TOWARDS DIALOGISM IN MATHEMATICS: A CHALLENGE IN PRACTICE

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THEME:

Future pathways for professional learning

BACKGROUND AND AIMS

The study of dialogic pedagogy has been a growing area and there is now a substantial body of literature in this field generally and in mathematics specifically (e.g., Mercer & Sams, 2006). Despite this maturing knowledge, adoption of dialogic practices in mathematics classrooms remains limited (Kibler et al., 2020).

Dialogic pedagogy has two different theoretical origins, Vygotskyan sociocultural theory and Bakhtinian notion of transgredience, and is not straightforward to define. Nevertheless, dialogic pedagogies are typically related to transmissive, univocal pedagogies where knowledge is presented as fixed and the authoritative voice of the teacher and/or textbook is emphasised. In contrast, the emphasis of dialogic or multivocal pedagogy is on inquiry and problem-posing where knowledge is treated ambiguously, creating space for interaction and rearticulation of thoughts with others.

These contrasts suggest a tension in developing dialogic practices in mathematics classrooms. Teachers often have concerns in helping their students access content knowledge. A question arises how provocations arising from a dichotomous perspective can be resolved in way to help teachers develop their practice towards more student-centred approaches but maintain a focus on knowledge.

METHODOLOGY OR PROCESS(ES) UNDERTAKEN

An integrative literature review was carried out to critique and synthesise recent representative literature to help explore this question (Torraco, 2005). A search, carried out in Scopus, focused on recent literature of mixed methodologies from 2015 using key words: dialogic + mathematics revealed 39 journal articles. These were reduced to 10 that focused on teacher education or professional learning.

RESULTS AND CONCLUSIONS

A key finding suggested an emerging model that challenges the accepted dichotomous view of dialogic and univocal approaches to teaching mathematics (e.g., Otten et al., 2015). This finding suggests an alternative approach based on a dynamic interplay between dialogic and univocal interactions that deserves further empirical study.

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