THE POTENTIAL OF *POWERPOINT* IN ADDRESSING TECHNOLOGICAL PEDAGOGICAL KNOWLEDGE TO SUPPORT STUDENT-CENTERED LEARNING

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The Technological Pedagogical Content Knowledge (TPACK) framework which provides useful guidance for teachers to become effective ICT integrators describes how three broad knowledge bases – knowledge of technology (TK), pedagogy (PK) and content (CK), interact to create several forms of new knowledge (Mishra & Koehler, 2006). Among these, Technological Pedagogical Knowledge (TPK) is referred to as the relevant technical knowledge required to implement instructional designs, or an understanding of how teaching and learning can change when particular technologies are used in particular ways. This study was concerned with the TPK required by teachers to implement their instructional designs in ICT-based student-centered learning and the potential of PowerPoint in this regard. The study adopted a mixed-mode research design based on qualitative and quantitative approaches. A purposive selection of 30 teachers were the participants of the study. Using Visual Basic programming facility embedded in PowerPoint, an authoring tool termed Instructional Management Unit (IMU) was created to address TPK. Herein, interactivity was extended by creating slides with sample activities. The teachers had to duplicate a slide and replace sample questions (text and multimedia) with their own material, but it did not eliminate their freedom to be innovative within the given sample activities to implement their own instructional strategies. IMU eliminated the need for programming knowledge, which is a part of TK. It has been found that handling multimedia as TK and how to implement instructional designs using ICT as TPK were the teachers' requirements. An intervention was performed conducting a training programme using IMU as the authoring tool. The effect of IMU on teachers in the development of ICT based student-centered material was evaluated via observations, perceptions and evaluation schemes during and after the intervention. It was found that the PowerPoint-based authoring tool IMU was successful in addressing TPK of the teachers to support student-centered learning.

Keywords: Technological Pedagogical Knowledge, Student-centered learning, ICT in instruction

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