



Policy Brief Series

Towards establishing a center for brain-based research and education neuroscience program



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Our understanding of the human brain and the complex processes in which information is acquired has progressed over time producing immense knowledge on teaching and learning. These studies, however, are grounded in a 'western' perspective, a context that may not be applicable to Filipino learners given the wide variety of socio-cultural context. Thus, a proposal to establish a research center on the learning sciences has been deemed necessary.

The 'internet revolution' has immensely influenced the landscape of our socio-cultural environment, which consequently changed the way we think and learn. Acquisition of declarative knowledge transitioned from classroom-based to online platforms paving the way to a well-educated and well informed society. This universal access to information, however, has seemingly brought challenges to educational institutions in a way that learning theories developed prior to the 'Internet revolution' may no longer be effective to 21st century learners. Thus, recent research in education calls to account the impact of digital imprint in knowledge acquisition through cognition and brain studies. *Learning sciences* is an emerging interdisciplinary field of research underpinning the process of learning using lenses from both scientific and humanistic perspectives to design holistic innovative learning environments and instructional methodologies.

The Philippine Normal University (PNU), as a leading institution in the training of teachers as well as in education research, envisions to initiate research in the learning sciences by establishing a brain-based research center that will eventually host graduate programs in education neuroscience (Rungduin, David, Genuino, Nalipay, Torio, Bayten, & Escoto, 2017, p. 2). Dubbed as the PNU BRAENS (Brain Research and Education Neuroscience Program), the project intends “to be instrumental to providing solutions to national concerns when it comes to evidence-based approaches to teaching and learning” (p. 2). This project further aims to “contribute to Philippine competitiveness, develop human capital through brain-based education with the primary goal of training the country’s human resources to create a critical mass in science and technology, and pioneer in [the] ASEAN on brain-based research in education” (p. 2).

The PNU BRAENS project is divided into three different phases: phase 1 is “resource persons pooling and capability building” (P. 7), phase 2 is “capacity building and facilities development” (p. 7), and phase 3 is “research and collaboration” (p. 7). This policy brief covers Phase 1 of the project. “A total of six institutions with brain research centers in the Asia-Pacific were visited by the core team members to understand research-management processes, equipment use and acquisition, and the types of research projects these centers are currently involved with. The core group [also] underwent two trainings, one in basic neuroscience conducted by an expert from the Department of Science and Technology (Balik Scientist Program) and a training in the use of the electroencephalogram (EEG) and computer software to measure EEG readings” (p.2).

The following is a summary of findings and recommendations towards the establishment of a University research center for brain-based research and education neuroscience program adapted from Rungduin et al. (2017, p. 2):

1. “The university needs to find sustainable sources of funds such as research grants, continuous government support, etc.; close collaborations with other institutions such as universities that also work on similar neuroscience research, industry partners as technology providers, hospitals that can provide the necessary medical equipment (e.g., MRI, fMRI), and partner schools; and in-house experts in neuroscience. For the PNU BRAENS project to be successful, neuroscience experts from within the institution need to be developed.”
2. “There is a need for university researchers to identify a specific area in neuroscience which they find would be most useful in the direction of research they would like to get involved with and receive intensive training/education in this area. It would be good to invest first in the training/education of the researchers from within the institution before getting into the major research projects. This will help in the assurance of sustainability of the institution’s research programs.”

REFERENCE

Rungduin, T. T., David, A. P., Genuino, C. F., Nalipay, M. J. N., Torio, V. A. G., Bayten, E. O., & Escoto, R. B. (2017). *The Philippine Normal University Brain Research and Education Neuroscience Program (PNU BRAENS): Developing a Center for Integrating Education and the Neurosciences*. Manila: Philippine Normal University.



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