Análisis comparativo de la metodología STEM y otras metodologías activas en la educación general básica [

2024

text (article)

Analítica

This article presents a comparative analysis between the STEM methodology (Science, Technol-ogy, Engineering, and Mathematics) and other active methodologies applied in Basic General Education (BGE). The objective of this study is to evaluate the effectiveness of the STEM meth-odology in comparison with other active methodologies, such as project-based learning (PBL), cooperative learning, and problem-based learning (PBL), in developing cognitive, social, and emotional skills in BGE students. As educational demands evolve, it is crucial to identify and understand which teaching methodologies are most effective in preparing students for the chal-lenges of the 21st century, especially in areas that require critical thinking, creativity, and prob-lem-solving skills. The study was conducted with a sample of 120 BGE students, divided into four groups, each exposed to a different methodology: STEM, PBL, cooperative learning, and problem-based learning. Over a 12-week period, various activities and assessments were applied to measure the impact of each methodology on developing competencies in science, mathemat-ics, and social skills. Data were collected through pre- and post-intervention assessments, moti-vation surveys, and classroom observations. The results indicated that the STEM methodology had a significantly positive impact on developing competencies in science and mathematics. Students who participated in the STEM group showed notable improvements in critical thinking, problem-solving, and conceptual understanding compared to the other groups. However, active methodologies such as PBL and cooperative learning also proved effective, particularly in fos-tering social skills such as cooperation, communication, and teamwork. This study concludes that, while the STEM methodology is highly effective in enhancing scientific and mathematical competencies, combining STEM with other active methodologies can provide a more compre-hensive approach. By integrating STEM with me
This article presents a comparative analysis between the STEM methodology (Science, Technol-ogy, Engineering, and Mathematics) and other active methodologies applied in Basic General Education (BGE). The objective of this study is to evaluate the effectiveness of the STEM meth-odology in comparison with other active methodologies, such as project-based learning (PBL), cooperative learning, and problem-based learning (PBL), in developing cognitive, social, and emotional skills in BGE students. As educational demands evolve, it is crucial to identify and understand which teaching methodologies are most effective in preparing students for the chal-lenges of the 21st century, especially in areas that require critical thinking, creativity, and prob-lem-solving skills. The study was conducted with a sample of 120 BGE students, divided into four groups, each exposed to a different methodology: STEM, PBL, cooperative learning, and problem-based learning. Over a 12-week period, various activities and assessments were applied to measure the impact of each methodology on developing competencies in science, mathemat-ics, and social skills. Data were collected through pre- and post-

intervention assessments, moti-vation surveys, and classroom observations. The results indicated that the STEM methodology had a significantly positive impact on developing competencies in science and mathematics. Students who participated in the STEM group showed notable improvements in critical thinking, problem-solving, and conceptual understanding compared to the other groups. However, active methodologies such as PBL and cooperative learning also proved effective, particularly in fos-tering social skills such as cooperation, communication, and teamwork. This study concludes that, while the STEM methodology is highly effective in enhancing scientific and mathematical competencies, combining STEM with other active methodologies can provide a more compre-hensive approach. By integrating STEM with me

---

Título: Análisis comparativo de la metodología STEM y otras metodologías activas en la educación general básica electronic resource].]

Editorial: 2024

Tipo Audiovisual: parental involvement innovative strategies early childhood education cognitive development school-family communication participación parental estrategias innovadoras educación inicial desarrollo cognitivo comunicación escuela-familia

Documento fuente: Ciencia Latina: Revista Multidisciplinar, ISSN 2707-2207, Vol. 8, Nº. 4, 2024, pags. 10094-10113

Nota general: application/pdf

Restricciones de acceso: Open access content. Open access content star

Lengua: Spanish

Enlace a fuente de información: Ciencia Latina: Revista Multidisciplinar, ISSN 2707-2207, Vol. 8, Nº. 4, 2024, pags. 10094-10113

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es