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ABSTRACT

TPACK is a framework that combines all the three components of knowledge (content, pedagogy and technology) and their interweaving relationship, elucidating why technology cannot be treated in isolation when it comes to the classroom teaching. It is often referred to as a "TOTAL PACKAGE" required by an educator for an effective pedagogical practice in technology-enhanced learning environment. It is not all about technology usage but it also emphasizes on mastering the subject to be dealt with and knowing the best suitable method for effective transaction of instructions. The present study was conducted to determine the integration of TPACK among Urdu medium Science teachers teaching in Hyderabad city (India). It also sought to examine if there is any significant association between the seven dimensions of TPACK with gender, the type of school and their teaching experiences. This study also determined the level of awareness of the students studying in Urdu medium schools and investigated if there was any significant association of Technology awareness with gender, class standard and the type of school. Survey method was adopted for the present study in which self-constructed and developed mixed interview schedule was used for randomly selected 14 Urdu medium schools. Data obtained were analysed using MS-Excel, SPSS; whereas to test the association between the variables, Chi-square test was done using Minitab software. From the present study, it was unfurled that both the teachers and the students had limited knowledge regarding the various educational tools and technologies that are being used in science education. The findings of this study revealed that the science teachers performed better in terms of Content knowledge (CK) and Pedagogical knowledge (PK) compared to Technology knowledge (TK). Further, male science teachers

performed comparatively better than their female counterparts in terms of Technology knowledge, content knowledge, technological content knowledge, pedagogical content knowledge and technological pedagogical content knowledge. It was inferred that TCK, PCK and TPCK were significantly associated with gender. Also, among all seven dimensions only TPCK was significantly associated with type of school in which they teach. It was further discovered that most of the school's students had moderate level of awareness regarding technology integration in their learning. Chi Square analysis of data revealed that learning-based technology awareness of the students and gender were not significantly associated with each other. However, it was found to be significantly associated with the class and type of schools in which they study.

Content analysis of the textbook with regard to TPACK Framework revealed that the syllabus was well organized as per CK, PK and PCK. However, there was no coordination between three domains of knowledge namely, content, pedagogy and technology. These all made the subject matter weak in terms of TK, TCK, TPK and TPCK dimensions of the TPACK Framework.