



Realização:



MINISTÉRIO DA EDUCAÇÃO  
UNIVERSIDADE FEDERAL DO PIAUÍ – EDITAL 17/2016

# EXAME DE PROFICIÊNCIA DE LEITURA EM LÍNGUA ESTRANGEIRA

DATA: 23/10/2016

HORÁRIO: das 8 às 11 horas

## CADERNO DE PROVA

Idioma:

**INGLÊS**

Área de Pesquisa:

**(4) LINGUÍSTICA, LETRAS E ARTES**

### LEIA ATENTAMENTE AS INSTRUÇÕES

- Esta prova é constituída de um texto técnico-científico em língua estrangeira, seguido de 5 (cinco) questões abertas relativas ao texto apresentado.
- É permitido o uso de dicionário impresso, sendo vedados trocas ou empréstimos de materiais durante a realização do Exame.
- As respostas deverão ser redigidas em português e transcritas para a **Folha de Respostas**, utilizando caneta esferográfica com **tinta preta** ou **azul, escrita grossa**.
- A Folha de Respostas** será o único documento válido para correção, não devendo, portanto, conter rasuras.
- Será eliminado o candidato que se identificar em outro espaço além daquele reservado na capa da **Folha de Respostas** e/ou redigir as respostas com lápis grafite (ou lapiseira).
- Nenhum candidato poderá entregar o Caderno de Prova e a Folha de Respostas antes de transcorridos 60 minutos do início do Exame.
- Em nenhuma hipótese haverá substituição da **Folha de Respostas**.
- Ao encerrar a prova, o candidato entregará, obrigatoriamente, ao fiscal da sala, o Caderno de Prova e a Folha de Respostas devidamente assinada no espaço reservado para esse fim.

## Could playing Tchaikovsky's 'Nutcracker' and other music improve kids' brains?



**Children who play the violin or study piano could be learning more than just Mozart. A University of Vermont College of Medicine child psychiatry team has found that musical training might also help kids focus their attention, control their emotions and diminish their anxiety. Their research is published in the *Journal of the American Academy of Child & Adolescent Psychiatry*.**

James Hudziak, M.D., professor of psychiatry and director of the Vermont Center for Children, Youth and Families, and colleagues including Matthew Albaugh, Ph.D., and graduate student research assistant Eileen Crehan, call their study "the largest investigation of the association between playing a musical instrument and brain development."

The research continues Hudziak's work with the National Institutes of Health Magnetic Resonance Imaging (MRI) Study of Normal Brain Development. Using its database, the team analyzed the brain scans of 232 children ages 6 to 18. Each participant underwent MRI scanning and behavioral testing on up to three different occasions with a 2-year interval between each one. Cortical thickness was analyzed in relation to the number of years that each youth had played a musical instrument. Next, thickness was analyzed to establish a relation between age, gender and total brain volume. Follow-up analysis revealed that music training was associated with an increased rate of thickness maturation within areas implicated in motor planning and coordination, visuospatial ability, and emotion and impulse regulation.

As children age, the cortex -- the outer layer of the brain plays a key role in memory, attention, perception, awareness, thought, language, and consciousness -- changes in thickness. In previous analysis of MRI data, Hudziak and his team discovered that cortical thickening or thinning in specific areas of the brain reflected the occurrence of anxiety and depression, attention problems, aggression and behavior control issues even in healthy kids -- those without a diagnosis of a disorder or mental illness. With this study, Hudziak wanted to see whether a positive activity, such as music training, would influence those indicators in the cortex.

The study supports The Vermont Family Based Approach, a model Hudziak created to establish that the entirety of a young person's environment -- parents, teachers, friends, pets, extracurricular activities -- contributes to his or her psychological health. It is a healthcare paradigm that aims to improve population health by improving emotional and behavioral health within family structure. "Music is a critical component in my model," Hudziak says, as he suggests that music training is an intense, multisensory, and motor experience that can be correlated with relevant improvements in trained-induced brain plasticity.

The authors found evidence they expected -- that music playing altered the motor areas of the brain, because the activity requires control and coordination of movement. Even more important to Hudziak were changes in the behavior-regulating areas of the brain. For example, music practice influenced thickness in the part of the cortex that relates to "executive functioning, including working memory, attentional control, as well as organization and planning for the future," the authors write.

A child's musical background also appears to correlate with cortical thickness in "brain areas that play a critical role in inhibitory control, as well as aspects of emotion processing."

The findings bolster Hudziak's hypothesis that a violin might help a child battle psychological disorders even better than a bottle of pills. "We treat things that result from negative things, but we never try to use positive things as treatment," he says.

Such an approach may prove difficult to accomplish. According to the study's authors, research from the U.S. Department of Education indicates that three-quarters of U.S. high school students "rarely or never" take extracurricular lessons in music or the arts.

The Dept. of Education statistic is disturbing, but not surprising, as funding sources for music; sports; and the arts have slowly diminished as revenue streams for so-called "extracurricular" school programs have been eliminated beginning in the late 1980s into the 1990s.

Historically elementary schools offered free music lessons to students, so they could explore playing musical instruments and discover what they liked. Today, however, the tendency seems to be the stripping of curriculum opportunities, including art, music, physical education and more, and the imposing a brutal testing regime that has



QUESTÃO 03 - Qual a relação que o texto estabelece entre música e a plasticidade cerebral (capacidade do cérebro de modificar sua organização estrutural e funcionamento)?

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QUESTÃO 04 - De que forma a pesquisa conduzida pelo time do professor Hudziak foi conduzida e quais os resultados encontrados?

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QUESTÃO 05 - Que problemas o texto apresenta para a inserção de programas de saúde como o proposto pela Abordagem Baseada na Família da Faculdade de Medicina de Vermont?

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