

Development of a school-based neuroscience curriculum in a high school in Hong Kong

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We are the pioneer to develop a school-based neuroscience curriculum in a high school in Hong Kong. Although the functions and basic structure of the brain and neurons, neuromuscular junction, neurotransmission, spinal reflexes, roles of cone and rod cells in vision and cochlea in audition are included in Hong Kong's high-school science curricula including Integrated Science and Biology, a comprehensive neuroscience curriculum and neuroscience teachers to cultivate young neuroscientists and to raise student's awareness and understanding on some common neurodegenerative diseases such as Alzheimer disease and Parkinson's disease are absent. Since 2004, our school has set up a school-based neuroscience program in which research-based learning mode is applied to engage students in learning neurodegenerative diseases. Neuronal cell culture is also included as a tool for students to study the growth and death of neurons. To further promote neuroscience education, student's participation in neuroscience research and attendance in neuroscience conferences are encouraged. Collaboration with neuroscientists in university is highly supportive to neuroscience education in our school. To further develop the school-based neuroscience curriculum, more diverse examples about neuroscience such as studies on invertebrate nervous system will be introduced. To evaluate our school-based neuroscience curriculum, student's awareness and interest on neuroscience are enhanced. This implicates that our school-based neuroscience curriculum is constructive to the neuroscience education in our school.