

## Saudi Arabian Science Teachers and Supervisors' Views of Professional Development Needs

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### Abstract

*Problem Statement:* Teacher professional development is a prominent feature in the educational landscapes of both developed and developing countries. Teacher development can be conceptualised as a mechanism for driving change in educational systems and/or as a strategy for empowering teachers to improve their professional knowledge and pedagogy. To ensure effective teacher professional development, Science teachers need to be more in control of their own PD. More studies of teacher professional needs have been carried out in Western societies rather than Arab societies. In addition, supervisors' voices in regard to the PD of teachers have not been emphasised by international or national studies. Changing the research contexts might introduce a new understanding of the priority of professional needs.

*Purpose of the Study:* This study aimed to identify and explore science teachers' needs for both pedagogical and content knowledge as a first step toward making decisions and recommendations about the elements of

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CPD programme(s) required for science teachers. The purpose of the study was to determine the professional development needs perceived by science teachers and their supervisors in Saudi Arabia.

*Methods:* The main instrument used was a questionnaire. The validity and reliability of the instrument were systematically established through relevant test procedures. The questionnaire seeks feedback on the main aspects of science teachers' needs, including generic pedagogical knowledge and skills, knowledge and skills in science subjects, managing and delivering science instruction, diagnosing students' needs, evaluating students' work, planning science instruction, administering the use of facilities and equipment, integrating multimedia technology, and informal science learning. Additionally, the questionnaire covers the key science subject domains in which science teachers might need professional development (PD).

*Findings and Results:* This study argues that science teachers' voices concerning their PD needs are the key guide for their CPD. While science teachers may share a number of perceived needs with science supervisors, teachers have distinct pedagogical and content knowledge needs that may differ according to individual interests.

*Suggestions and Recommendations:* Attention should be given to ensure that individual teachers' differing needs are met because providing the same programme for all teachers may not meet the needs of them all. Science teachers, supervisors, policy makers, and in-service and pre-service training planners need to work together to consider the recommendations that have been identified in the teachers' PD research.

**Keywords:** Teachers' Professional Development (PD) Needs - Continuing Professional Development (CPD) - Teacher Education.

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## Introduction

Teacher professional development is a prominent feature in the educational landscapes of both developed and developing countries. Teacher development can be conceptualised as a mechanism for driving change in educational systems and/or as a strategy for empowering individuals and teams to improve their professional knowledge and pedagogy (Day & Sachs, 2004). Dillon (2010) argues that teacher