# NEUROPHYSIOLOGY 2021: Teaching neurophysiology in an integrated problem base learning curriculum: A KSAU-HS experience- Sheikh Abdul Saeed

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**Introduction**:
One hundred seventy four undergraduate medical students participated in the study. Majority of the participants supported the concept of PBL and thought it is a beneficial learning strategy. However, only about half of them consider the problems used in tutorials are relevant for the local setting. Significant differences have been identified between the gender, schools, and study level of participants and their views on the process of PBL tutorials. About 35% of participants either undecided or will not recommend medical schools that adopt PBL curriculums for their friends.

**Objectives**: The majority of participants were satisfied with PBL approach and valued its importance in their learning process. Specific concerns have been expressed about relevance of some aspects of PBL. Underlying factors should be further explored in order to improve the outcomes of PBL curriculum in the local Saudi setting.

**Results**: In spite of great efforts that have been made to present systems
that support the user's need of the answers from the Holy Quran, the current systems of English translation of Quran still need to do more investigation in order to develop the process of retrieving the accurate verse based on user's question. The Islamic terms are different from one document to another and might be undefined for the user. Thus, the need emerged for a Question Answering System (QAS) that retrieves the exact verse based on a semantic search of the Holy Quran. The main objective of this research is to develop the efficiency of the information retrieval from the Holy Quran based on QAS and retrieving an accurate answer to the user's question through classifying the verses using the Neural Network (NN) technique depending on the purpose of the verses' contents, in order
to match between questions and verses. This research has used the most popular English translation of the Quran of Abdullah Yusuf Ali as the data set. In that respect, the QAS will tackle these problems by expanding the question, using WordNet and benefitting from the collection of Islamic terms in order to avoid differences in the terms of translations and question.
In addition, this QAS classifies the Al-Baqarah surah into two classes, which are Fasting and Pilgrimage based on the NN classifier, to reduce the retrieval of irrelevant verses since the user's questions are asking for Fasting and Pilgrimage. Hence, this QAS retrieves the relevant verses to the question based on the N-gram technique, then ranking the retrieved verses based on the highest score of similarity to satisfy the desire of the user.

According to F-measure, the evaluation of classification by using NN has shown an approximately 90% level and the evaluation of the proposed approach of this research based on the entire QAS has shown an approximately 87% level. This demonstrates that the QAS succeeded in providing a promising outcome in this critical field.

**Conclusions**: IGD presents some characteristics that are not extensive to online GD. These specificities have potentialclinical implications and they need to be further studied