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Introduction and overview of paper

The focus of Higher Education policy is on a knowledge economy, vocationalism, quality control and marketization (BIS, 2016) that extends the reach of fast capitalism further into the fundamentals of university life. This may be seen to challenge academic freedom to construct alternative visions of what it means to learn in a knowledge society (Holmwood, Hickey, Cohen & Wallis, 2016). The paper is based on the early stages of research conducted at a Scottish university where the focus of provision is on specialist degrees for the professions. Against the background of new government policy in Higher Education and the context of biting neoliberalism (Gewitz & Cribb, 2009), the paper presents an analytical account of one institution's education improvement practices and their network effects over a number of years. The paper explores how these practices, conceptualised as knowledge work in a knowledge society (Knorr Cetina, 2001) may offer an alternative vision of education improvement. Staff and student knowledge practices take place within the paradox of a university that positions itself as a global institution but which, nonetheless, emphasizes its particularity and roots as the world's first Mechanics Institute. We analyse how, within these tensions, academic staff and students have approached the task of introducing innovations to improve learning and teaching (QAA, 2016). Such analysis that is grounded in staff's and students' practices is important because it highlights the long term effects of their work in the University. This makes it possible to appreciate how their contributions and influences may be built upon as a counterpoint to neoliberalisation of education.

Method

The aim of this study is to capture the nuance, complexity and effects of learning and teaching practices in a range of education improvement projects. Analysis of the network effects (Latour, 1987,2004) of these practices reveals an alternative vision of what it means to make the learning experiences of students better. The research aims to capture:

1. the network effects of knowledge-making practices among a group of university teachers and students working as teams in "bottom up" initiatives to improve learning at a university;
2. how these practices and their network effects influence the professional learning of academic staff and of students who follow professional curricula (as learning for the economy is a main aim of the White Paper);
- 3 the interactions of knowledge-making practices and technology.

The research sampling targets 95 university teachers and students who have led 47 teaching improvement projects between 2011 and 2016. The paper reports on findings from the pilot phase of the study. The methods employed involve tracing practices and their network effects through documents, online data gathering and individual interviews (Fenwick & Richards, 2011).

The paper conceptualises the education improvement practices of colleagues and students as knowledge creation that is part of work and learning in a knowledge society. The analysis of the paper places Higher Education in the context of a wider knowledge society where social practices of knowledge-making underpin economic and societal development. The work draws on a practice theory approach to

knowledge-making (Knorr Cetina, 2007) and Actor Network Theory (Latour, 1987,2004) to provide analytical tools for understanding educational improvement and its effects from the perspective of the social study of science.

Methodology and literature

The education practices that we investigate in this paper take place in a globalised, technologically intensive and changing professional landscape that is characterised by emerging freedoms and inequities. Contested enactments of learning and technologies present challenges for educational improvement, requiring us to examine which practices find traction and why others fall out of sight. This is important because these have far-reaching implications for the politics of knowledge (Gherardi, 2009; Knorr Cetina, 2007) that are tacit in all professional curricula. The paper draws on Knorr Cetina's idea that "knowledge practices are not neutral" (2007) and asks how these can support education improvement. Changes in work suggest a need to reappraise underpinning assumptions about professional learning and knowledge. The loosening of some work structures require new approaches to professional learning. These need to be taken into account in university teaching.

The study draws on literature from the social study of science, work, learning and professionalism. For example, we consider the development of knowledge work as analysed by Gee, Hull and Lankshear (1996) who argue that it is constituted by "massive global economic, technological, and social change" where knowledge is a primary value. Knowledge is emphasised as a productive force (Alvesson & Wilmott, 2002) that requires a continual readiness to learn (Jensen, Lahn & Nerland, 2012). We base our conceptualisation of what it is to be a professional on the work of Evetts (2012) who argues that professionals' activity, on the basis of knowledge and critique, has the potential to mitigate some of the social controls exercised by neoliberalism. We draw on Evetts' argument that highlights the potential value of professional groups' contributions as a counterbalance to organisational control and fragmentation.

Conclusion and anticipated contribution of the research

The research will trace the effects of staff and student practices on education improvement. It is anticipated that ANT will allow us to identify otherwise unaccounted for results and trace complex effects within the institution.

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