

ABSTRACT

Speakers of Trinidad English Creole Taught in Standard English: Understanding
the Nature of the Language Challenges in Mathematics and Science

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In many Caribbean states, students' vernacular is a Creole language, while the official language in which they are instructed in content areas is Standard English. This investigation adopted a qualitative case study design to elucidate the nature of the language challenges which such a situation might create for learners in mathematics and science classrooms. Using purposeful sampling, three sub-cases were selected at one primary school site in Trinidad and Tobago. Three classes and four teachers participated in the study. School documents, interviews, and transcripts of audio-taped classroom interaction provided data that were analyzed using qualitative procedures within a combined theoretical framework of Halliday's systemic-functional linguistics and New Literacy Studies. While learners experienced some challenges because of morphological, syntactic, and semantic differences between Creole and Standard English, the language challenges were largely defined by the academic language that they were expected to use in the educational context. The process involved students' understanding and use of appropriate features of the registers of mathematics and science in classroom discourse that was linguistically and conceptually complex.

Furthermore, students were required to manage different dimensions of language variation as they operated within language boundaries. Teacher language was also a significant source of language challenges. The study provides the basis for further investigation into the consequences for students' learning in school disciplines. It recommends teacher awareness of the linguistic differences between students' home language and the language in which they are instructed; an understanding of classroom discourse patterns and consequent effects on content learning; and increased teacher knowledge of how discourse features of mathematics and science texts function, and their possible influence on students' learning. Such knowledge is crucial for teacher development of pedagogical practices that would better facilitate student engagement in school disciplines. In light of the findings, a model for reflective teacher practice is offered.

Keywords: Iris Pamela Hewitt-Bradshaw; language challenges in mathematics and science; language across the curriculum