World Academy of Science, Engineering and Technology
International Journal of Educational and Pedagogical Sciences
Vol:13, No:01, 2019

Building Teacher Capacity: Including All Students in Mathematics Experiences

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Abstract : In almost all mathematics classrooms, students demonstrated discrepancies in their knowledge, skills, and understanding. OECD reports predicted that this continued to aggravate as not all teachers were sufficiently trained to handle this concentration. In response, the paper explored the potential of reSolve's professional learning module 3 (PLM3) as an affordable and accessible professional development (PD) resource. Participants' hands-on experience and exposure to PLM3 were audio recorded. After it was transcribed and examined and their work samples were analysed, there were four issues emerged: (1) criticality of conducting preliminary data collections and increasing the validity of inferences about what students can and cannot do by addressing the probabilistic nature of their performance; (2) criticality of the conclusion: $a > b$ and/or $(a-b) \in Z^+$ among students' algebraic reasoning; (3) enabling and extending prompts provided by reSolve were found useful; and (4) dynamic adaptation of reSolve PLM3 through developing transferable skills and collaboration among teachers. PLM3 provided valuable insights on assessment, teaching, and planning to include all students in mathematics experiences.

Keywords : algebraic reasoning, building teacher capacity, including all students in mathematics experiences, professional development
Conference Title : ICSME 2019 : International Conference on Science and Mathematics Education
Conference Location : Rome, Italy
Conference Dates : January 17-18, 2019