Internationalisation in First-Year Computing: A Study of Australian Universities

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Higher education institutions have responded to the growing demand of internationalisation by embedding global citizenship and intercultural competency as key graduate attributes within their curricula. These attributes shape the learning outcomes (LOs) and assessment criteria (UTS, 2023), guiding students to acquire the necessary skills to thrive in diverse global environments (Wong et al., 2022). LOs are pivotal in understanding how internationalisation is incorporated and prioritised within the curriculum, reflecting the institution's commitment to preparing graduates with these key competencies.

This study seeks to evaluate how internationalisation is integrated into computing education curricula, with a focus on the potential of graduates' design decisions to foster an environmentally sustainable and equitable world (Shultz & Jorgenson, 2009). The first phase of the study examined the LOs for five first-year units across three Australian universities to assess the initial introduction of internationalisation to students. The data for this study was sourced from publicly available information on university websites, including curriculum details, course descriptions, and associated documentation outlining the LOs. These LOs typically provide an overview of the educational goals for a course or unit, highlighting the primary skills and attributes students are expected to develop. However, they may not fully capture the specific pedagogical approaches or assessments used to achieve these outcomes.

The analysis involved a comprehensive review of the available curriculum, course descriptions, and associated documentation to understand how internationalisation is integrated into the LOs. Each identified LO was systematically analysed to identify codes related to internationalisation. An inductive thematic analysis approach was used to derive themes from these codes, representing the forms in which internationalisation appeared in these units.

Out of the 15 units examined, 46.7% (seven units) did not include any LOs related to global citizenship. Therefore, the themes derived from the analysis represent the remaining 53.3% (eight units) across the three universities:
● Ethical/Moral/Legal Obligations: Six out of eight units referenced moral, legal, ethics or ethical behavior in professional practice.
● Thinking Skills: Seven out of eight units required students to demonstrate analytical, and critical thinking skills as part of the learning outcomes.
● Diversity of People and Places: Three out of eight units mentioned diverse cohorts of people or places, emphasising the importance of understanding, and engaging with diversity.
● Working with People: Four out of eight units included the need for students to work effectively with others, highlighting teamwork, leadership, and conflict management skills.
● Communication Skills: Four out of eight units stressed the importance of effective communication, requiring students to convey complex information appropriately in various formats.

While LOs provide a valuable starting point for assessing the presence and emphasis of global citizenship attributes within the curriculum, they may not fully capture the depth of internationalisation

efforts. Exemplary practices are those that explicitly and comprehensively incorporate internationalisation concepts, as evidenced by detailed LOs. These practices are identified through the presence of key attributes such as ethical obligations, thinking skills, diversity, teamwork, and communication. By highlighting these attributes, the study aims to showcase effective integration methods that could serve as models for other disciplines.

Keywords: global citizenship, learning outcomes, internationalisation, curriculum design

References

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