

## Social brain based educational strategies with Focusing on interactive techniques

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### ABSTRACT

Educational systems are changing. One of the recent strategies is social brain based education. The present research was conducted with the aim of answering the following question: What is social brain based learning? And how is the quality of this education? Since the question is based on how to teach; therefore, after the conceptual and theoretical explanation, a number of educational strategies based on the social brain were mentioned, relying on the available experimental evidence. This work was done by documentary and review method. The tool of collection was taking copies of written documents which is based on the criteria (1.Purposeful selection by referring to more relevant, meaningful, well-referenced and representative documents; 2.Cumulative selection based on the sources of each document; 3. Matching the keywords of the documents) were selected. The collection was based on searching keywords in scientific databases. Extracting and reporting the results was based on the thematic content analysis of the documents. The validity of the research was secured based on the validity of the documents and compliance with the codes of ethics in social studies. 18 strategies on how to teach social brain based on interactive techniques were extracted. It was concluded that the theoretical and empirical basis of the social brain and education based on the social brain is to first pay attention to "social interaction" to "maximize the effects of education (and learning)". In this training, the category of "interaction and social nerve connections" is more important. The strategies are: Interactive training in group contexts. Dialogue-oriented and conversational, Based on reasoning and critical thinking, problem-oriented, Project-oriented with research opportunities, Comparative, integrated, Teaching-learning, Based on experiences and traditions, melodious with sensory associations; based on games and gamification, Grouping and academic participation, Movement and vibrancy, Applying models and theories in the context of life, Using events and news sources, Integrating digital and live education, Using humor and allegory, and role playing. Based on these findings, the use of social brain-based teaching strategies, especially in social science education, can improve teaching and learning.

**Keywords:** Education, brain based educational strategies, social brain, Social interaction.



## Introduction

Educational systems are evolving and the latest revolution in education is brain-based teaching and learning. The new theory of "Brain-based education (BBE)", "Brain-based learning (BBL)" and "Social Brain-based education (SBBE)" is a position supported by educational scientists. Brain-based education considers the mechanism of the brain as a general theoretical basis for learning (Caine & Caine, 1990). That is, it implements neuroscience discoveries about the brain in the classroom (Becktold, 2001). This training is compatible with the brain and focuses on aspects of training that create an opportunity to enhance and maximize training, knowledge transfer and acquisition of new social information (Duman, 2010-b; Lieberman, 2012: 3).

Therefore, understanding the brain mechanisms underlying learning can transform educational strategies (Blakemore, 2010: 746) and Lead to training compatible with the brain instead of training against the brain (Stevens & Goldberg, 2001 cited by Duman, 2006). While the teaching and learning methods in today's classrooms are not based on the brain (Agustin, Umamah & Na'im, 2020: 109). The present research was done to answer the question, what is social brain-based education and what is the quality (strategies) of this education?

## Methodology

This study is a documentary and narrative review that introduces and summarizes the most important educational strategies based on the social brain. Data collection started from searching keywords in Google Scholar, Science Direct, Elsevier, JSTOR, JCR and ISC databases. The tool for collecting, extracting and analyzing the content of written documents and documents (in the format of books, articles, printed and electronic reports) was in the field of social neurology and social brain-based education. The documents were selected purposefully with the following criteria: 1. Deliberately referring to more relevant, meaningful, well-referenced and representative documents; 2. Accumulation based on the sources of each document and 3. Keyword matching. Therefore, the selection and entry and exit criteria of texts also include: 1. The relevance of the documents to the subject of the research; 2. Documents are based on brain training and 3. Matching keywords. In the first deliberate search About 85 studies were found. More than 110 relevant studies were found in cumulative searches. Finally, 36 studies were selected as sources and empirical evidence of social brain-based education according to the criteria of keyword matching. Extracting, categorizing and combining the results was done using qualitative content analysis. The direction of movement in the analysis was from getting to know the content of the text to extracting common concepts (Concepts that were introduced in a series of experimental studies as an educational strategy) and categorizing them under one concept (strategy). The credibility of the research using the credibility of documents and evidence (which documents with more references and visible in more reliable databases were selected) and Intra-subject agreement by the authors (with 0.80 agreement and 0.20 disagreement) and compliance with the principles of ethics in social science research (conceptualization and reflection of evidence without omission or distortion, honesty and impartiality, compliance with the rights related to citations, etc.) has been ensured. In this research, two questions about "what and how to teach based on the social brain" have been proposed: What is social brain-based learning? And how is the quality (according to the strategies) of this education?

## Findings

18 strategies on how to teach social brain based on interactive techniques were extracted. The strategies are: Interactive training in group contexts. Dialogue-oriented and conversational, Based on reasoning and critical thinking, problem-oriented, Project-oriented with research opportunities, Comparative, integrated, Teaching-learning, Based on experiences and traditions, melodious with sensory associations; based on games and gamification, Grouping and academic participation, Movement and vibrancy, Applying models and theories in the context of life, Using events and news sources, Integrating digital and live education, Using humor and allegory, and role playing.

## Conclusion

Based on the findings of this research, it was found that. The theoretical and empirical basis of the social brain and social brain-based education is, first of all, to pay attention to "social interaction and social neural connections" to "maximize the effects of education (and learning)".

Therefore, education about the social brain and the use of social brain-based education strategies are suggested, especially in social science education, which can improve teaching and learning.

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