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The Effects of Multiple Levels of Intelligence in an Algebra 1 Classroom

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Abstract : The goal of this research study was to adjudicate if implementing Howard Gardner's multiple levels of intelligence would enhance student achievement levels in an Algebra 1 College Preparatory class. This was conducted within every class by incorporating one level of the eight levels of intelligence into small group work in stations. Every class was conducted utilizing small-group instruction. Achievement levels were measured through various forms of collected data that expressed student understandings in class through formative assessments versus student understandings on summative assessments. The data samples included: assessments (i.e. summative and formative assessments), observable data, video recordings, a daily log book, student surveys, and checklists kept during the observation periods. Formative assessments were analyzed during each class period to measure in-class understanding. Summative assessments were dissected per question per accuracy to review the effects of each intelligence implemented. The data was collated into a coding workbook for further analysis to conclude the resulting themes of the research. These themes include 1) there was no correlation to multiple levels of intelligence enhancing student achievement, 2) bodily-kinesthetic intelligence showed to be the intelligence that had the most improvement on test questions and 3) out of all of the bits of intelligence, interpersonal intelligence enhanced student understanding in class.

Keywords : stations, small group instruction, multiple levels of intelligence, Mathematics, Algebra 1, student achievement, secondary school, instructional Pedagogies
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