with their parents, particularly with their mothers (Hinshaw, 1997). Due to their inability to manage their children's symptoms, their parents typically have a terrible relationship with them, which in turn causes the children to behave in a challenging manner (Kring et al., 2019). According to research by Arnold et al. (1997), fathers of ADHD-diagnosed children were also ineffective in raising their offspring, indicating that parental psychopathological disorder may have a direct impact on the development of ADHD symptoms in their offspring.

Parental behaviors that are dysfunctional when it comes to an ADHD-affected child, like psychological deprivation or rigorous control, can lead to disputes that can make the child less obedient or even generate additional difficulties. Lastly, social factors within the family, such as the parent's income and educational status, social class, or occupation, can influence the symptoms of ADHD anywhere from 0% to 6% (Barkley, 2003; Kring & Johnson, 2019).

8. ADHD and Computers

Prem, Mohanraj, and Samuel (2020) studied the effects that computer interfaces have on the brains of children with ADHD. The Brain-Computer Interface (BCI) is a new technological system of intervention that improves the attention of people with neurological disorders, such as Attention Deficit Hyperactivity Disorder (ADHD). BCI can be used to monitor the brain's activation during an activity, particularly its attention levels and the level of hemispherical balance (Carelli et al., 2017). Using BCI to improve attention in patients with attention disorders is a relatively new approach. BCIs use mathematical algorithms to decipher the neurophysiological signals of the nervous system. Patients can monitor and control their brain activity through "neuro bio-feedback therapy." BCIs typically use magnetoencephalography (MEG), near-infrared spectroscopy (NIRS), functional magnetic resonance imaging (fMRI), electrocorticography (ECoG), and multi-electrode intracranial implants (Mehdi et al., 2016). A meta-analysis shows that the effects of neurofeedback in children with ADHD increase over time while the effects of medication decrease, thus indicating the long-term effectiveness of neurofeedback (Van Doren et al., 2019). In this research, there is a critique for applying BCI in attention issues, both for healthy individuals and for individuals with various cognitive disorders, such as Attention Deficit Hyperactivity Disorder (ADHD), Amyotrophic Lateral Sclerosis (ALS), Autism Spectrum Disorder (ASD); post-stroke disabilities, cognitive deficits resulting from brain and spinal cord injuries, and dementia. For this purpose, after sourcing the databases PubMed, Web of Science, and Scopus using the terms "brain," "interface," "computer," "training," and "neurofeedback," 23 surveys were retrieved and studied (Prem et al., 2020).

The brain-computer interface has been suggested as a neurofeedback therapy for children with ADHD. Jiang et al. (2011) designed a BCI-based 3D game to improve attention. Precisely, users control the movement of a virtual hand via a 3D animation technique, and the BCI processor tracks their attention levels. Another group of researchers evaluated an intervention program that included sensors and Bluetooth technology with a CogoLand game. After the intervention, parents observed a significant improvement in symptoms in their children with ADHD (Lim et al., 2012). Neuroimaging studies have shown that the brain functions that control selective inhibition in children with ADHD can be normalized with neurofeedback therapy (Beauregard & Levesque, 2006). Munoz et al. (2015) developed a video game using BCI to monitor the neurophysiological signals of children with ADHD. The game's name was "The Harvest Challenge," and the setting was a coffee plantation. Games (Drigas et al., 2015; Papanastasiou et al., 2017) enhance the ability to wait, schedule, and follow instructions to achieve goals. When these skills are improved, impulsivity can be brought under control.

Qian et al. (2018) used the fMRI method to examine changes in brain function when using BCI. After the training, the intervention group's inattentiveness symptoms were significantly improved compared to the control group. The researchers also observed an improvement in behavior and an acceleration of brain maturation in children with ADHD. Another study by Sciberras et al. (2014) found that BCI-based attention training programs relieved anxiety and low mood symptoms.

Research by Dentz et al. (2020) studied the effects of the Cogmed educational program on working memory in children aged 7 to 13 years with ADHD and on medication. Throughout life, ADHD is highly associated with cognitive impairments (Kasper et al., 2012); among them, working memory (WM) difficulties are pretty frequent (Martinussen & Major, 2011; Massat et al., 2012). Cogmed is a cognitive training software program that includes exercises to improve verbal and non-verbal memory. The study aimed to determine if the Cogmed program was effective for children with ADHD. For this purpose, participants were divided into an experimental group, which used the standard version of the program, and a control group, which used a comparative version with a lower level of difficulty. The researchers hypothesized that participants in the experimental group would show a more notable improvement in their verbal and nonverbal memory than those in the control group. The secondary objective was to assess whether the results of the Cogmed program extended to other cognitive functions of the children, such as logic, inhibition, or self-regulation, and whether they helped improve ADHD symptoms and school performance in reading comprehension and math (Dentz et al., 2020).

The study included 36 children aged 7 to 13 years who were diagnosed with a combined type of ADHD with co-existing learning disabilities (LD), Oppositional Defiant Disorder (ODD), or Tourette Syndrome (TS). It was taking medication that had been stable for at least the last two months. Measurements were taken at three different times: 6 weeks before the program started, immediately before the program began, and after program completion. Participants completed the training program in five consecutive weeks, with five sessions per week. The assessment tools used were the Wechsler Intelligence Scale for Children - Fourth Edition (WISC-IV) alphanumerical sequence tests (Wechsler, 2005a) to measure verbal working memory; the Wechsler non-verbal amplitude test (Wechsler, 2006) for measuring the visual-spatial working memory; BRIEF (Gioia et al., 2000) for working memory and executive functions; Raven's color progressive tables (Raven, Court, & Raven, 1998) for nonverbal reasoning; the Continuous Performance Test (CPT-II) (Conners,

2000) for inhibition and attention; the Conners 3AI Questionnaire (Conners, 2008) for ADHD symptoms; and the comprehension and math reasoning tests by Wechsler Individual Achievement Test, second edition, French Canadian edition (WIAT-II CDN-F) (Wechsler, 2005b).

The results showed that participants who used the standard version of Cogmed did not improve their working memory capacity more than those in the control group. Furthermore, during the entire program, from beginning to end, none of the two groups showed improvement in their cognitive skills. Qualitatively, the participants stated that they found the program tedious, not very encouraging, and challenging. There may need to be more than a reward system in place to maintain the motivation of participants and parents (Dentz et al., 2020). This is a significant issue, given that motivation is crucial to completing the Cogmed program and that ADHD is associated with motivation difficulties (Sonuga-Barke et al., 2013). In addition, the results of the Cogmed program did not differ for participants with LD, ODD, or TS.

9. Conclusions

Finally, it is shown how important digital technologies are to education and training for ADHD (Stathopoulou et al., 2022; Stathopoulou et al., 2023; Loukeri et al., 2023; Vouglanis; Driga, 2023; Karyotaki et al., 2022; Mitsea et al., 2022). These technologies are extraordinarily productive and effective because they expedite and enhance education, intervention, and evaluation processes. Furthermore, studies show that instructional games can significantly improve learning processes and reach previously unheard-of levels of effectiveness. Moreover, research has shown that the integration and application of ICTs with metacognition, mindfulness, meditation, and the development of emotional intelligence theories and models improves educational practices and outcomes, especially for children of color who have ADHD. This approach addresses several topics, including evaluation and intervention.

More accurately, statistics from the past few years suggest that a sizable portion of the population is now multicultural. Culture dramatically influences how therapy materials, practice models, evaluation techniques, and client collaboration are developed. A therapist's relationship with their client and the need to comprehend a child's needs within their culture has also been discussed in recent articles. Ethnic minority children and adolescents continue to lag behind their non-minority peers in terms of evaluation and therapy rates despite significant advancements in the development and implementation of effective programs for children with attention deficit hyperactivity disorder.

A child's attention span is short when they have ADHD. As a result, they must maintain their focus at all times. While playing video games, kids can stay attentive and entertained for the duration of the game while also learning to be watchful and aware of their surroundings. Children with ADHD are increasingly being diagnosed and treated with video games and other cutting-edge technology. When playing video games, it is essential to use executive, organizational, and metacognitive skills. The two abilities that are most commonly used in games are memory and attention. Memory and attention are integrated into finishing a job. Given that longer attention spans are linked to higher levels of working memory, they are essential for the cognitive functioning of individuals with ADHD.

The debate concerning the etiology of ADHD and the range of therapies available to children from ethnolinguistic minorities highlights the rapid advancement of these fields of study. More studies are required to develop alternative therapies that employ computers to enhance these children's cognitive and metacognitive abilities and facilitate their social integration.

Compliance with ethical standards

Disclosure of conflict of interest

The Authors proclaim no conflict of interest.

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