

118 Employability as Learning Outcomes in Master's Degree Programmes: Cases in Education and Engineering Fields

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Research Domains

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Abstract

What are the learning outcomes of master's degrees in the Education and Engineering field? How do the learning outcomes at the master's level incorporate employability? Based on the qualitative document analysis, the learning aims and outcomes across all master's programmes in Education (n=81) and Engineering (n=95) in Hong Kong were reviewed. Keyword and thematic analysis were used to describe employability as learning outcomes at the master's level. The results showed that master's programmes in two fields emphasize an interdisciplinary approach as the essential employability. They focus on applying disciplinary knowledge to other disciplines and professions. In addition, most programmes highlight the recognition of programmes from the professional association and promote the license or qualification students can obtain upon degree completion. For the skills, they tend to emphasize the transferable skills in the learning outcomes; the curriculum content heavily relies on the technical skills.

Full paper

Attaining an advanced degree is a means of achieving more significant academic, economic, and social opportunities. Increasing numbers of people are pursuing master's degrees today to improve their knowledge, skills, competency, and employability (Baker, 2011; Gallagher, 2016). Traditionally, a master's degree was seen as a pre-doctoral step with a vital research component or as the minimum qualification to teach in the tertiary sector. Gradually, the concept of 'mastery' has changed and now tends to focus more on the local labour market demands (McInnis et al., 1995). The types and titles of master's degree have diversified as it has become the common credential for a professional certificate in several fields (Glazer-Raymo, 2005). More and more master's programmes integrate employability as their learning outcomes.

Identifying learning outcomes at the master's level has several issues. For example, there are conflicting views about what master's students should learn. For example, it is debated whether a master's degree should provide specialisation or broader knowledge, highlight theory or practice, and focus on field-specific knowledge or transferrable skills (Gallagher, 2016). There are also contrasting views on whether the master's degree should emphasise future career or personal development. For example, the degree can be an instrument for developing a highly educated workforce and improving employability. However, some scholars believe that the labour market should not overly impact students' learning at the master's level; instead, the learning experience should enrich students' personal and professional development (Hu et al., 2016).

This research will focus on the following research questions: What are the current learning outcomes for master's degrees in the Education and Engineering field? How do the learning outcomes at the master's level incorporate employability? Education and Engineering master's programmes have similar characteristics in terms of history, development, and current challenges. Historically, the two fields developed from traditional, research-focused master's degrees: Master of Arts and Master of Science. However, they have become more specific with the increasing demands of professions and now place greater emphasis on the integration of theory and practice than on traditional research components. Both also have large professional associations that influence the supply-demand of the labour market and professional development. In both fields, several occupations require a master's degree as a prerequisite. In both fields, new demands for master's programmes have emerged in recent years with a strong emphasis on fieldwork, practicums, hands-on experience, and employability. On the other hand, the two fields have different characteristics. Although both are in applied science, according to Becher and Trowler (2001), education is a soft science, and engineering is a hard science. In education, many students focus on their careers relating to teaching or as educational administrators, and most master's programmes focus on the continuing professional

development of teachers (Deem & Lucas, 2006). On the other hand, in engineering, the career path of graduates is heterogeneous in terms of working sectors, tasks and positions, and the size of organisations (Nilsson, 2010).

This study applied qualitative document analysis. For the data collection, it explored the stated learning aims and outcomes across all master's programmes in education (n=81) and engineering (n=95) in Hong Kong. Programme websites were reviewed to collect information on the stated mission and aim of the curricula and learning outcomes. Keyword frequency was used to describe the master's programmes' learning outcomes and employability. Key phrases that describe general learning outcomes, knowledge, skills, and attitudes were identified, and the concept of employability as learning outcomes was constructed.

The preliminary findings showed that master's programmes in two fields emphasize interdisciplinarity as a learning outcome. Most programmes focus on the application of knowledge to other disciplines. In addition, most programmes highlight the recognition of programme learning from the professional association in the field or promote the license or qualification that students can obtain upon degree completion. For the skills, they tend to emphasize the transferable skills in the learning outcomes; on the other hand, the curriculum content heavily relies on the technical skills in their specific fields.

Designing good quality learning outcomes in master's degrees by integrating employability will affect the design of learning content, teaching methods, and assessment at an institutional and programme level. For example, current requirements for master's degrees are based on coursework, thesis, or internships, and this study will ask whether all programmes should follow similar requirements or develop new areas to enhance students' learning and employability.

References

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