

Technological University Dublin ARROW@TU Dublin

Articles

Learning Teaching & Assessment

2018

"I don't Have the Time!" Analysing Talk of Time in Lecturers' use of the VLE

Claire McAvinia Technological University Dublin, claire.mcavinia@tcd.ie

Deirdre Ryan Mary Immaculate College, deirdre.ryan@mic.ul.ie

David Moloney Mary Immaculate College, david.moloney@mic.ul.ie

Follow this and additional works at: https://arrow.tudublin.ie/ltcart

Part of the Higher Education and Teaching Commons, Online and Distance Education Commons, and the Scholarship of Teaching and Learning Commons

Recommended Citation

McAvinia, C., Ryan, D. & Moloney, D. (2018). "I don't have the time!" Analysing talk of time in lecturers' use of the VLE. [Special Issue, McAvinia and Risquez]. *Irish Journal of Technology Enhanced Learning*, 3(2), 35-46

This Article is brought to you for free and open access by the Learning Teaching & Assessment at ARROW@TU Dublin. It has been accepted for inclusion in Articles by an authorized administrator of ARROW@TU Dublin. For more information, please contact arrow.admin@tudublin.ie, aisling.coyne@tudublin.ie, vera.kilshaw@tudublin.ie.



I don't have the time! Analysing talk of time in lecturers' use of the VLE

Claire McAvinia, Dublin Institute of Technology Deirdre Ryan, Mary Immaculate College, University of Limerick David Moloney, Mary Immaculate College, University of Limerick

Abstract

This paper reports on findings from the recent extension of the VLE survey which examined VLE usage from a staff perspective. 580 staff across seven institutions responded to the survey. The survey explored staff perceptions of the VLE and the opportunities *for* and barriers *to* its effective use. Qualitative and quantitative data were analysed in order to identify the major factors influencing staff engagement with the VLE. Time (or the lack thereof) emerged as the greatest barrier to effective use of the VLE. When time was in scarce supply, staff evaluated where to spend it and prioritised accordingly. The amount of time needed to gain proficiency in all or particular elements of the VLE was cited as a barrier to its effective use. There was a perception that large tracts of time were required to attend training. This led to questions about the pedagogical value of VLE usage. Technical infrastructure and usability were also factors which prevented staff from engaging with the VLE. We discuss these factors in light of a move towards micro courses and micro-credentialling, and the growing body of scholarly evidence available to support investment of valuable time by staff in the VLE.

1. Introduction

In any article aimed at higher education professionals, it seems mention of time pressures is almost superfluous, since people everywhere within our organisations experience intense demands on their time year-round. It is not only the practitioners who cite pressures of time: our students are very busy people too, with jobs, childcare, and other commitments slotting in around their studies. Examination of the literature shows that academics divide their time principally between teaching, research, service, and administration (Bentley & Kyvik, 2012). Research examining the challenges of academic time management and prioritisation has mainly focused on how academics juggle these pillars of their work. Research has also focused on the changes in academic identity that have followed globalisation and the expansion of higher education (Henkel, 2000) and how these phenomena have generated unprecedented pressures on academics' time.

Irish Journal of Technology Enhanced Learning Ireland, 2018. © 2018 McAvinia, C., Ryan, D. & Moloney, D. The Irish Journal of Technology Enhanced Learning Ireland is the journal of the Irish Learning Technology Association, an Irish-based professional and scholarly society and membership organisation. (CRO# 520231) http://www.ilta.ie/. This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0), allowing third parties to copy and redistribute the material in any medium or format and to remix, transform, and build upon the material for any purpose, even commercially, provided the original work is properly cited and states its license.

C McAvinia, D Ryan & D Moloney

A confounding variable in defining academic identity is the emphasis on disciplinary research, which has gained significant kudos over that of teaching and learning in the hiring strategies of HEIs. Gregory and Lodge (2015) state that this is evident in the universal requirement for higher degrees in disciplinary research but less frequently any formal teaching qualification. Others have analysed academics' use of time according to themes such as time available for research and writing, different pressures in different sectors, and gender differences (Acker & Armenti, 2004; Antoniou & Moriarty, 2008; Feather, 2017; MacLeod, Steckley & Murray, 2012; Ylijoki, 2013). Perhaps neglected in these studies has been analysis of the time available for professional learning, and the time available to learn about teaching and about the technologies that might enhance teaching in higher education. Smith's (2012) literature review of 144 peer-reviewed articles on the adoption of innovative practices in teaching and learning found that existing workloads and time were "highlighted as the major barrier to adopting innovative work practices" (p.175), and that staff need to be given time for innovation as well as the embedding process taking time itself. Gregory and Lodge demonstrate through an extensive review and critique of literature that pressures of existing work represent a "silent barrier" to greater use of technology-enhanced learning in higher education (2015, p.210). If, as they argue, technology is to have transformative effects on students' learning then time must be found.

In this article, we explore the response "I don't have time" in terms of how we might enable people using VLEs to innovate in their practice, and enhance learning and teaching. This special issue has reported findings from the VLE survey over almost a decade, and the more recent extension of our research to staff using the VLE in some of the partner institutions. In our survey with staff, we were keen to find out how time was discussed, how it affected the use of the VLE, and how we might be able to encourage staff to prioritise the use of technology-enhanced learning in the future. We report the findings from this data which cite time, technical and usability issues and return on investment as barriers to effective use of the VLE. In particular, we have drawn from the qualitative questions where staff were able to free-write their responses.

2. Methods: collecting and analysing data about time

Full descriptions of the #VLEIreland research methodology and analysis of the results for the staff survey have been presented earlier in this Special Issue (Farrelly, Raftery & Harding, 2018; Harding, 2018). The staff survey ran during the academic year 2014/15 with responses received from seven institutions. Of the seven institutions three used Moodle and four used Blackboard as their VLEs. The findings reported in this paper are drawn from Questions 1, 6 and 13 of the survey. In addition, this paper refers to Questions 11 and 12 which were quantitative, but help validate the analysis of the qualitative data presented here and support some of the themes and comments identified.

Question 1 asked staff why they did not use the VLE. Question 6 asked staff to comment on whether there was "anything that prevents you getting best use of the VLE". Question 11 asked staff "Are you interested in making more use of online tools in your teaching?" and Question 12(a-I) sought respondents' opinions on a number of issues which might affect their engagement with the VLE and online tools in general. These included lack of access, usability issues and availability of training. Question 13 asked staff were there "any reasons you choose not to, or are prevented from, making use of online tools in your teaching". References to time featured prominently in the sets of answers received here.

The qualitative data were open-coded in NVivo, with comparison of codes by the research team and identification of the main themes using the thematic analysis approach described by Braun and Clarke (2006). We found more than a hundred separate references to lack of time across Questions 1 and 6, and 77 references to pressures of time in response to Question 13. However, these were nuanced and dependent on other factors influencing the work of staff.

3. Findings: talking about time

In this section, we treat each of the themes identified following analysis of the qualitative data from the staff questionnaire. We discuss each theme briefly along with selecting some indicative quotes from the data itself.

3.1 Needing more time to learn the system

Of 529 staff questionnaires returned, there were 135 specific references to lack of time, with many responses referring to needing more time to learn the VLE or specific features of the VLE. People had specific features in mind to learn (such as quizzes, assignment submission) but needed more time to become familiar with these, and with the system overall. A sample of representative comments follows:

Time to become familiar with skills required to operate it; and time to assess its potential value in engagement and learning outcomes for the particular modules and student groups that I teach

enough time to try out new features and be confident about using them before 'trialling them on students'

Not knowing enough about it: I have just basic skills: not enough time in my working day to upskill myself to exploit its full potential

I usually have great intentions to use [named VLE] in my teaching however I never seem to have the time to set up my courses so I end up using the same features every year

Participants talked about waiting for an appropriate chunk of time in which to sit down with the system and learn it:

Lack of time to really give to working out what it can do

Mainly time to sit and learn and take advantage of it

Time to figure it all out!

The prioritisation of activities in academic life is heavily dependent on academic identity construction (Gregory & Lodge, 2015) but also on individuals' strategies for time management. There are interesting similarities here with the ways in which people speak about research and writing (Silvia, 2007). Academics wait for perceived oases of time in which to write – weekends, vacation periods, sabbaticals – and yet these calm uninterrupted periods of time never seem to materialize. The right time does not appear to come along in

which independent learning of the VLE becomes possible, which suggests that training might offer discrete pieces of time in which to learn specific features. However, the data also indicated that people did not have time to go to training or alternatively, training was offered at times when they were not available.

getting the designated time to get training on how to use it even though i have received help in trying to expand my knowledge on it

insufficient time to develop new activities, insufficient training at the time when I need it

The inability to attend training was acute for adjunct faculty/part-time lecturers who are often on campus only for the periods of time in which they need to teach. The inability of these colleagues to attend academic professional development workshops and training has been highlighted in other recent research (Coughlan, 2015).

as a part-time lecturer you do not have the same exposure to training and tuition to master [named VLE]

3.2 Technical issues taking time away

For those participants who had spent time with the VLE developing their courses, they reported needing more time than anticipated owing to other problems such as poor usability, WiFi problems or other technical issues:

Time and the pain it can be to actually figure out how to do some things. I find it very unintuitive. Also very slow to upload one thing at a time.

the class lists are not accurate and the navigation is clunky

An added problem here was that when staff spent time on the VLE it took time away from other tasks, and sometimes increased the number of tasks they would need to complete. For example, the VLE was not linked to other institutional systems for recording of grades, so these would have to be entered again to the relevant system. Spending time in the VLE did not result in a pay-off elsewhere:

Some things I just give up on [..] Too many other priorities

3.3 Just too busy

25 participants in our survey simply wrote a one-word answer, "time", without any further detail or explanation. This presents a challenge in analysis and interpretation of the data: is it that time pressures affect all aspects of their work, or just the use of the VLE? What does this answer tell us about the priorities of busy teaching staff? A paradox here is that they are too busy coping with current workloads to learn about technologies that could potentially make teaching, or at least some of the tasks associated with teaching, easier. Those who were actively using the VLE cited time pressures as preventing them from learning new features to add to their toolkit.

3.4 Questionable return on time investment

Irish Journal of Technology Enhanced Learning Vol 3, Issue 2, 2018

It must be acknowledged also that the data signalled judicious use of time by staff, and that they had considered what the return on their investment of time in the VLE was likely to be. Once they had created course spaces in the VLE, more time would be needed to keep these up to date:

it is time consuming to use - which is fine but staff now have much less time than the past to concentrate on this kind of preparation. This is not a fault of [named VLE] - just too much admin now

A further concern was that they might spend time setting up activities or adding materials to the VLE for students who then did not engage with these:

It takes time to actually set up blogs. There is a cost benefit to putting work into [named VLE] - you go to the bother of putting things up on [named VLE] and facilitating blogs and students then don't participate

Other tools were more time efficient and easier to use, with shared drives being mentioned here:

I used it many years ago for a course but I just found it took way too much time putting notes up on the server etc compared with just creating folders on the X: drive

There are indications in the data also that some lecturers were not convinced that the use of technology added any value to their teaching, and that it therefore represented poor use of their time. These issues will be discussed in further detail in Section 4.

3.5 Comparison with quantitative findings

It is encouraging to note that although time pressure is a major barrier to engagement with the VLE and online tools in general, a large proportion of respondents answered yes (91%) to the question "Are you interested in making more use of online tools in your teaching". The quantitative data supported the overall consensus that time is a major issue with 61% of respondents strongly agreeing/agreeing with the statement "I don't have time to learn how to use them". Interestingly, staff were ambivalent as to whether the issue lies in a lack of suitable training as can be seen in Figure 1.

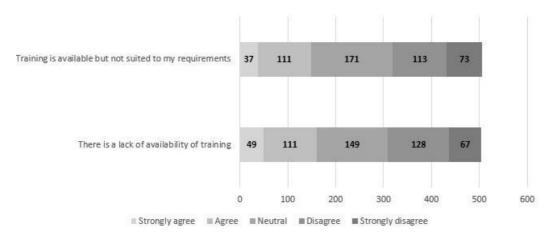


Figure 1: quantitative data on restrictions in obtaining VLE training

Furthermore, respondents tended to disagree/disagree strongly with such statements as "They (online tools/VLE) are not suited to my teaching" and "I do not have any use for them" (Figure 2).

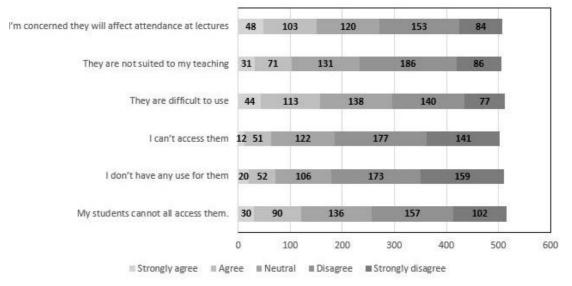


Figure 2: issues preventing staff from making more use of the VLE or other online tools

4. Discussion

Analysis of how staff speak about time in our qualitative and quantitative data indicates some important potential issues for all those of us working in technology-enhanced learning, and in academic development more generally.

While it is heartening to see that the quantitative data indicates that there is a willingness and openness in staff to engage with online tools and the VLE, the overwhelming assertion of time as a major barrier to staff engagement presents a number of challenges. Gregory and Lodge (2015) comment on international peer-reviewed literature demonstrating the

Irish Journal of Technology Enhanced Learning Vol 3, Issue 2, 2018

transformative potential of technology-enhanced learning (TEL), but identifying that academic workloads prevent staff from utilising TEL sufficiently. While individuals may make their own choices about areas of work to prioritise, they argue that leadership is also needed here to encourage and support the adoption of TEL across institutions. Engaging with TEL adds to the academic workload but is often hidden and unrecognised by institutions which need new models to account for it appropriately (Gregory & Lodge, 2015). These same issues arise with each new innovation in TEL too: for one example, see Logan-Phelan's (2018) discussion of learning analytics in this special issue.

Another challenge we face is to try to shift the perception that technologies like the VLE require staff to clear large amounts of time in which to "sit down and learn". Such expanses of time are unlikely to arise. As mentioned earlier, academic writing specialists have used metaphors of snacking rather than bingeing (Murray, 2015) as a way of counteracting this same tendency in the way academics and students speak about writing. MacLeod, Steckley and Murray (2012) have also discussed the blurred nature of academic work, and that it can be impossible for lecturers to identify their main or "primary" task at any given time. They theorise that this may mean "developing a disposition and strategy for making writing the primary task at specific times. At other times, other tasks will have primacy" (p. 644). It may be that we need to consider similar strategies for making professional development and learning new processes in the VLE as a primary task at particular times. We may also need to find new ways to support staff in using small gaps and windows of time to develop their use of the VLE.

Findings from this survey are borne out through correlation with findings from the *National Survey on the use of Technology to Enhance Teaching and Learning in Higher Education* (2014) conducted by the National Forum. VLEs were considered to be "critical" to the teaching and learning practices of 70% of the 790 respondents to that survey. Interestingly, activities such as distributing learning materials, distributing administrative information and online assessment, ranked highest in terms of their relative importance amongst respondents, in comparison with activities such as student collaboration, interactive learning materials and developing/supporting learning communities. When asked to choose from among 10 possible perceived barriers to the use of technology enhanced activities, the top three ranked by respondents were "Lack of time to engage in technology enhanced learning" (42%), "Lack of time to attend training" (28%), and "Lack of technology comfortably".

4.1 Micro-learning opportunities

Designing smaller and more focused points of training and development may be appropriate for time-poor academics who can only make the VLE their main or primary task at short intervals. Incorporating social or informal elements to such opportunities could also be helpful, since informal learning is already an important part of lecturers' professional learning (Knight, Tait & Yorke, 2006).

If face-to-face workshops are difficult to attend, or part-time staff working remotely cannot access them at all, then perhaps alternative models of training and support need to be considered. Micro-learning opportunities such as the *10 Days of Twitter* (for one example see https://ucd10dot.wordpress.com/) and *12 Apps of Christmas*

C McAvinia, D Ryan & D Moloney

(<u>http://www.dit.ie/the12appsofchristmasarchive/</u> and <u>https://ul12apps.wordpress.com/</u>) offer useful examples of how staff can be guided and facilitated to learn new technologies through short, task-driven, online inputs.

There is a drive nationally to produce such micro-learning opportunities through funded projects such as the *All Aboard* (www.allaboardhe.ie) and *Take 1 Step* (www.t1step.ie) initiatives. *All Aboard* allows participants to engage with short lessons on a range of digital skills and competencies. Participants can take lessons flexibly and evidence of attainment of the skill is acknowledged through the issuing of micro-credentials (digital badges). Micro-learning opportunities such as those mentioned above could be modelled to support staff in using the VLE in more sophisticated ways. However, it would be important to monitor the medium to long-term traction for technologies piloted in this way.

4.2 Return on investment (ROI) (Added value)

1) Pedagogical value

As noted in the survey analysis, some academic staff were not convinced that the use of technology added any value to their teaching, and that it therefore represented poor use of their time. Staff needed reliable evidence that there are sound pedagogical and practical reasons for them to develop their use of the VLE (and indeed other technologies) as part of their teaching. Such evidence exists nationally and internationally, and perhaps this could more readily be communicated to staff through training and development activities alongside the practical guides to using the system. There is a readily available body of research nationally from such bodies as The National Forum for the Enhancement of Teaching and Learning, Irish Learning Technology Association (ILTA) and Educational Developers Ireland Network (EDIN).

2) Continuing Professional Development

We must also emphasise the professional development value that derives from engaging with the VLE and new technologies. The *National Professional Development Framework for All Staff Who Teach in Higher Education* (National Forum, 2016) provides a framework under which we might begin to recognize and attribute value to the informal and formal learning undertaken by staff in engaging with and upskilling in the use of the VLE and online tools. The Framework places great value on this engagement by identifying personal and professional digital capacity as one of its five domains. If the Framework gains traction then staff may begin to see a better return for their investment not only in terms of the pedagogical value of engaging with new technologies but also in terms of the professional recognition that might be derived from evidencing their engagement through micro-credentials and portfolio building.

4.3 Usability, Technical Infrastructure and Usage

For new technology-enhanced teaching and learning approaches to work, the technology needs to work too. That staff are still citing usability problems in the VLE after almost two decades of use is important in this data, and something institutions may wish to research further with staff as they plan future iterations or upgrades of their VLEs. User interface design and system usability are elements that require careful planning by developers going forward and also by institutions selecting a version and theme for their VLE, and careful

Irish Journal of Technology Enhanced Learning Vol 3, Issue 2, 2018

consideration ought to be given to the perspectives of each audience using the system students, teachers, and administrators. The extensive array of features and functionalities to cater for distinct teaching and learning approaches within VLEs is ever-increasing. As positive as this may appear, it could be argued that a feature-laden environment like this has potential to obscure the completion of tasks that are regarded as *quick and easy*. When these tasks seem obscure and more complex than they should be, value statements can be attributed with their completion - "is this worth the time I've spent doing it?"

A less than satisfactory usability experience could contribute to the VLE being regarded as "clunky" and may further point to why usability, as an element extrapolated from the data in itself, may account for less widespread VLE engagement at deeper levels. In fact recently, commercial competitors to traditional notions of VLE's have begun to emerge. Aula Education (www.aula.education) is one example. These new alternatives cite competitive advantage on the belief that education should begin with conversation and participation and that some current digital infrastructure offerings, with an emphasis on administration of learning and functionality over usability, hinder rather than encourage meaningful learning interactions. This will be an interesting space to watch for traction in over the short to medium term.

Similarly, the technical infrastructure available to staff appears to affect whether and how they use the VLE. Some staff survey responses highlighted technical ICT issues as being partially responsible for taking time away from their using the VLE to a fuller potential - ubiquitous availability to adequate internet, WiFi, etc.

The Report on Ireland's Higher Education Technical Infrastructure (National Forum, 2017) compiled for the National Forum provides a snapshot into the current Irish technical infrastructure context supporting higher education teaching and learning enhancement. This report highlights that all Irish higher education campuses provide WiFi networks and that there is an expectation now among staff and students using institutionally embedded VLEs and other pedagogy-focused technologies that there will be ubiquitous connectivity and access to online tools and resources across campus. That said, in response to a Campus Computing Survey (2016) just 37% of responding Irish CIOs/IT managers rated their wireless networks as excellent (points 6 and 7 on a 7-point scale). In the same Campus Computing Survey, respondents rated upgrading/replacing campus networks among their top five institutional priorities over the subsequent three year period. The report points out that "a recurring issue at many institutions relates to the challenges posed by older buildings, where the wireless range is inhibited by the physical infrastructure." (p.11) While notable strides have been made nationally and in many institutions to support emerging digital technologies with underlying network infrastructure, this seems to be a factor impeding some staff from adoption according to the responses. It is encouraging that institutions are increasingly focusing strategic planning efforts to keep up to date infrastructurally with fast moving developments in the area of teaching and learning and digital technology.

Aside from the usability issues, staff in this research suggested that students were not engaging with course spaces in the VLE, and yet there is plentiful evidence elsewhere in our work and in other studies that students use VLEs pervasively. We perhaps need to consider whether and how staff are finding out about students' use of their VLE courses: are they aware of the analytical data available to them, and how to interpret it? Are they aware of best practice nationally and internationally that will help them refine their VLE spaces and ensure that students are engaged with the online learning environment? Providing staff with reliable and practical information around these issues may help them to re-prioritise the VLE and give it small amounts of their time with the aim of making incremental improvements. These issues are discussed in greater detail with reference to specific results from the #VLEIreland project research elsewhere in this special issue (Harding, 2018; Logan-Phelan, 2018).

5. Conclusion

The findings from the #VLEIreland research, perhaps unsurprisingly, highlight the issue of time as a barrier to staff engagement with the VLE. Staff cited the need for more time to learn how to use the VLE or specific features of the VLE. There was a general sense that large chunks of time were required to attend training and that this was not possible in already busy schedules. Time is a valuable commodity and the return on investment on VLE training were rightly questioned by staff. Issues such as the pedagogical value of the VLE, usability, technical infrastructure, and student engagement with the VLE arose. Yet the quantitative data also showed that staff were interested in learning and using the VLE. It is incumbent then on Educational Technologists and Educational Developers to provide the means for staff to upskill in a way that fits with their busy work schedules. Most importantly, we need to provide scholarly evidence that such an investment in time has value from a pedagogical, professional development and productivity perspective. Recent trends towards micro courses, micro-credentialling to evidence professional development, and the accessibility of scholarly evidence on the benefits of VLE usage, should be harnessed to aid busy staff who have an appetite for expanding their knowledge and use of the VLE. This may help to alleviate time pressures and build trust in the usefulness of the VLE in higher education teaching and learning.

References

Acker, S. & Armenti, C. (2004). Sleepless in academia. Gender and Education, 16(1), 3-24.

Antoniou, M. & Moriarty, J. (2008). What can academic writers learn from creative writers? Developing guidance and support for lecturers in Higher Education. *Teaching in Higher* Education, 13(2), 157-167.

Bentley, P.J. & Kyvik, S. (2012). Academic work from a comparative perspective: a survey of faculty working time across 13 countries. Higher Education, 63, 529-547.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research* in Psychology, 3(2), 77-101. http://eprints.uwe.ac.uk/11735

Coughlan, A. (2015). The growth in part-time teaching in higher education: the imperative for research in the Irish context. All Ireland Society for Higher Education Journal (AISHE-J), 7(1), no page numbers. doi:http://ojs.aishe.org/index.php/aishe-j/article/view/220/304

Donnelly, R., & O'Rourke, K. C. (2007). What now? Evaluating eLearning CPD practice in Irish third-level education. Journal of Further and Higher Education, 31(1), 31-40.

Farrelly, T., Raftery, D. & Harding, N. (2018). Exploring lecturer engagement with the VLE: findings from a multi-college staff survey. [Special Issue, McAvinia & Risquez]. Irish Journal of Technology Enhanced Learning, 3(2), 11-23.

Feather, D. (2017). Time! What's that? You're joking, I don't have any! Journal of Further and Higher Education, 41(5), 706-716.

Gregory, M.S-J. & Lodge, J.M. (2015). Academic workload: the silent barrier to the implementation of technology-enhanced learning strategies in higher education. Distance *Education 36*(2), 201-230.

Harding, N. (2018): The Digital Turn: staff perceptions of the virtual learning environment and the implications for educational developers. [Special Issue, McAvinia and Risquez]. Irish Journal of Technology Enhanced Learning, 3(2), 58-76

Henkel, M. (2000). Academic Identities and Policy Change in Higher Education. London: Jessica Kingsley.

Knight, P., Tait, J. & Yorke, M. (2006). The professional learning of teachers in higher education. Studies in Higher Education, 31(3), 319-339.

Logan-Phelan, T. (2018): The Buzz around Learning Analytics – Enablers and Challenges Identified through the #VLEIreland Project. [Special Issue, McAvinia and Risquez]. Irish Journal of Technology Enhanced Learning, 3(2), 77-85.

MacLeod, I., Steckley, L. & Murray, R. (2012). Time is not enough: promoting strategic engagement with writing for publication. Studies in Higher Education, 37(6), 641-654.

Murray, R. (2015). Writing for Publication Workshop. Educational Developers in Ireland Network/Dublin Institute of Technology, 29th January 2015.

National Forum (2014). National Survey on the use of Technology to Enhance Teaching and Learning in Higher Education. National Forum for the Enhancement of Teaching and Learning in Higher Education: Dublin. Retrieved from

https://www.teachingandlearning.ie/wp-content/uploads/2014/03/TEL-FINAL.pdf

C McAvinia, D Ryan & D Moloney

National Forum (2017). *Ireland's Higher Education Technical Infrastructure: A review of current context, with implications for teaching and learning enhancement.* National Forum for the Enhancement of Teaching and Learning in Higher Education: Dublin. Retrieved from https://www.teachingandlearning.ie/wp-content/uploads/2017/12/Final-Infrastructure-report-with-doi-web-ready.pdf

Silvia, P. (2007). *How to Write a Lot: A practical guide to productive academic writing*. Washington: American Psychological Association.

Smith, K. (2012) Lessons learnt from literature on the diffusion of innovative learning and teaching practices in higher education. *Innovations in Education and Teaching International*, 49(2), 173-182.

Ylijoki, O-H. (2013). Boundary-work between work and life in the high-speed university. *Studies in Higher Education*, *38*(2), 242-255.