Exploring the use of a scoring rubric for studying graduate teaching assistants' competence in collaborative learning lesson planning and implementation

Sapthaswaran VEERAPATHIRAN[1], ZHEN Weirui[1], Akhil GOPINATH[2], Maddi Kamal DIVYA[3], and Mark GAN[4],*

[1] Faculty of Science, National University of Singapore
[2] Faculty of Engineering, National University of Singapore
[3] School of Computing, National University of Singapore
[4] Centre for Development of Singapore, National University of Singapore
*mark.gan@nus.edu.sg

Teaching assistants play an important role in facilitating and supporting teaching and learning in tertiary institutions. In order to better prepare GTAs for their roles and responsibilities within their faculties, NUS runs the Teaching Assistant Programme (TAP) through the Centre for Development of Teaching and Learning (CDTL). TAP is a formal two-day programme for graduate teaching assistants (GTAs) aimed at enhancing pedagogical skills and knowledge in fostering collaborative learning (CL) in higher education classroom contexts.

In this study, we explore the development and use of a scoring rubric to investigate GTAs' competence in adopting CL scripts during TAP. In particular, we examine GTAs' effectiveness in instructional planning and implementation through micro-teaching sessions. CL refers to 'any instructional method in which students work together towards a common goal, emphasizing interaction and group processes' (Ruys, Van Keer & Aelterman, 2012, p.350). CL scripts serve to structure or scaffold group interactions for the purpose of prompting elaborative discussion or discourse through the use of roles, activities, and sequencing of activities (Kollar, Fisher & Hesse, 2006). Although research has recognized the importance of scripting CL lessons, anecdotal evidence from lesson observations of current GTAs in NUS showed that they tended to adopt a passive and transmissive approach to teaching and learning in tutorials. Thus, the potential benefits of developing GTAs' instructional skills in using CL scripts to enhance their students' learning warrant a more detailed study. We address the following research questions:

How do we develop and use a scoring rubric to examine GTAs' competence in CL lesson planning and implementation?

What is the competency of GTAs in lesson planning and implementation after explicit instruction?

The study involved GTAs from three cohorts of TAP participants. They were nominated by their departments to attend the 2-day TAP programme. CL scripts and lesson planning were taught during the 2-day TAP, with opportunity for practice in micro-teaching sessions. Video recordings of micro-teaching and GTAs' written lesson plans were collected and used for analysis with a scoring rubric. The scoring rubric was developed through an iterative process by student research assistants and a researcher, grounded in research literature

about assessing the quality of lesson plans, and included the criteria *Prior Knowledge*, *Evaluation* and the five components of a CL script. Each criterion was scored on a 5-point Likert scale, from 0 – "Absent of the criteria", to 4 – "Exceeds expectation", giving a total score for each lesson plan or micro-teaching video of 28 points.

Overall, the findings indicated that CL lesson planning and implementation allowed GTAs to use the CL scripts to structure and teach a CL lesson. Strengths and weaknesses in both the lesson planning and micro-teaching were identified with the help of the rubric, with GTAs being able to design interesting CL activities but less explicit in terms of role assignment and distribution and in monitoring and evaluating the outcomes of CL. Furthermore, the findings revealed that the micro-teaching sessions, in particular, provided the opportunity for GTAs to practice and enact the CL lessons. It is also through the micro-teaching that we were able to observe and uncover how GTAs interacted with their 'students' to bring about CL, and to have a sense of how co-construction of knowledge or shared learning worked or did not work.

The development and use of a lesson planning and observation scoring rubric may provide not only detailed information on GTAs ability for CL instructional planning and implementation, but the tool may also be used for peer and self-reflection, feedback dialogues and monitoring of teaching and learning progress.

Keywords

Instructional planning; collaborative learning scripts; graduate teaching assistant; scoring rubric; micro-teaching

References

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