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Measuring Student Teachers' Development of Metacognition and Self-regulated Learning in Professional Dialogue

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Contribution

Measuring Student Teachers' Development of Metacognition and Self-regulated Learning in Professional Dialogue

Teachers are often considered to be the most important agents in reforming education and in bringing about change in practices (Lieberman & Mace, 2008). Since the publication of 'Teaching Scotland's Future' (Donaldson, 2010), the teacher education sector in Scotland has gone through significant changes. One of the key changes is to allow teachers to develop as reflective practitioners. Reflection on one's own perceptions, experiences and practices is at the heart of all activities that teachers do. Reflective practice enables learning by thinking back and articulating the acquisition of knowledge and strategies. For teachers at the pre-service stage, this can be particularly powerful and even transformative (Kramarski & Kohen, 2016). More recently, researchers have argued that the development of reflective skills can be enhanced by combining reflection with professional dialogue (Simoncini et al., 2014), enabling teachers to 'maintain an awareness of their learning and be attuned both to evidence of changes to content and pedagogic knowledge as well as to the impact on professional and personal identity that can be revealed through the conversations themselves' (Lofthouse & Hall, 2014, p. 759).

This paper addresses this important aspect of teacher education. We aim to investigate how student teachers on a Scottish teacher education programme learn by reflecting on their professional dialogue experiences. We are particularly interested

in the self-regulated learning (SRL) and metacognitive processes in their reflection. Endedijk et al. (2015) note that the study of SRL and metacognition holds great potential to meet the challenge of transitioning from student teachers to teaching professionals. By asking student teachers to reflect on their dialogic interactions with university tutors, peers, more experienced teachers, we hope to gain insights into the ways in which they engage with the complex processes of professional learning. Therefore, the goal of this project is to measure how student teachers perceive their own learning through professional dialogue. We also explore this way of learning, conceptualised as metacognitive discourse awareness, and participants' motivated strategies for learning (Duncan & McKeachie, 2005; Pintrich et al., 1993). The concept of metacognitive discourse awareness was underpinned by Vygotsky's (1978) sociocultural psychology which proposed that language use and other semiotic tools could be perceived as mediating artefacts between the social world and the development of an individual's inner thinking. The dialogic space created by professional dialogue may play a pivotal role in enhancing teachers' instructional practices and in promoting learning through the (re)negotiation of meaning (Mercer & Littleton, 2007; Warwick et al., 2016). Building on current research on metacognition, SRL and teacher professional learning, we hope to uncover the interplay between language use, learning and thinking. Therefore, we focus on professional dialogue as reflective practice for teacher professional learning. We seek to address the following questions:

1.   How do student teachers co-construct and negotiate meaning in professional dialogue?

2.   Do their motivated strategies for learning predict the quality of their professional dialogue, or vice versa?

3.   Is there any variation about student teachers' learning in professional dialogue between university-based and placement-based learning?

4.   Is there any variation about their motivated strategies for learning between university-based and placement-based learning?

Method

The participants are student teachers who are on a one-year PGDE (Professional Graduate Diploma in Education) programme (Primary and Secondary) at the University of Strathclyde. The students (approx. 950 students) have received an invitation to participate in an online survey via email which outlined the purpose of this study and further information about the project in plain English. The main body of the survey consists of two parts. In the first part, we ask the participants to reflect on a recent professional dialogue experience at university settings (e.g. discussing course content with a tutor). We also ask them to indicate their overall motivated strategies for learning based on their overall experience studying on the PGDE course. The second part has the same content and format except that this time, we ask them to reflect on a professional dialogue experience at placement settings (e.g. discussing lesson plan with an experienced classroom teacher).

To this end, the survey is made up of the 40-item Metacognitive Discourse Awareness Questionnaire (MDAQ) and the 29-item motivated strategies for learning questionnaire adapted from the motivation and learning strategies subscales of the Motivated Strategies for Learning Questionnaire or the MSLQ (Duncan & McKeachie, 2005; Pintrich et al., 1993). To our knowledge, there is no instrument which allows researchers to examine student teachers' understanding of their own learning through professional dialogue as dialogical endeavours. Thus, one of the purposes of this study is to develop and validate the MDAQ which aims to measure learners' awareness of discourse patterns and metacognition in professional dialogue. The instrument was developed based on the sociocultural perspective of learning which highlighted the interrelatedness between thought and communication. The MDAQ supports student teachers in creating and regulating a dialogic space for their own professional learning. The instrument which measures student teachers' motivated strategies for learning was adapted from one of the most widely and frequently used instruments, MSLQ, which has proven to be a reliable and useful tool for reporting learners' motivational and cognitive attributes. For this study, the students were asked to provide a rating for each questionnaire item based on a Likert scale (strongly disagree, disagree, somewhat disagree, neutral, somewhat agree, agree, or strongly agree).

Expected Outcomes

One of the outcomes is to raise student teachers' awareness of their own learning as they engage in purposeful professional dialogue and subsequent reflection. The MDAQ encourages student teachers to attend to a range of metacognitive, discourse and social-affective strategies so that they can become more self-aware as well as reflective agents for change. This paper will consider the use of MDAQ as a professional learning tool which has the potential to be used at various stages of a teacher's career and in diverse sociocultural contexts.

Another outcome of this study is to further our understanding of student teachers' learning in professional dialogue as a process of co-constructing and negotiating meaning. Student teachers' reflection on their learning may deepen our understanding of how the co-construction and negotiation of the knowledge and skills are essential in constituting their transition from student teachers to teaching professionals. Therefore, the paper has the potential both to contribute to detailed empirical evidence and to the theoretical debates concerning the importance of teachers learning how to learn –

from themselves and others, as well as, in and from practice.

The agenda of teacher quality and professionalism for raising student attainment (OECD, 2005) and the association between these and teacher education (Menter et al., 2010) will continue to grow as a key policy across the globe. It is expected that this paper and its findings around the quality of professional dialogue as part of teacher professional learning will hold relevance to teacher educators and policy makers at an international level.

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