

Blended Learning in the Electrical and Automation Engineering Study Program at Häme University of Applied Sciences: Challenges and Teaching Methods That Support Learning

Lea Mustonen , Susan Heikkilä

Häme University of Applied Sciences, Finland

Abstract

Blended learning, rooted in online education, has become increasingly common in universities of applied sciences, particularly to support adult learners and working professionals seeking flexibility. This is evident in the Electrical and Automation Engineering Study Program at Häme University of Applied Sciences (HAMK). The main purpose of this article is to explore the challenges faced by these students and describe the pedagogical solutions that best support them. HAMK's core educational approach features a modular curriculum, dividing the academic year into four eight-week periods, each centered on a thematic 15-credit module. This structure promotes synergy between courses, allowing students to investigate topics from multiple perspectives and reducing fragmented learning. Assignments are often integrated across courses, minimizing workload and enhancing coherence. The program employs diverse, student-centered teaching methods, enabling learners to study at their own pace. Social interaction and peer support are actively encouraged. Real-world work projects and case studies are central, allowing students to apply theoretical knowledge directly to their professional environments. Recognition of prior learning and personalized guidance further increase flexibility and support. In summary, blended learning has proven to be an effective educational model, addressing the evolving needs of students and the workforce. Although challenges such as time management and stress remain, the combination of flexible structures, relevant content, and comprehensive support services helps students balance study and work. This approach benefits individual learners and promotes the real-time transfer of knowledge between academia and industry, highlighting the strategic importance of ongoing development in blended learning methods.



International Conference on Future of Teaching and Education

Keywords: Adult Learners; Modular Curriculum; Flexible Study Arrangements; Work-Life Balance; Pedagogy