Secondary Science Teachers' Views on Resource Folio to Improve Their Pedagogical Content Knowledge

[1]Zubaida Mehzabin Labanna, [2]S M Hafizur Rahman, [3]S. M. Mushfiquer Rahman Ashique

[1]Education Development Officer, Nucleus School, Bangladesh

[2]Professor, Institute of Education and Research, University of Dhaka, Bangladesh

[3]Lecturer, Department of Education, Noakhali Science and Technology University, Bangladesh

[1]Corresponding author: zm.labanna@gmail.com

Abstract

Purpose - This paper aimed to explore secondary science teachers' views on Resource Folio as an effective tool to improve their PCK through interpretation of own teaching practice.

Method - The study was conducted in qualitative approach following multiple case study method. Three secondary science teachers were purposively selected as participants and each class was considered as a case. The instruments included lesson observation and in-depth interviews. Data were also collected from the teachers through developing Resource Folio (CoRes and PaP-eRs) by them. Then analysis was done case by case following cross case analysis.

Findings - The findings derived that Resource Folio significantly aided teachers to see through their teaching practice by capturing their Pedagogical Content Knowledge (PCK) in terms of PCK components. It helped to identify the gaps in their practice and to think explicitly about ways to address those gaps. Using Resource Folio gradually improve teachers PCK, as well as enhances their science teaching practice. However, considering regular class practices there are some major challenges determined in using Resource Folio likely lack of teachers' essential knowledge and skills, preparation time and teachers' belief and attitude and so on. At the same time, the study revealed Professional Learning Community (PLC) as a possible solution to mitigate these challenges.

Significance - This study showed that Resource Folio successfully enriches the practice of science teachers' by capturing their PCK. Initiating use of Resource Folio will improve teachers PCK over time that will ensure proficient teaching-learning practice and develop professional skills for science teachers.

Keywords: Content Representations (CoRes), Pedagogical and Professional-experience Repertoires (PaP-eRs), Pedagogical Content Knowledge (PCK), Professional Learning Community (PLC), Resource Folio.