

# **Pivoting to blended learning: TU Dublin Geospatial student experiences during Covid-19.**

**Audrey Martin, Ruairi Hayden, Roisin Murphy, Frank Harrington and Dermot Kehily (Ireland)**

**Key words:** Curricula; Education; Technology. Online learning. Online assessment

## **SUMMARY**

The School of Surveying and Construction Management (SSCM) TU Dublin offers undergraduate (UG) and postgraduate programmes (PG) across Real Estate, Quantity Surveying, Geospatial Surveying and Construction Management disciplines. The school currently has in excess of 900 students the majority are in full-time education normally delivered onsite in its Bolton street campus. The Geospatial discipline includes an UG 4-year BSc in Geographic Science, a PG MSc in Geographical Information Science (GIS) and a part-time course in GIS aimed at Continuing Professional Development (CPD) professionals in the work place. In March 2020, due to Covid-19 the Government implemented restrictions on classroom-based activities and the SSCM pivoted to online and blended teaching and learning approaches in all disciplines. This approach continued for the entire academic year of 2021 with most students accessing further education remotely from home. Where possible, UG Geospatial students attended field survey classes undertaken outdoors. This was to ensure the practical survey skills on the programme could be developed. To assess the impact of Covid-19 on teaching and learning and inform future curriculum development the SSCM formed a research team to examine student experiences in the areas of: 1. Teaching, learning and assessment 2. Technology and 3. Student experience. In total, 510 usable responses were received with strong representation across all programmes. This paper presents the results from the UG Geospatial discipline.

Results of the survey strongly indicate that student preferences are for onsite face-to-face education however, the benefits of online learning can be seen from the significant percentage (<80%) of students who used recorded content to review and revise course materials. In addition, over 90% found the range of additional online materials supportive of their learning. The student experience of online assessment found this to be an effective method to demonstrate their knowledge (76%) and to be less stressful (70%) than traditional assessment methods. The cost of electronic devices

---

Pivoting to blended learning: TU Dublin Geospatial student experiences during Covid-19. (11262)  
Audrey Martin, Ruairi Hayden, Roisin Murphy, Frank Harrington and Dermot Kehily (Ireland)

FIG e-Working Week 2021

Smart Surveyors for Land and Water Management - Challenges in a New Reality  
Virtually in the Netherlands, 21–25 June 2021

was a significant problem to 50% of students and over 60% had issues with broadband when accessing online classes. One of the main technological issues highlighted by the Geospatial students was software requirements, which exceeded their PC capacity. Measures of the overall student experience indicate a positive teaching and learning environment, but wellbeing and mental health were negatively impacted as a result of the shift to the virtual learning environment. This supports the thesis that the physical and social environment of University education is a significant factor in students flourishing.

It is expected that a more blended approach to third level education will be implemented in the future and lessons from this study can be learned in terms of clever timetabling solutions, which facilitate both on and off site programme delivery simultaneously. Such solutions highlight the need for dedicated University sites with screen casting and video equipment as standard. A single Virtual Learning Environment (VLE) such as Brightspace, currently used by TU Dublin, is an absolute necessity with the possibility of remote login facilities for students to access required software and data storage facilities.

---

Pivoting to blended learning: TU Dublin Geospatial student experiences during Covid-19. (11262)  
Audrey Martin, Ruairi Hayden, Roisin Murphy, Frank Harrington and Dermot Kehily (Ireland)

FIG e-Working Week 2021  
Smart Surveyors for Land and Water Management - Challenges in a New Reality  
Virtually in the Netherlands, 21–25 June 2021