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Graduate employability and pseudoscience

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Abstract

This paper will argue that the dominant possessive skills and attributes 'research' to graduate employability fails the test to be regarded as scientific, and should therefore be seen as pseudoscientific. The purported research issue is unclarified, failing to distinguish between investigative purposes (eg at micro-, meso- and macro-levels) and pre-empted by definitional entrapment. Ontological and epistemological problematics are unconsidered in the rush to search for 'attributes' and 'skills', which may be seen as similar to the alchemist search for the philosopher's stone, or the belief in phlogiston. No explanation is provided as the causal relationship between the acquisition and possession of the purported attributes and skills and post-graduation employment, and the evidential support for such a link is lacking. The approach may be seen as an example of what Lakatos termed a 'degenerative research programme'. The paper will suggest an agenda for developing a 'progressive research programme'.

Full paper

In any sphere of scientific enquiry, in the physical and human sciences, there are often competing, even incommensurable ways of conceptualising and theorising the nature of the phenomena under study and the modes of empirical investigation deemed valid. These may be termed 'paradigms' (Kuhn, 1970), 'research programmes' (Lakatos, 1970), 'frames of reference' (Johnston, 2003), 'theory families' (Harré, 2008) or simply research 'perspectives'. This is certainly the case of the investigation of graduate employability where, despite the existence of alternative perspectives, in most of the scholarly, policy and practitioner literature the 'possessive' graduate attributes and employability skills perspective clearly dominates (Holmes, 2013a). Given that the issue is one that implicates academic scholars and institutions we might reasonably anticipate that approaches to the investigation of such purported attributes and skills would be supported by a sound rational approach to conceptualisation, theorisation, and empirical investigation. In other words, that the study of graduate employability is being conducted scientifically. This paper will argue that this is *not* the case, that the currently dominant possessive approach has arisen without scholarly due diligence, and so must be regarded as pseudoscientific and should be abandoned.

Although the single term 'graduate employability' has become commonplace, much of the discussion fails to distinguish between different arenas of inquiry and action, that can usefully be separated in terms of micro-, meso- and macro-levels (Holmes and Coughlan, 2008; Holmes, 2013b; Tomlinson, 2017). That the term denotes, or refers to, the same *concept* in each arena is not demonstrated, and is reminiscent of the now deprecated 'unity of science' approach (see eg Cartwright, 1999; Dupré, 2001). Consequently, the concepts deployed in the different arenas of inquiry and investigation cannot logically be treated as identical in meaning, for they carry different 'theoretical luggage' (Ryle, 1954).

The discourse of skills and attributes is highly confused, such that there is no agreement on nomenclature. Lists, frameworks, classifications of such purported phenomena have abounded in the literature for over three decades with no sign of progression towards agreement. In this respect we might see the field as in a state similar to that of the proto-science of chemistry (ie alchemy) prior to Lavoisier's publication of his 'Elements of Chemistry'(1790/ 2009). Not only are different terms used: it is unclear what category or categories of phenomena are being referred to by the terms 'skills', 'competencies', 'abilities', 'attributes', 'characteristics' and so on.

Lack of agreed nomenclature may, perhaps, be regarded as a consequence of a more deep-rooted issue, problems in respect the ontological and epistemological assumptions regarding the purported phenomena to which the terms. As Kuhn points out, without firm answers to questions on these matter, research can scarcely begin (Kuhn, 1970: , pp.4-5). Ontological issues include those of causation, how ontological existent has an effect on, a consequence for another. Yet the possessive attributes and skills approach omits explanation of *how* such purported phenomena relate to post-graduation employment and career outcomes. These ontological problems with the possessive approach are, perhaps, masked by the tendency to adopt definitions of graduate employability expressed in terms of skills and attributes, such that any investigation suffers from definitional entrapment, preventing further exploration.

Ontological problems affect epistemological matters, for if there is no clarity on what is the nature of the phenomena under study it is not possible to understand how we might identity their existence, or absence, within a particular setting. This then affect methodological choices, as can be seen by the absence of any sound approach to empirical investigation the claimed phenomena. Instead, surrogate methods are usually adopted, whereby for example surveys are conducted of the *opinions* or *perceptions* of various groups of informants: students/ graduates, recruiters/ employers, teaching staff. Often these opinions are taken as factual measures of skills and attributes required/ desired/ achieved, with no supportive argument for doing so, an act of investigative legerdemain. The provenance of lists of skills, attributes etc that form the basis of the survey questions typically is unsupported by any rationale except that of precedence by other publications. In sum, such approaches may be regarded as example of 'cargo cult science' (Feynman, 1974).

That the field is marked by lack of progress over more than three decades clearly points to the whole approach as a 'degenerative research programme' (Lakatos, 1970), one that should be treated as pseudoscientific. The paper will conclude with suggestions of how to develop a 'progressive research programme' (op. cit.).

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