

Adoption of Low-Code Web Development Approach by IT Undergraduates in Sri Lanka

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Abstract

Low-Code Development Platforms (LCDP) have emerged as a solution to the shortage of skilled developers since they provide a simplified approach to web application development using a graphical user interface. Acceleration of software development cycles, significant increase in developer productivity, and minimal hand-coding requirements have led to their popularity among web developers and a broader range of non-programmers. Literature shows that the booming digital economy in Sri Lanka faces a significant challenge due to the difference in computer programming skill level demanded by the industry and the actual skill level of IT graduates. The objective of this study is to investigate how perceived usefulness, perceived ease of use, and industry trends influence the adoption of LCDA for web application development among IT undergraduates. A pilot study was conducted with 35 undergraduates from three state universities, revealing that 18 students favoured LCDA, while 7 preferred traditional coding. Building on this, a main survey was conducted online with 372 IT undergraduates with the help of a pre-tested structured questionnaire using a convenience sampling technique. The findings revealed that perceived usefulness, including enhanced productivity and job relevance, is a significant factor driving low-code adoption. In addition to perceived ease of use, user-friendly interfaces and ease of learning contribute to the growing preference for LCDPs. Industry trends, including increasing market demand for faster, cost-effective solutions and peer influence, also play a critical role in shaping the adoption of low-code tools. Statistical analysis supports the hypotheses that all three factors significantly influence low-code adoption. The researcher recommended adding LCDPs to existing curricula to suit the job market and promote the arrangement of training programmes.

Keywords: application development, development platforms, graphical user interface, low-code, software development process