



## Engaging professional learners using the Virtual Learning Environment (VLE): a case study from social care.

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### Summary - Crynodeb

Virtual Learning Environments (VLEs) constitute an important resource for learners in Higher Education (HE), but data on the engagement of learners with VLEs is limited, particularly in the case of part-time, distance learners, and student engagement with VLEs may be lower than anticipated by institutions (Hopkins, 2011). This paper described a case study of a large group of WIWBL part-time, distance learners studying aspects of social care. A quantitative approach is taken to assess engagement with the Moodle VLE based on 'page views'. 72% of enrolled students viewed one or more of the resources within the VLE 'course', and all resources present were viewed. The highest number of page-views was observed for resources such as 'essential documents' which are required for mandatory assessment tasks, whilst the lowest number of page-views appeared to be associated with information that students had received via other routes. Patterns of usage associated with demographic and achievement data are discussed. The paper considers reasons for the trends in engagement which may include the relatively high level of tutor contact and workplace support on this module. However, many part-time, distance learners do not have support of this type, and may display study behaviour which is even more strategic in terms of study approaches. The needs of such learners in relation to the effective use of VLEs and other appropriate technology is discussed, and recommendations are made for further study.

*Mae Amgylcheddau Dysgu Rhithwir (ADRh) yn adnodd pwysig i ddysgwyr ym myd Addysg Uwch (AU), ond mae data ynghylch ymgysylltiad dysgwyr ag ADRh yn gyfyngedig, yn enwedig yn achos dysgwyr o bell, rhan amser (Blaschke, 2012). Mae data o'r fath yn bwysig er mwyn helpu i ddeall anghenion dysgwyr, yn enwedig yng ngoleuni awgrymiadau y gallai ymgysylltiad myfyrwyr ag ADRh fod yn is nag y rhagwelai sefydliadau (Hopkins, 2011). Mae'r papur hwn yn disgrifio astudiaeth achos o garfan fawr o weithwyr proffesiynol Athrofa Cymru ar gyfer Dysgu Seiliedig ar Waith (ACDSW) a astudiaid agweddau ar ofal cymdeithasol o bell ac yn rhan amser. Defnyddiwyd dull meintiol i asesu ymgysylltiad â'r ADRh Moodle wedi'i seilio ar niferoedd yn bwrw golwg ar dudalennau. Roedd 68% o'r myfyrwyr a gofrestrwyd wedi bwrw golwg ar un neu fwy o'r adnoddau o fewn y 'cwrs' ar yr ADRh, a bwriwyd golwg ar bob adnodd oedd yn bresennol. Yr adnoddau gyda'r nifer mwyaf yn bwrw golwg arnynt oedd adnoddau megis 'dogfennau hanfodol' sy'n ofynnol ar gyfer tasgau asesu gorfodol, ac ymddangosai mai ar dudalennau'n gysylltiedig â gwybodaeth am weithdrefnau a dolenni allanol ar y we y cafwyd y niferoedd lleiaf yn bwrw golwg. Hefyd trafodir patrymau defnydd yn gysylltiedig â data demograffig a data cyrhaeddiad. Mae'r papur yn ystyried rhesymau dros y tueddiadau o ran ymgysylltiad a allai fod yn gysylltiedig â'r lefel gymharol uchel o gyswllt gan y tiwtor a chefnogaeth yn y gweithle ar y modwl hwn (Leese, 2009). Fodd bynnag, nid oes cefnogaeth o'r fath gan lawer o ddysgwyr o bell rhan amser, ac felly efallai eu bod yn arddangos ymddygiad astudio sydd hyd yn oed yn fwy strategol nag ymddygiad myfyrwyr llawn amser (Risque et al, 2013). Trafodir anghenion dysgwyr proffesiynol yng nghyswllt defnydd effeithiol o ADRh a thechnoleg briodol arall, a chynigir argymhellion ar gyfer astudiaeth bellach.*

**Keywords:** technology, VLE, engagement, work-based learning

## Introduction

Virtual Learning Environments (VLEs) continue to be an important resource to support part-time, distance learners within a blended provision, and a well-designed VLE can be a valuable resource for learners (JISC Digital Media, 2015) and hence. According to Naveh *et al.* (2012), five key aspects of successful VLEs are: complete content; current content; easily navigable content; ease of access; responsive tutors. The use of programmed VLE activities, both synchronous and asynchronous, with associated feedback, adds further value to learners and increases the likelihood of learner engagement with VLEs (Salmon, 2002).

Data on engagement within reported literature is limited, and engagement of learners with VLEs may be lower than anticipated by institutions (Hopkins, 2011). It has also been suggested that learner engagement with VLEs may be limited to accessing key course materials or uploading assignments (Risquez *et al.*, 2013). However, these studies tend to focus on full-time, campus-based learners (*e.g.* Cosgrave, 2012), and may not adequately describe the behaviour of work-based, distance learners undertaking undergraduate and postgraduate study (Blaschke, 2012)

This case study aims to quantify the engagement of a specific group of WIWBL part-time, distance learners with designated parts of the institutional VLE. Trends in engagement are ascertained based on student page-views, and the factors influencing the results are discussed. Options to increase engagement are also suggested, along with recommendations for further research.

## Methods

The module examined in this case study is 'Social Work Practice', and this was selected because it involves a particularly large cohort of students and hence provides relatively robust data. This module is studied at Level 6 (*ie.* year 3 undergraduate level) over a period of 9 months, and is a compulsory part of post-qualification study for social workers in Wales. Delivery of this module includes several face-to-face support sessions from University staff as well as employer representatives. However, a significant part of the study for the module is self-directed, with resources and support materials made available on the UWTSO Moodle VLE.

Demographic information for the group examined within this case study is outlined in Table 1.

Number of students enrolled	Age range (enrolled students)	Gender ratio, female: male (enrolled students)	Number of students who accessed Moodle page resources	Period of module study
69	22-60	61:8	50	March – Dec, 2015

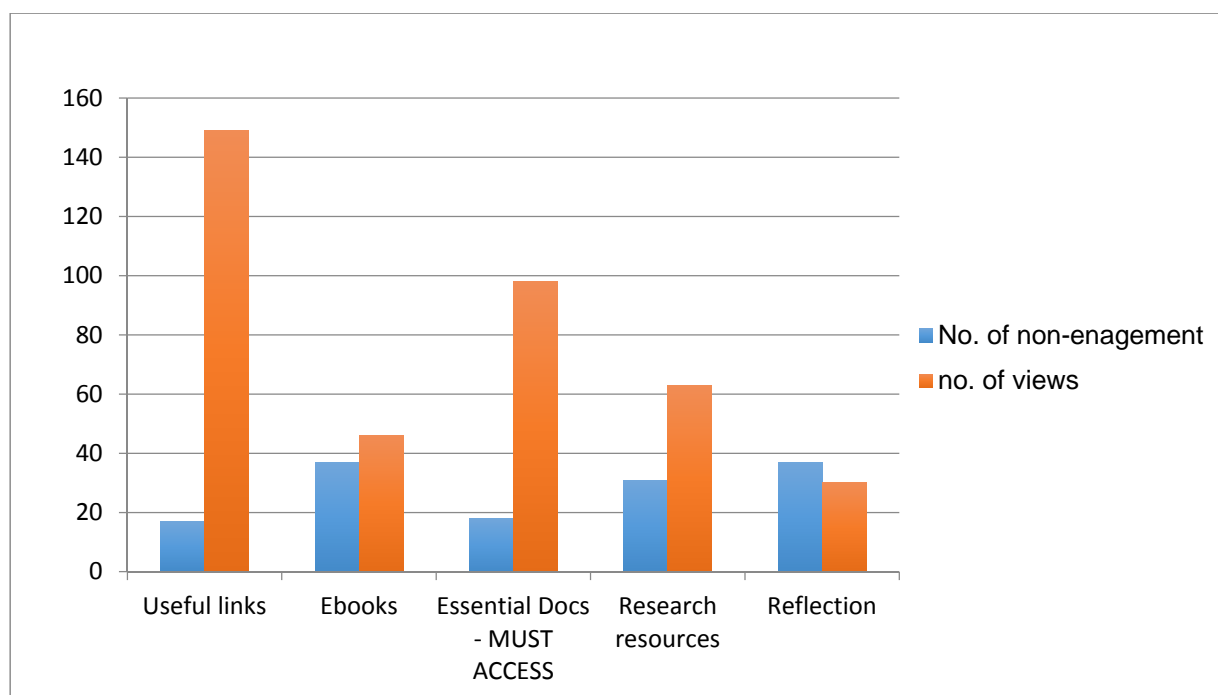
**Table 1** - Demographic data for module.

'Course participation reports' were generated for the Moodle VLE site for the module involved at the end of the study period. The reports provided information on the total number of students who had accessed the module page, and the number of student views ('page views') of the specific resources for each module. Page views by staff members and others were filtered out, though multiple views by the same learner(s) were retained since any student views were considered to be indicators of VLE engagement. Since individual learners could be identified, demographic data such as age and gender was available; however, all data obtained has been anonymised.

## Results

Access relative to enrolment (*i.e.* total number of students logging in to the module web page divided by total number of enrolled students, expressed as a percentage) was 72%. The mean number of page-views per student engaging with Moodle was 7.5, with corresponding means of 8 for females and 3 for males. However, this may not be a fair comparison given that only 8 of the students in this group were male.

The number of page-views of five key resources on the module Moodle page is shown in Figure 1. As indicated above, all views are those of students, and include any multiple views by the same individual.



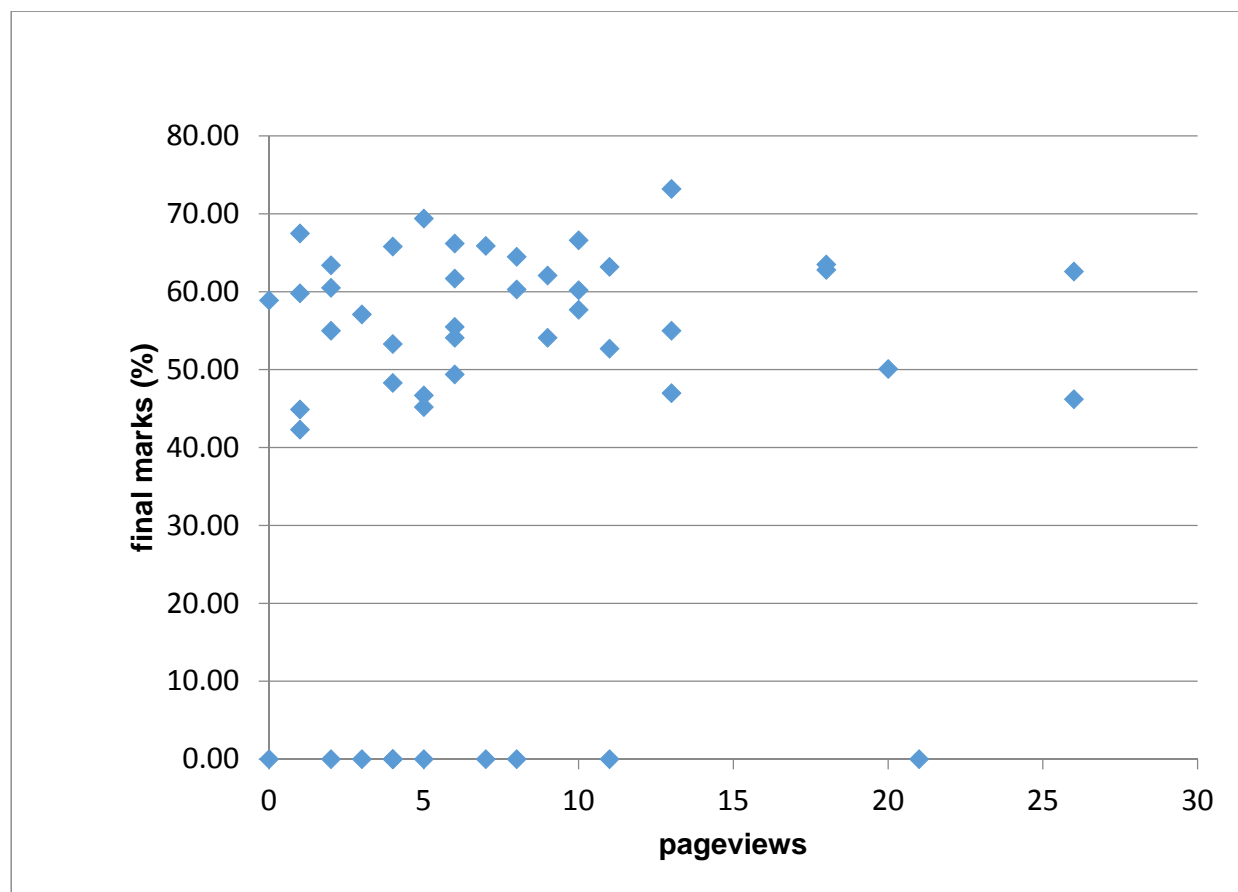
**Figure 1** – Page views for five key resources.

Figure 1 indicates that the highest number of page views was obtained for ‘useful links’ and ‘essential documents’, both of which are required for mandatory assessment tasks. The lowest number of page-views appears to be for ‘reflection’, though there were nonetheless over 30 page views for this item despite the fact that this topic was covered thoroughly during since this topic

A comparison of student page views and final module marks is depicted in the scatter plot in Figure 2. If a trend-line is applied to the data, a slight positive association between the two variables can be seen; however, the number of page views of Moodle would appear to have little influence on the final mark for this module. The majority of 0 marks evident were due to non-submission associated with claims for extenuating circumstances, and it may be that trends would become clearer when marks achieved for these assignments become available.

## Discussion

This study examined VLE engagement in a quantitative way by examining the number of student page-views over a period of time. The data obtained from this module are particularly interesting because of the large group size for this module. The % VLE access for this module was 72%, which is lower than the 90% suggested by Toole *et al.* (2015) for the same institution though still relatively high compared to other WIWBL modules that have been examined (Davies and Harris, 2015). It is important to bear in mind, however, that the data described in this case study relate solely to part-time, distance learners rather than the institutional learner population as a whole. In fact, WIWBL learners may be unique with respect to much of the existing literature on VLE engagement which tends to consider either full-time, campus-based students (*e.g.* Cosgrave, 2011), or those who are completely distance-based (*e.g.* Selwyn, 2014). The learners on this module were work-based, and received both ‘face-to-face’ and VLE support as part of a blended provision.



**Figure 2** - Relationship between page views and final marks.

Reasons for the patterns of engagement shown in this case study are a matter of speculation, and need to be explored further in future research. Like many other part-time, distance learners, professional learners have limited study time and may therefore be highly strategic in the way they select resources, prioritising those designated as 'essential' either by tutors, because of their association with assessment, and this is consistent with the findings of Risquez *et al.* (2013). This highlights the importance of tutor direction and contact, and links to the observations of authors such as Leese (2009) and Agudo (2014) who indicate that tutor feedback and student-tutor interactions have an important role in maintaining VLE engagement. Boling *et al.* (2012) make the further point that 'disconnection', *i.e.* an absence of links between tutors and students, may hinder VLE engagement.

There are several actions that tutors could take to promote engagement. Work on learning design by Laurillard (2010) and others highlights the need for effective planning of VLE layout and content, in conjunction with the wider programme of study and tutor contact and guidance. An over-reliance on excessive document-type resources should be avoided (Boling, 2012), and there should be greater use of the range of VLE tools available (Borwarnginn, 2014). Media such as video and audio is often more engaging than text, and may also be conducive to learners' preferred modes of study. Active learning can be encouraged using interactive options such as quizzes and SCORM-complaint learning objects (Davies, 2015).

A further strategy that could improve engagement involves making selected resources available before periods of tuition. Risquez (2014) suggests that a particularly positive aspect of the use of the VLE is to facilitate prior access to lecture notes. This may be considered a minor example of 'flipping', *i.e.* providing learning materials before formal teaching sessions, an approach which is considered to support learning, though to date substantive objective data on this subject have not been available (Bishop and Verleger, 2013).

Other technologies which could supplement or replace the VLE could also be considered, and may better meet learner needs. Online applications such as Blendspace and Facebook may be easier to access

than VLEs, and more appealing and intuitive to use. They may also be easier to use on mobile devices, an important point as mobile learning becomes increasing widespread (Yarmey, 2011).

## Conclusions

The outcomes of this case study indicate that the number of student page-views per resource on VLE pages is a useful indicator of VLE engagement. It would appear that for work-based learners, the level of tutor and programme support, and specifically tutor direction, is important to promote VLE resources, and hence tutors have a key role to play in learning design associated with VLE use.

## REFERENCES

- Agudo-Peregrina, A.F., Iglesias-Pradas, S., Conde-González, M.A., & Hernández-García, A. 2014. Can we predict success from log data in VLEs? Classification of interactions for learning analytics and their relation with performance in VLE-supported F2F and online learning. *Computers in Human Behaviour*, 31, 542-550.
- Bishop, J.L. & Verleger, M.A. 2013. The Flipped Classroom: A Survey of the Research. *Proceedings of the 2013 ASEE Annual Conference, Atlanta*. [online] Available at: <http://www.asee.org/public/conferences/20/papers/6219/view> (Accessed 15.11.15).
- Blaschke, L.M. 2012. Heutagogy and Lifelong Learning: A Review of Heutagogical Practice and Self-Determined Learning. *International Review of Research in Open and Distributed Learning*, 13 (1), 56-71 [online] Available at: <http://www.irrodl.org/index.php/irrodl/article/view/1076/2087> (Accessed 19.2.15).
- Boling, E.C., Hough, M., Krinsky, H., Saleem, H., & Stevens, M. 2012. Cutting the distance in distance education: Perspectives on what promotes positive, online learning experiences. *Internet and Higher Education*, 15, 118–126.
- Borwarginn, P. & Tate, A. 2014. An Investigation into students' perceptions and lecturers' perceptions of a virtual learning environment. *Proceedings of EDULEARN14* [online]. Available at: <http://www.aiia.ed.ac.uk/project/ix/documents/2014/2014-edulearn-borwarginn-vle-survey.pdf> (Accessed 19.2.15).
- Cosgrave, R., Rísquez, A., Logan-Phelan, T., Farrelly, T., Costello, E., Palmer, M., McAvinia, C., Harding, N., & Vaughan, N. 2012. Usage and Uptake of Virtual Learning Environments in Ireland: Findings from a Multi Institutional Study. *All Ireland Journal of Teaching and Learning in Higher Education* [online]. Available at: <http://ojs.aishe.org/index.php/aishe-j/article/view/30> (Accessed 19.10.15).
- Davies, C. 2015. Finding and making Xerte Learning Objects for Research Methods. *Proceedings of OER15*, Cardiff, April 2015 [online] Available at: <https://oer15.oerconf.org/sessions/finding-and-making-xerte-learning-objects-for-research-methods-670>. (Accessed 5.5.15).
- Davies, C. & Harries, L 2015. The role of the VLE for distances learners: adding value and increasing engagement. *Proceedings of FACE2015*, University of South Wales, July 2015.
- Hopkins, D 2011. VLE- the discussion continues. *Technology-Enhanced Learning Blog*, 9.9.11 [online] Available at: <http://www.dontwasteyourtime.co.uk/elearning/vle-the-discussion-continues/> (Accessed 19.2.15).
- JISC 2015. *Use of VLEs with Digital Media*. JISC Digital Media Guides, [online] Available at: <http://www.jiscdigitalmedia.ac.uk/guide/introduction-to-the-use-of-vles-with-digital-media> (Accessed 19.2.15).
- Laurillard, D. 2010. Effective use of technology in teaching and learning in higher education. In E. Baker, P. Peterson, B. McGaw (eds.), *International Encyclopedia of Education*, 4, 419-426. Oxford: Elsevier.
- Leese, M. 2009. Out of class—out of mind? The use of a virtual learning environment to encourage student engagement in out of class activities. *British Journal of Educational Technology*, 40 (1), 70–77.
- Naveh, G., Tubin, D., & Pliskin, N. 2012. Student Satisfaction with Learning Management Systems: A Lens of Critical Success Factors. *Technology, Pedagogy and Education*, 21 (3), 337-350.
- Ofsted 2009. Virtual learning environments: an evaluation of their development in a sample of educational settings [online]. Available at: <http://dera.ioe.ac.uk/325/1/VLE%20an%20evaluation%20of%20their%20development.pdf> (Accessed 14.11.15).
- Risque, A., McAvinia, C., Raftery, D., O'Riordan, F., Harding, N., Cosgrove, R., Logan-Phelan, T., & Farrelly, T. 2013. *An investigation of students' experiences of using virtual learning environments: implications for academic professional development*. University of Limerick Institutional Repository [online] Available at: <http://hdl.handle.net/10344/4454>. (Accessed 19.2.15)
- Salmon, G. 2002. *E-Tivities: The Key to Active Online Learning*. Routledge, London.
- Selwyn, N. 2011. Digitally distanced learning: a study of international distance learners' (non)use of technology. *Distance Education*, 32 (1), 85–99.

- UCISA 2014. *2014 Survey of Technology Enhanced Learning for higher education in the UK*. [online] Available at: <http://www.ucisa.ac.uk/~media/groups/dsdg/Tel%202014%20Final%2018%20August.ashx> (Accessed 12.10.15).
- Toole, T., Khetaguri, T. & Zangaladze, M. 2015. An Evaluation of e-Learning in Eastern and Western Europe. *Journal of Educational Innovation, Partnership and Change*, 1 (1) [online] Available at: <https://journals.gre.ac.uk/index.php/studentchangeagents/article/view/150> (Accessed 8.11.15).
- Yarmey, K 2011. Student Information Literacy in the Mobile Environment. *EDUCAUSE Review Online*. [online] Available at: <http://www.educause.edu/ero/article/student-information-literacy-mobile-environment>. (Accessed 12.10.15).