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Cognitive Science
April 27-29, 2015 - Tehran, Iran
Razi Intl. Conference Center

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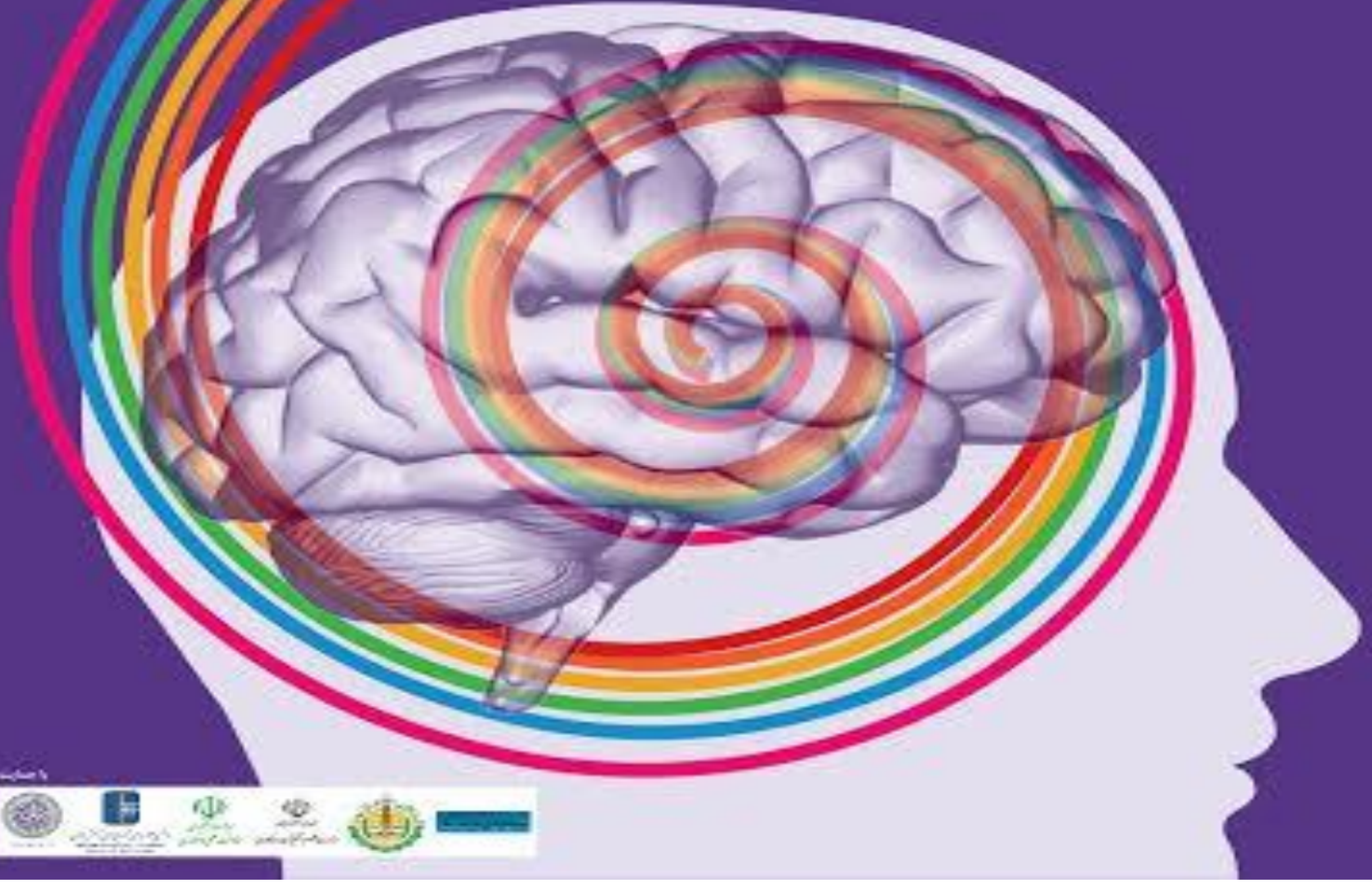

BookofAbstracts

6th International Conference of Cognitive Science

27- 29 April 2015, Tehran - Iran

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WelcomeMessage

IntheNameofGodtheMostMerciful

Dear Excellences, distinguished guests, dear colleagues, ladies and gentlemen,

It is a true pleasure for me on behalf of The Institute for Cognitive Sciences Studies (ICSS) and Iran Medical Sciences University to welcome you to the 6th biannual international conference of cognitive sciences this time in Tehran, Iran. I am very grateful to you for taking time off from your busy schedule to attend this conference.

As you know, cognitive sciences is a model of interdisciplinary program study of the mind, encompassing the study of brain functions as well as intelligent behaviors and also the reasons and computations underlying those behaviors. This field is at the intersection of other disciplines including philosophy of mind, cognitive psychology, computer science, social cognition, cognitive rehabilitation, cognitive modeling and cognitive neuroscience.

In Iran interdisciplinary graduate programs on cognitive sciences maintain strong links with a variety of universities and institutes focusing on interdisciplinary studies of brain functions and neighboring phenomena such as the aforementioned ones. I hope, following the recent scientific efforts, the cognitive sciences grow in Iran and make worldwide contributions in near future. I also hope in line with the five pervious conferences the 6th International Conference of Cognitive Sciences provides an appropriate venue for this aim. This conference concentrates mainly on neuroimaging, cognitive aspects of sleep and sleep deprivation, cognition and emotion, and cognitive education.

We are honored to have keynote speakers, panelists and symposium presenters from different countries with us today. All these scholars are esteemed specialists in cognitive sciences and have worked for many years on different branches of cognitive sciences and have been leading figures in developing of cognitive sciences.

I should thank prof. Kamal Kharrazi the President of The Cognitive Sciences and Technologies Council for his guidelines and supports. I also like to thank prof. Mir-Esmaeli the president of Iran Medical Sciences University for helping us to organize this conference. At the end, I want to thank the members of the scientific and organizing committees: Dr. Shariat, the scientific secretary of the conference and Mr. Nosrat, the secretary of executive committee, Mr. Kia Tabatabaee Director of International Affairs of ICSS, and all other organizations, universities and institutes for their support.

Finally, I want to welcome you again to this conference; particularly those of you who have traveled long distances to encourage us and join our scientific efforts.

I am positive you will enjoy your stay in Iran and will have a first- hand experience of Iranian culture and hospitality.

We also hope to meet you in our next conference in Iran.

Warm regards,

Alireza Moradi

The President of the 6th International Conference of Cognitive Sciences

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Executive Function in School: The Effectiveness of Executive Functions Strategies Training and Combining It with Neuro-Feedback on Promoting Academic Performance of Students

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Objective:

Academic success in the digital age is increasingly linked not only with students' technological expertise, but, even more important, with their mastery of such processes as goal setting, planning, prioritizing, organizing, shifting flexibly, holding/manipulating information in working memory, and self-monitoring. Collectively, these are termed executive function processes. From the elementary grades onward, these executive function processes affect many academic areas and are critically important for reading comprehension, written language, math problem solving, long term projects, studying, and taking tests. These processes are not taught systematically in schools and are not a focus of the curriculum, which typically emphasizes competency and efficiency in the traditional "three R's"—reading, writing, and arithmetic (Meltzer, 2010). Due to clarified role of executive function in academic achievement, it has become increasingly important for classroom teachers to teach strategies that address executive function processes systematically, in order to help students understand how they think and how they learn. The aim of this study was to evaluate the effectiveness of executive function (working memory, planning and prioritization, Emotional Self- Regulation, organizing, Self-Monitoring and Self-Checking) training based on Meltzer model and neuro-feedback on promoting academic performance of normal students.

Method:

In a pseudo-experimental design pretest-posttest with control group, 36 boy students were selected with simple random sampling and placed randomly in three groups of twelve: training and neuro-feedback group, training group alone and control group. The training and neuro-feedback group and training alone group participated in 16 executive function sessions based on Meltzer model. In addition to that training, training and neuro-feedback group participated in 8 session trainings of neuro-feedback, and control group was placed in the waiting list.

Results:

The results indicate a significant improvement in academic performance of students participating in training session's executive function than control group. Groups' comparison showed significantly greater academic performance in training and neuro-feedback group than training group alone.

Conclusion:

This study showed that executive function (working memory, planning and prioritization, Emotional Self-Regulation, organizing, Self-Monitoring and Self-Checking) training based on Meltzer model along with neuro-feedback can improve academic performance of students in the areas of planning, organizing, emotional self-regulation, self-checking, lack of control over the outcome and motivation.

Keyword:

Executive Function, Academic Performance, Neuro-feedback, Working memory, Planning, Organizing, Emotional Self-Regulation, Self-Checking, Motivation

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