Facilitating Students' Transition to Higher Education: Interlinking Engagement Analytics and Digital Mediation

Maurice Kinsella, University College Dublin, Ireland
John Wyatt, University College Dublin, Ireland
Niamh Nestor, University College Dublin, Ireland

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Abstract
Higher Education Institutions' approach to monitoring, managing and maintaining student engagement is evolving, accelerated by the Covid-19 pandemic and aligned prevalence of blended learning models. "Digital mediation", i.e. the use of digital and analytic tools by higher education staff in managing, monitoring and maintaining students' engagement, offers new opportunities in how interpersonal communication is facilitated and student data is collected. However, optimising its utility and effectiveness necessitates continually calibrating how digital and in-person engagement can be reciprocally and seamlessly integrated into student experiences. Here, University College Dublin's 'Live Engagement & Attendance Project' (UCD LEAP) has developed an online engagement monitoring resource providing Student Advisors with real-time programme-level engagement data. This resource supports them in providing students with timely and tailored interventions following potential disengagement. The purpose of UCD LEAP is twofold: achieving a more comprehensive picture of the student experience than would be available within module-specific engagement metrics, and helping staff create additional pathways for digitally-mediated student support. This paper explores ongoing learning from UCD LEAP, alongside the growth, evolution, and institutional embedding of digitally-mediated support interventions in higher education.

Keywords: Digital Mediation, Engagement, Attendance, Data Analytics, Student Support, Student Advisor

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1.0 Introduction

While navigating their journey through higher education (HE), students encounter a variety of issues, tasks and obstacles as they strive to become self-directed learners with the competencies for societal engagement and employability (ESRC, 2014; Knight & Yorke, 2003).[1] How students respond to these challenges can affect their subsequent ability and willingness to participate effectively in their chosen programme (Glynn, Aultman, & Owens, 2005) and their aligned susceptibility to retention issues (Burnett, 2007). Here, students' healthy engagement with their higher education institution (HEI) underpins their psychosocial and academic development (Balwant, 2018; Kahu & Nelson, 2018; Kahu, Stephens, Leach, & Zepke, 2015; Macey & Schneider, 2008), and is crucial in fostering the characteristics and competencies to address these challenges. Consequently, during their transition into HE, students often require proactive social support (Maymon, Hall, & Harley, 2019) to meet the demands of programme integration, such as 'independent learning, living and navigating new social environments' (Thompson, Pawson, & Evans, 2021).[2]

Against this background, ongoing digital and analytic resource innovations continue to shape the design and delivery of student support and services (Karkouti & Bekele, 2019; Underwood & Anderson, 2018) across areas such as information, referral and resource provision (Cutrona & Suhr, 1992). There are a number of factors contributing to the proliferation of digital-centric engagement, including pedagogical necessity in the wake of COVID-19 (Godber & Atkins, 2021; Salah-Eddine, 2020), advances in technology (Karkouti & Bekele, 2019; Srinivas, 2018), and institutional/organisational mandates (European Commission, 2021; University College Dublin, 2020). Thus, in addition to on-campus opportunities for educational and social exchanges already offered within HEIs, staff-student interfaces are occurring remotely. Digital mediation, which we define as the use of digital tools and analytics by HEI staff in managing, monitoring and maintaining students' engagement, has been instrumental to this process. Alongside its practical applications in reshaping staff-student interactions across academic, advisory, and administrative domains, digital mediation is vital in rethinking interpersonal engagement as comprising in-person and digitally-centric forms of interaction.

In this paper, we present ongoing insights from University College Dublin's 'Live Engagement and Attendance Project' (UCD LEAP) from the academic years 2019-2022. This project explores the feasibility of a blended student support model that integrates real-time insights from monitoring virtual learning environment (VLE) engagement with the provision of student support services. We explore digital mediation's status within the ambit of student services and support by reevaluating the binary between digital and in-person engagement and reframing these communication methods as existing on an interpersonal continuum. Here, we assess the potential contributions this support initiative can make to enhancing Student Advisors' (SAs') capacity to identify and intervene when disengagement occurs and provide recommendations on how digital mediation strategies can be integrated into HEIs' organisational practice.[3]

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[1] In UCD (2015), it is noted that 'Entering university…brings very significant challenges for first-year students who need to become used to an educational environment where they are expected to function as independent and self-motivated learners'.

[2] Albrecht and Adelman (1987) define social support as communication that reduces forms of uncertainty, functioning to augment perceived personal control. Lakey and Cohen (2000) also note that social support can contribute to people's health by protecting them from the adverse effects of stressful experiences.

[3] Student Advisors (SAs) are UCD staff who provide advisory and support services to students.

2.0 UCD LEAP Overview

University College Dublin's "Live Engagement & Attendance Project" (UCD LEAP) is hosted by the School of Veterinary Medicine at UCD. It comprises ~300 students across four class cohorts in 1st-year and one class cohort in 2nd-year. As of the 2021/22 academic year, it has expanded to the School of Science at UCD, encompassing ~1000 additional 1st-year students. UCD LEAP assesses the contribution digital and analytic tools can make to enhancing student support provision and fostering engagement, particularly during students' transition into HE. Specifically, we seek to interlink digital engagement resources and analytics with student advisory supports, aiding in timely and targeted disengagement interventions. Alongside assessing the feasibility of this resource, we examine the principle and practice of student engagement against recent technological developments in HE services and supports.

To achieve this objective, we have developed a VLE engagement reporting tool that collects and disseminates weekly programme-level data on components of students' engagement activity. Data is derived from UCD's VLE Brightspace, which offers the functionality to capture descriptive data, including the volume, time, and length of students' topic/content access per module.[4] From these metrics, student "at-risk" flags are generated to identify potentially disengaged students from two key factors: VLE long-in and module access frequency.

As UCD LEAP is undertaken as a UCD Student Advisory Services initiative, this data is provided to the designated SA, who has discretion over how they action student insights based on considerations such as extenuating circumstances and recent engagement records. The SA, a designated "Trusted Person" for students, can then arrange personalised, one-to-one follow-up sessions and refer to specific supports on an as-needed basis.[5] Alongside facilitating direct SA interventions, the project also addresses pedagogically-orientated questions on the functionality of VLEs, including whether high VLE usage correlates to high GPA attainment and the converse. Macro-level insights on whether early and consistent student access to VLE material is more beneficial from an assessment perspective than late and variable access is also examined. Similarly, this data may also offer an understanding of whether the volume or type of topics Module Coordinators (MCs) provide in their dedicated VLE module space relates to assessment outcomes.

3.0 Student Engagement in Higher Education

HEIs are tasked with preparing students for professional practice and societal engagement by delivering dynamic and formative educational experiences (Bowden, Tickle, & Naumann, 2019; Kahu, 2013; Kahu & Nelson, 2018; Kahu et al., 2015). Engagement is at the heart of this mission and a crucial characteristic of high-quality teaching & learning (T&L) (Ashwin & McVitty, 2015). It enables students to integrate into their education community, meet the psychosocial demands of their programme, and work with their HEI to become self-directed learners. Kuh (2001) states that student engagement consists of 'Participating in educational practices strongly associated with high levels of learning and personal development'.

[4] While the volume and frequency of access indicated student engagement levels, the time-in-topic metric was considered less significant given difficulties in accurately verifying whether this time was spent consciously internalising the learning material.

[5] The Trusted Person Project is undertaken by UCD Agile, to contribute to UCD's student support ecosystem.

Engagement occurs in numerous areas across students' 'educational interface' (Kahu & Nelson, 2018); within curricular and non-curricular contexts (Krause, 2011). While it offers students a range of academic and psychological growth opportunities, it requires participating in demanding situations, tasks, and interactions. For example, there can be external obstacles relating to logistical, organisational, and cultural aspects of the educational environment, e.g. navigating timetables, adhering to learning/assessment benchmarks, and integrating into social groups (Chipchase, Davidson, Blackstock, & Bye, 2017; Denny, 2015; Kahu & Nelson, 2018). Additionally, internal obstacles may be related to developing the skills and personal characteristics needed to practice self-directed learning.

Student engagement is multidimensional and comprises interconnected capacities that come together to produce a holistic psychosocial experience. Drawing on the literature, we present provisional descriptions of five such components of engagement (Blumenfeld et al., 2005; Bowden et al., 2019; Christenson, Reschly, & Wylie, 2012; Eldegwy, Elsharnouby, & Kortam, 2018; Fredricks, Blumenfeld, & Paris, 2004; Fried & Konza, 2013; Kahu et al., 2015; Khademi Ashkzari, Piryaei, & Kamelifar, 2018; Klem & Connell, 2004; K. L. Krause & Coates, 2008; G. Kuh, 2006; Lay-Hwa Bowden, 2013; Mahatmya, Lohman, Matjasko, & Farb, 2012; NCESS, 1992; Nguyen, Cannata, & Miller, 2016; Reeve, 2012, 2013; Reeve & Shin, 2020; Reeve & Tseng, 2011; Reschly & Christenson, 2012; Schaufeli, Salanova, González-romá, & Bakker, 2002; Vivek, Beatty, Dalela, & Morgan, 2014; Wentzel, 2012; Yazzie-Mintz & McCormick, 2012):

i. Cognitive Engagement: The student intellectually invests in their learning process. This engagement is practiced through self-regulating one's learning and mentally challenging oneself during the process of acquiring, internalising and applying the knowledge and skills needed to advance learning.
ii. Behavioural Engagement: The student participates in learning and development activities. This engagement is exhibited through being a productive and involved member of one's HEI across educational and extracurricular domains, alongside demonstrating academic achievement.
iii. Affective Engagement: The student feels personally connected and emotionally invested in their HE experience. This engagement is expressed by valuing and cultivating one's HEI experience, including being enthusiastic and optimistic about it contributing to one's personal and professional development.
iv. Social Engagement: The student identifies with, and healthily interacts with, significant others within their HE environment. This engagement is reflected in becoming embedded within and developing a sense of belonging toward one's HE social context.
v. Agentic Engagement: The student constructively attempts to contribute to their learning and development experience. This engagement is manifested in proactively and collaboratively making decisions on the nature and content of one's HE experience.

Engaged students discover, deploy, and develop their personal and environmental resources to foster constructive relationships with their educational community (Ecclestone, Biesta, & Hughes, 2009; Fredricks et al., 2004; Kahu, 2013; Phan, 2014; Yazzie-Mintz & McCormick, 2012) and undertake psychosocial and academic development. Numerous departments and domains within HEIs are responsible for ensuring students' needs are adequately met, including academic services and resources, information and communications technology infrastructure, administrative facilities, and student support. UCD's Student Advisory Services, in particular, provide resources enabling students to healthily and productively participate in their HEI community; in particular, they collaborate with students to identify personal engagement barriers and enhancers, and tailor supports accordingly.

Different strategies can help foster HE transition, such as supporting students to develop the internal mechanisms to engage and create an *external* environment conducive to holistic participation. To enable such supports, SAs' role spans academic, administrative, and pastoral spheres embedded within an institutional, professional network, including careers, counselling, disability, health services, and academic support. Inter-departmental embeddedness is a central component of SA services, particularly in enabling the social and academic resources which strengthen transition and retention (Fergy, Marks-Maran, Ooms, Shapcott, & Burke, 2011; Tinto, 1987). An example of an approach to harnessing students' internal capabilities is providing them with the relevant guidance and resources to help foster self-directed learning. Self-directed learning comprises actively gaining greater control over one's learning by taking responsibility for planning, initiating, maintaining, and evaluating learning activities (Merriam & Baumgartner, 2020; Wilcox, 1996). Specifically, it can encompass shaping one's education objectives and academic resources, materials, and methods (Knowles, 1975; Olivier & Wentworth, 2021), either collaboratively or independently. Regarding creating an engagement-conducive environment, SAs are instrumental in assisting students in establishing and maintaining meaningful relationships with peers and faculty (Fergy et al., 2011) through numerous social initiatives, e.g. group events, peer mentoring programs and academic liaising.

4.0 Digital Mediation

We define "digital mediation" as the use of digital and analytic tools by HEI staff in managing, monitoring and maintaining students' interactions and engagement. In addition, these resources are incorporated into their HEI's digital architecture and are integrated into stakeholder communications. Digital mediation now supplements and substitutes for in-person activities across pedagogical and pastoral domains. VLEs are a prominent engagement resource utilising digital mediation, providing remote access to educational content, resources, communications, and assessments (Alves, L, & Morais, 2017).[6] VLEs play a vital role in facilitating and supporting blended learning – reducing potential barriers to learning through accessibility and adaptability, and enabling students to engage autonomously with different education platforms.

Given that technological innovation provides HEIs with additional support avenues and capabilities (Morra & Reynolds, 2010), a question arises, from the perspective of SAs, as to whether a similar integration of digital and in-person communication approaches may enhance their ability to anticipate, identify, and respond to students' needs. Here, beyond pedagogical applications, digital tools are broadening how HEIs capture and analyse student engagement data across a range of domains, e.g. module access, assessment results, class attendance, library usage and fee payment (Hlosta, Zdráhal, & Zendulka, 2017). Defined by Long and Siemens (2011) as 'The measurement, collection, analysis and reporting of data about learners and their contexts', learning analytics help mitigate potential disengagement issues and enhance retention (Cooper, Ferguson, & Wolff, 2016; Nik Nurul Hafzan,

[6] Here, among the UCD LEAP student cohort, the increasingly pivotal role of VLEs is apparent, with usage rates remaining comparatively higher than prior to the shift to blended learning in the 2020/2021 academic year.

Safaai,Asiah, Mohd Saberi, & Siti Syuhaida, 2019).[7] Here, Nutt (2017) provides four examples of how digital insights can enhance engagement across Descriptive, Diagnostic, Predictive and Prescriptive domains:

i. Descriptive insights address the question: 'What has happened?' Important information can be drawn from independent data sources (the student's "digital footprint") based on established parameters, e.g. VLE engagement rates, academic performance, extenuating circumstances and fee compliance.
ii. Diagnostic insights address the question: 'Why did this happen?' Combining and comparing pertinent information can create a thorough understanding of student engagement patterns, e.g. non-compliance with fees and personal financial pressures, and lack of VLE access with a heavy personal workload.
iii. Predictive insights address the question: 'What may happen?' Forecasting can be undertaken based on collected data to ascertain the potential consequences of particular T&L strategies and resources, e.g. aggregated feedback from VLE usage can help MCs decide how to curate their VLE and what learning/assessment materials to offer.
iv. Prescriptive insights address the question: 'How can we make it occur?' By using data that highlights students' trends and needs, SAs may be able to formulate and justify specific student support strategies, e.g. financial aids or healthcare referrals.

Bonnin and Boyer (2017) have identified a range of positive outcomes underpinned by learning analytics, including student retention, informed decision-making, curriculum development, and personalised interventions. Nevertheless, greater use of digital mediation practices has also presented some challenges. For example, more virtual content delivery can result in fewer opportunities for face-to-face contact. More frequent digital-centric engagement strategies and VLE-centrism (Recio & Colella, 2020) may also raise questions about whether blended models offer a holistic student experience. Likewise, when analytics infrastructure is tailored at a module level, this can lead to "module siloing", evident in significant discrepancies in the quantity and quality of learning materials and resources students are provided across different modules. A plurality of such virtual teaching tools can also result in engagement data aggregation challenges. While digital mediation already features within advisory service provision (White, 2020), e.g. email, video meetings, online resources and repositories, and social media, the potential limitations of VLE-centrism raise questions about MCs' and SAs' capacity to identify disengagement and intervene accordingly when such data is used as a primary/sole source for engagement insights.

5.0 UCD LEAP: Interlinking Engagement Analytics & Digital Mediation

Although the full scope of engagement is not confined to teaching and learning, VLE activity is nevertheless a key marker of engagement. As such, the analytic framework employed in UCD LEAP is underpinned by the perspective that students with higher VLE activity levels are more likely to represent students with higher engagement levels than their peers (Fuller, Wilson, & Tobin, 2011; Macfadyen & Dawson, 2010). Therefore, the assumption that students with less programme engagement are less likely to be self-motivated to engage, and would have lower VLE usage and indicative of low levels of engagement in students, underpins the UCD LEAP student targets. The two benchmarks used to flag students with SAs are:

[7] Against this backdrop, UCD (2020) aims to "Integrate student services to ensure a consistent level of high-quality student support…These supports will be bolstered by advanced systems using student data to target and personalise timely interventions".

i. The student had not logged into the majority of their VLE modules in seven days.
ii. The student's module topic access was <30% of their class peer average.

These metrics allow us to relay insights to the SA, which fulfil the aims of Nutt's (2017) framework by capturing two key engagement markers. The login data allows SAs to identify if any students who previously have been highly engaged have had a sudden drop-off in their engagement level, which would not be apparent from topic access levels alone. This approach also aligns with existing literature indicating that the best predictor of student engagement is changes in the student's own VLE engagement compared to previous activity (Wolff, Zdrahal, Nikolov, & Pantucek, 2013). Additionally, the peer average content access allows SAs to attain a sense of the quality of student interaction with learning material while accessing the VLE, differentiating those who log in and access very little material from those who have a broader depth of virtual engagement with their programme. This metric being a relational benchmark helps mitigate the module-by-module variance in total learning material available, effectively controlling for inter-module variance and siloing, and fulfilling the best practice aim of framing engagement within local context (Gašević, Dawson, Rogers, & Gasevic, 2016). It is worth noting here that although time-in-content analytics are available in UCD's VLE, current literature consensus is that this metric is not predictive of engagement (Gardner & Brooks, 2018), and as such, was omitted from UCD LEAP reporting to put greater emphasis on the reporting metrics more likely to capture current student engagement levels representatively.

For the data of flagged students to be effective and actionable, it is necessary for reporting to cover a sufficiently representative time horizon of current engagement, while also being frequent enough to give SAs the capacity to initiate contact as close to apparent disengagement as possible. A weekly reporting run achieves both of these aims, with one week capturing the entirety of regularly scheduled student classes for all modules. Consequently, UCD LEAP reporting is set up to collate student flag data during the weekend, ensuring that the whole prior week of engagement is represented in the data for SAs on Monday, and that interventions can take place within a week of a student's disengagement, at the latest. In addition, the weekly reporting frequency detailed here provides the opportunity to mitigate dropout risk when first-year students are most likely to withdraw (Nistor & Neubauer, 2010).

6.0 Digital Mediation and Virtual Learning Environments

VLEs can enable MCs to monitor, manage, and maintain students' engagement remotely through digital mediation. However, digital mediation should not focus on whether it can replace in-person support and services; instead, it should address how it can help to deepen the efficiency and accessibility of these resources. Digital and in-person resources should thus be mutually reinforcing, which requires leveraging the contribution new technologies can make through an advisory infrastructure that keeps interpersonal engagement at its centre (Kalamkarian, Boynton, & Lopez, 2018). Srinivas (2018) notes: 'Technology is only a tool that makes tasks easier for students. It's the people that actually support the students.' This is borne out, for example, in research by Kalamkarian and Karp (2015) on the implementation of technology-based advisory tools, noting that in the vast majority of cases, students believed that these could not provide them with the levels of personalised feedback and developmental instruction they considered necessary.

As Mattei et al. (2014) argue, new advising technologies 'cannot and should not replace in-person advising'; rather, for them to be most effective, they 'still require strong relationships between advisor and advisee' (Underwood & Anderson, 2018). Mattei et al. (2014) have identified a range of reasons why it is crucial to have a 'human in the loop', including for creativity, critical thinking, and understanding, both interpersonal and organisational. This necessity is apparent in how digital mediation enables MCs to monitor, manage and maintain engagement within VLEs. In each context, a human perspective is needed to maximise the functionality and increase the effectiveness of the online learning space. Thus, while digital mediation continues to enhance MCs' and SAs' role in addressing students' engagement issues, in-person interactions are not there to simply complement digital tools, but to fulfil their capabilities. Here, SAs can play a vital role, ensuring that human insights, interests, and innovations remain at the centre of digital mediation and how it is used to facilitate and foster student engagement. Against this background, we provide some brief recommendations on how both MCs and SAs can help maximise the benefits of using digital mediation with VLEs.

6.1 Monitoring Student Engagement

VLEs are equipped with monitoring tools that track student participation and performance according to specific forms of engagement, including:

i. Cognitive information on how students respond to and absorb module content, e.g. accessing lecture materials/resources and providing critical feedback.
ii. Behavioural information on how students participate in and perform on their module, e.g. adhering to login requirements and submitting assignments.
iii. Social information on how students interact with their class, e.g. contributing to discussion boards and collaborative projects.

One can better understand student involvement with the course by designing one's module to incorporate VLE features that cater to different facets of student engagement. Collecting and collating inter-module data may help reduce monitoring discrepancies in terms of students' program-wide engagement related to silos. It can be challenging to evaluate the relative quality of various learning materials and resources provided through a VLE and decide which engagement resources should be prioritised. In order to control for potential discrepancies in relative access, UCD LEAP establishes a baseline of student engagement at programme-level when monitoring engagement. With this approach, SAs may be able to distinguish between what singular module-level engagement data shows and what program-wise data may indicate.

6.2 Managing Student Engagement

A digitally-centric management approach considers the operational interdependency of modules at the program level, leveraging their shared platforms and infrastructure. The distinct characteristics of each online module should be acknowledged, such as aims, content, learning approach and assessment. Nevertheless, consistency is essential in upholding quality and quantity benchmarks of learning materials and resources, as well as the intuitiveness of interface navigation. It is possible to achieve inter-module coordination and cohesiveness by considering their function, form, and fit and implementing them to facilitate programme-level integration:

i. Module Function is its overriding purpose – understanding what it aims to achieve, why it is educationally and professionally useful, how it will accomplish its objectives, and conveying this information to students.

ii. Module Form is the tangible configuration – providing a cohesive, dynamic, and interactive educational experience. This involves bringing together the constitutive components within a user experience that prizes usability, effectiveness and efficiency.
iii. Module Fit is its embeddedness within the broader programme it exists within – providing a distinct-yet-interconnected contribution to the programme's broader curriculum and the strategies necessary to meet learning outcomes.

6.3 Maintaining Student Engagement

The ability of VLEs to foster engagement has been instrumental in maintaining pedagogical service continuity. In terms of fully understanding the utility of the digital space as a HE participation portal, Self-Determination Theory (SDT) (Deci, Ryan, & Guay, 2013; Niemiec & Ryan, 2009; Ryan & Deci, 2002; Ryan & Deci, 2017) highlights the importance of fostering students' multidimensional need to maintain engagement, notably autonomy, competence and relatedness. Autonomy emerges when students possess control and choice, a sense that they can exercise a degree of ownership over their learning experience. Competency emerges when students are capable of engaging with and completing challenges, a sense that they can achieve mastery of the tasks presented to them. Finally, relatedness emerges when students feel connected with others in their HEI community, a sense that they are integrated into their learning environment and experience.

When discussing why students might not be engaging with their VLE, these three factors serve as a practical framework for developing questions about whether it is fulfilling their engagement needs. For example, regarding autonomy, SAs can ask themselves, 'Does the student have the opportunity to take ownership of their learning experience and participate in a self-directed manner?' Regarding competency, SAs can ask themselves, 'Is the student being given the resources to engage with module requirements and grow their capabilities?' Finally, regarding relatedness, SAs could consider, 'Is the student able to make meaningful connections with their class or lecturer?' Questions such as these can act as a springboard for deciphering if there are ways that their VLE experience can be modified to increase participation.

Additionally, students should ask themselves whether they can make any changes to enhance their participation. The SA can facilitate self-appraisal by implementing various activities, such as decisional balance sheets and setting goals. Decisional balance work encourages students to reflect upon and identify their behaviour(s) that may negatively impact their engagement and consider the consequences of implementing changes. As well as this, goal identification and mobilisation strategies can assist students in recognising and realising specific objectives. For example, based on the student's understanding of their change needs, they can identify an objective they wish to achieve, such as making new personal connections, participating more in class, and approaching study in a more balanced manner. They can then examine how relevant, realistic, and sustainable their goal is and formulate a plan to accomplish it with the support of their SA.

7.0 HEI Recommendations

Building on these insights, we have formulated a set of recommendations that can be adopted by HEIs seeking to deliver balanced and effective digital mediation strategies:

Student Supports

i. Support students in a manner that facilitates multiple aspects of their engagement, e.g. education support workshops, study skills workshops, social and group events, healthcare referrals, and student representation.
ii. Offer students blended services and support to meet their evolving preferences for digital communication with staff, such as video calls and emails, alongside in-person interactions. Here, as HEIs continue to utilise digital resources, it is crucial that SAs are attentive to students' off-site needs, such as technology access, and can address these needs should they arise.
iii. Maintain consistency between modules within their VLE by addressing "module silos" – ensuring greater standardisation in the quality and quantity of T&L materials that students are provided. In addition, these measures will help SAs when comparing students' engagement rates between different modules.

Student Advisor Supports

i. Determine the scope for blended support provision and the necessary resources to achieve this. To accomplish this task, education should also be provided on evolving technological tools, such as workshops, seminars, and best practice sharing.
ii. Test and scale VLE monitoring capabilities cross-campus.

Institutional Initiatives

i. Ensure ongoing consultation with the VLE service provider to continue optimising its functionality. For example, creating an engagement monitoring dashboard can facilitate more accessible access to information and a seamless monitoring process.
ii. Re-evaluate and specify criteria for identifying students at risk from disengagement, integrating a variety of data from VLE digital engagement.
iii. Focus on peer-relative engagement, not absolute thresholds. Although cross-module consistency may simplify some monitoring aspects, this may not always be achievable. Different subject areas can lend themselves to substantial differences in content and assessment. Ensuring that baselines for flagging engagement issues are driven by peer-relative engagement helps control for variability across different modules.

8.0 Conclusion

The binary distinction between in-person and online engagement is becoming less apparent. Notwithstanding their qualitative distinctiveness, the concept of "interpersonal" support is evolving to encompass both resources, and they are increasingly experienced as existing on a continuum of student-staff HEI interactions. Nevertheless, while digital mediation is vital, the primacy of in-person engagement remains apparent pedagogically and pastorally, particularly in courses designed for this to be their primary T&L medium. Consequently, for digital mediation to be most fruitful, it must optimise VLEs as a pathway to student insights and interventions.

The extent to which the provision of HE resources and support through digital mediation represents a paradigm shift in staff-student engagement practices is unknown. Given that student engagement is multidimensional and encompasses a range of interactions, its

relational underpinnings may be best served through in-person and digitally-mediated supports. Therefore, rather than completely displace in-person supports and services, digital mediation can enhance the availability and adaptability of student-staff communications, and provide staff with information on which they can base their support decisions.

Digital mediation is being enhanced by numerous HEI initiatives and resources, such as information workshops, pre-existing digital architecture and resources, and SAs' adaptability. Since the meaning of engagement, and the means through which it is achieved, is evolving in tandem with the proliferation of digital and analytic resources, SAs should remain attentive to these shifts if they are to be responsive to students' needs and preferences. To make the most of their resources and meaningfully contribute to students' success, HEIs should embrace a comprehensive range of opportunities for digital mediation, whether through online participation strategies or learning analytics. Here, UCD LEAP will continue to research VLE engagement data to assess the potential contributions this resource can provide in helping to paint a holistic and dynamic picture of students' experiences – bolstering pathways for SAs to achieve student insights and interventions.

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Contact email: maurice.kinsella@ucd.ie
john.wyatt@ucd.ie