

# Abstract

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## **An Investigation into the Improvement of Graduate Attributes within the Egyptian University Sector**

Graduate attributes have been used in Europe since the early 1980s. They were highlighted by the Dearing report in 1997 as a fundamental learning outcome of university education in the light of the concerns raised by UK employers who claimed that many graduates lacked the necessary attributes for employment, causing what is known as the skills gap. Many authors agreed that graduate attributes are at the nexus of a number of complexities that affect teaching and learning in taught courses. These could be conceptual, pedagogical, epistemological, structural cultural. However, many of their studies overlooked the role of context in the implementation of graduate attributes in taught courses which explains why the skills gap still exists. In Egypt earlier this century, the government recognised the importance of reforming its higher education sector to meet the challenges of the new era. One of these challenges was Egyptian employers' dissatisfaction with graduate attributes which were described as not meeting employment demands. To address such a problem, the Egyptian government, through a reform strategy, initiated a number of projects which among other things aimed to improve graduates' readiness for the labour market and thus reduce the skills gap. Yet, with all the initiatives achieved to date the problem still persists. This research has sought to study the skills gap problem in depth but within the scope of computer engineering undergraduate studies. It aims to understand the contextual factors affecting the effective implementation of graduate attributes in taught courses in Egyptian universities. To do this, a number of questions were posed, using semi-structured interviews, to a purposive sample of academics and graduates belonging to two different computer engineering undergraduate programmes one private and the other public. To ensure the validity of the data, more information was collected from Egyptian employers as well as the documents that represent the different educational policies and practices implemented in both private and public programmes of study. Through thematic data analysis and by applying complexity theory as a conceptual framework, the research arrived at its contribution to knowledge namely, identification of the different contextual factors that affected Egyptian academics' performance when teaching and learning graduate attributes in computer engineering undergraduate courses. These factors: were academics' recruitment promotion and progression procedures department/faculty culture which has an orientation towards disciplinary knowledge lack of scholarship of learning and teaching performance appraisal the pay scale fringe benefits and remuneration no incentive to conduct industry based research collaborative projects industry secondments and the fact that industrial practitioners are prohibited to teach in academia. In the light of these key findings, the main conclusion from this research is that it is possible, given the appropriate contextual conditions, that academics' teaching and learning of graduate attributes in undergraduate degree courses could be improved. This research has shown through its results that a concept such as graduate attributes is at the nexus of a number of complexities that affect their teaching in taught courses. Yet, these complexities are not only conceptual, pedagogical, epistemological and cultural but also contextual. The research also advises higher education authorities and practitioners, through a policy document, on how to improve Egyptian higher education reform outcomes and hence graduates' readiness for the labour market.