# The Future of Cognitive Neuroscience

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## Abstract

Cognitive neuroscience is an interdisciplinary area focusing on the application of neuroscience knowledge in areas such as neuroimaging studies, computer science, psychology, marketing, business, general and special education, social sciences, engineering, biology, learning science, health, etcetra. It is a new emerging field that may help Malaysia in the move towards 2050 for the development of economic, improve levels of knowledge and education, intensify healthcare, enhance people's well-being and expand network collaboration. Academicians, scientists, industry and educators must concentrate on the application cognitive neuroscience in their field of studies. There is a lack of neuroscientists in these fields, and concentrated efforts must come from the top down as well as the bottom up. We need to bring brain and mind sciences and neuroscience to a reputable level that will improve physical and mental health and increase creativity and innovation in Malaysia: A national institute to amalgamate the creative and innovative mind, behaviour, and brain sciences and neuroscience must be established.

## 1. Introduction

Cognitive neuroscience is an interdisciplinary area focusing on the application of neuroscience knowledge in the diverse areas such as neuroimaging studies, computer science, psychology, marketing, business, general and special education, speech and language sciences, social sciences, engineering, biology, learning science, health, etcetra.

Cognitive neuroscience, emerges as one of the sustainable development goals (SDGs) towards 2030 [1-30] and a critical component in the science, technology and innovation (STI) agenda towards 2050 (see Figure 1) [2]. This is reported by the United Nations and the Academy of Sciences Malaysia ([2]; This field is therefore an important agenda within the field of science, technology and innovation (STI),

It was indicated that Malaysia will require a minimum of 10 cognitive neuroscience experts per 100,000 labour force workers by 2050, [2]) . However, at present, Malaysia only has 150 experts in the field (including postgraduates) [2] which is not sufficient compared to the rapid progress of neurotechnology and opportunities in the related field of cognitive neuroscience such neuromarketing, neuroeducation, neurolinguistics, business and industry 4.0, artificial intelligence, computational neuroscience required not only in Malaysia but other parts of the world.

Cognitive neuroscience represents a way for developing Malaysia to foster economic development, improve levels of knowledge and education, intensify healthcare, enhance people's well-being and expand network collaboration [2]. Figure 1 demonstrate the Jobs' prospects related to the field of Cognitive neuroscience that will be created in Malaysia from 2015–2050, mainly in the private sector.



**Fig.1:** Cognitive Neuroscience related Jobs (adapted from Forum on Neuroscience and Nervous System Disorders; Board on Health Sciences Policy; Institute of Medicine, 2015a)