



Abstract. *This study focused on comparing science teachers' qualifications and practices between Saudi Arabia and Singapore. Data analysed in this study were the responses of science teachers to the Teacher Background Questionnaire-8th Grade from the Trend in International Mathematics and Science Study (TIMSS) in 2007. The Saudi sample consisted of 175 science teachers while the Singapore sample consisted of 377 teachers. This research is designed as causal comparative research in which attempts will be made to determine the cause or reason for the existing differences in the achievement of the students of the two participating countries. The comparison between two countries reveals that there were significant differences in teachers' preparation for teaching science topics (Biology, Chemistry, Physics, and Earth science), teachers' license, teaching experience, professional development programs, and teaching practices. Results were discussed and recommendations for science educators and policy makers were proffered.*

Key words: *8th grade, achievement, science, teachers' practices, teachers' qualifications, TIMSS.*

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LINKING TEACHERS' QUALITY AND STUDENT ACHIEVEMENT IN THE KINGDOM OF SAUDI ARABIA AND SINGAPORE: THE IMPACT OF TEACHERS' BACKGROUND VARIABLES ON STUDENT ACHIEVEMENT

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Introduction

In 2007, The Kingdom Saudi Arabia joined 57 other countries and participated in the Trends in International Mathematics and Science Study (TIMSS). This internationally comparative assessment conducted under the auspices of the International Association for the Evaluation of Educational Achievement (IEA) is designed to contribute to improving teaching and learning in mathematics and science for students around the world through evidence-based findings to inform educational policy and highlight similarities and differences between countries so that participating countries can learn from each other in relation to quantity, and quality of student learning.

In particular TIMSS focuses on three dimensions of learning: the intended curriculum; the implemented curriculum, and the attained curriculum. The intended curriculum concerns with what kind of mathematical and scientific knowledge that is expected to be learned by students and country-specific characteristics that may influence the development of such knowledge. The implemented curriculum refers to the curriculum as developed and implemented by teachers. The attained curriculum on the other hand refers to exact knowledge and skills that are learned and achieved by students.

It is obvious that teachers have eventually become the focus of TIMSS and placing more emphasis on their roles and responsibilities in achieving these three dimensions. In fact, teachers

