



# An Introduction to SOLE: Students' Online Learning Experiences

## *An evaluation study across the disciplines*

### What is SOLE?

The SOLE study was funded under Tranche 2 HEFCE funding through LTSN<sup>1</sup> (and JISC<sup>2</sup>) and awarded to Economics LTSN in collaboration with 5 other subject centres: Psychology, Information and Computer Science, Hospitality, Leisure, Sport and Tourism and Education.

SOLE investigated students' use and understanding of Virtual Learning Environments across these five discipline areas (and additionally in Art and Design in Further Education) in order to gather evidence on a broad range of student experiences and any discipline-dependent issues. The objectives of the study were:

1. To identify some aspects of the processes and strategies of learning (intended and unintended) that are associated with VLEs, both with subject area and generically.
2. To identify any specific changes in student attitudes to their learning, motivation or adaptation to VLEs by contrasting first time use with more experienced use throughout the period of a course.
3. To establish a cross-disciplinary evidence base on how VLEs can support learning and contribute to our understanding of the factors that may influence successful teaching and learning strategies.

### Methodology

Nine case studies have been undertaken in Higher Education and two studies in Further Education. A mixed-methods, holistic approach was employed, adapted from the learner-centred evaluation framework for computer facilitated learning projects in higher education (Philips et al, 2000). The study also drew on a theoretical model of the motivational context for virtual learning (Cook & Timmis, 2002) in order to investigate the ways in which motivation may be affected by students' virtual learning experiences. Figure 1 below outlines elements that make up the contextual framework for the study.

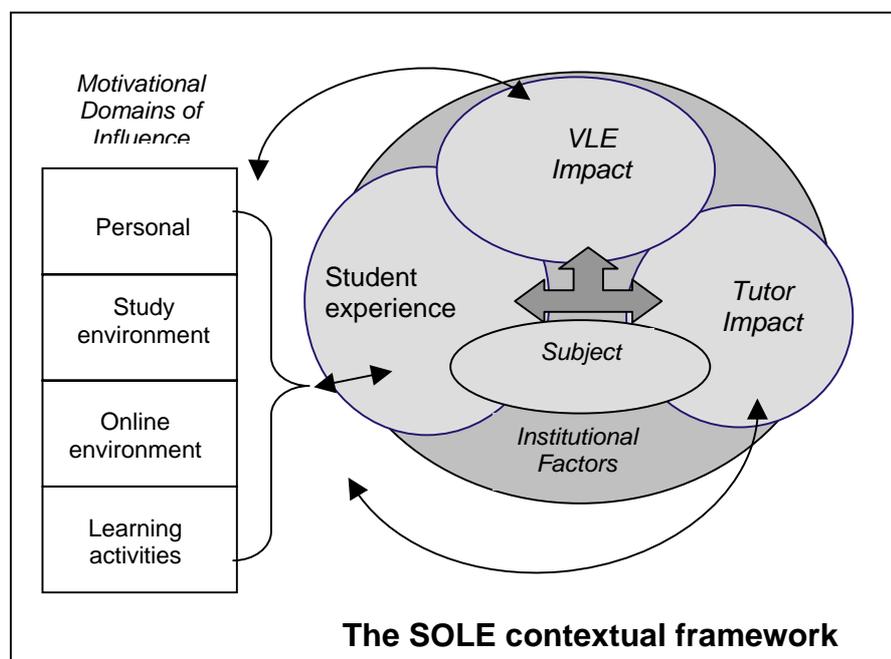


Figure 1: The SOLE Contextual Framework

The key research questions can be broadly categorized under the following headings: learning models, motivation and confidence, student and tutor roles, communication, use of resources and available

<sup>1</sup> Learning and Teaching Support Network

<sup>2</sup> Joint Information Systems Committee, Higher Education Funding Council

support and a summary of these has been set out below in Table 1. Figure 2 gives an overview of the data sources utilised in the study.

SUMMARY OF SOLE RESEARCH QUESTIONS	
Learning Models	<i>What is the implicit learning model, the explicit learning model and the actual tutor and student behaviour? How far is the VLE embedded within the pedagogical model? How much time (online and offline) do students spend working on VLE units?</i>
Motivation and Confidence	<i>What factors do students identify as affecting their motivation positively or negatively? Can any of these be attributed to the VLE itself?</i>
Student and tutor roles	<i>Who is/what is the role of the tutor? What is the role of the student? Are there any issues of authority in relation to VLEs?</i>
Communication	<i>How do students choose to communicate (how? when? why?) and for what purposes? How do the VLE tools support this?</i>
Use of resources	<i>What resources are the students making use of? What patterns of use can be identified? How do students use the VLE toolkit?</i>
Support for students and staff	<i>How do students and tutors use and perceive the various forms of support available?</i>

Table 1: Summary of SOLE Research Questions

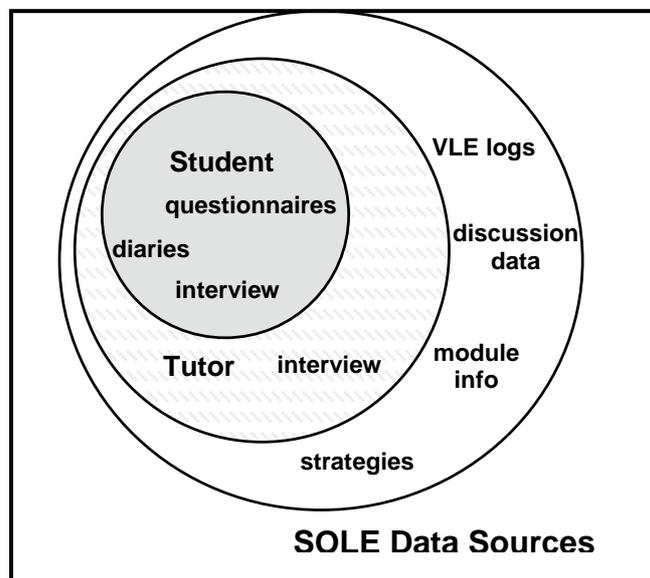


Figure 2: The SOLE primary and secondary data sources

### The case studies and intended learning models

A wide range of learning models and VLE uses are represented, including group work, problem-based learning and online assessment. Most HE courses used some form of discussion and online communication. The FE case studies both used the VLE within a classroom context and made less use of communication tools. Table 2 (below) gives an overview of each case study and its characteristics.

### Findings

**Full case study reports** for all HE studies together with an in depth discourse analysis report on one case study are available from the SOLE website at: <http://sole.ilrt.bris.ac.uk/findings.html>

A reports on FE studies and a series of thematic reports will be available on:

- Student and tutor roles and relationships
- Communications
- Motivation and confidence
- Activities, tools and learning strategies
- Methodology<sup>3</sup>

<sup>3</sup> Further information on the SOLE study and access to the evaluation tools can be found at: <http://sole.ilrt.bris.ac.uk/>

### An overview of the case studies and learning models

	<i>No of studs</i>	<i>Year grp</i>	<i>Course</i>	<i>VLE</i>	<i>Intended learning model</i>	<i>Intended use of VLE</i>
1-Information and Computer Science	125	1	Learning, Communication and Technology	WebCT	Mixture of lectures and seminar sessions. Including videos, online sessions, guest speakers, group work, case studies, and practical exercises. Assessment: portfolio of short assignments.	Lecture notes, exercises, tutorial, online discussion quiz, test, assessment, online help, e-mail and discussion.
2-Information and Computer Science	108	1	Formal Systems	StudyNet	Lectures, guided study, supervised practical sessions, online worked solutions and self-assessment exercises, discussion groups and feedback mechanisms.  Assessment: in-course tests and final exam.	Structured approach to the provision of worked solutions and self-assessment exercises; discussion groups and feedback; communication with peers and teaching staff.
3- Education	8	Post grad	Learning and ICT	WebCT	Blended learning; half the module online. Weekly evening lecture. Assessment: choice of written assignments.	Lecture notes, reading lists, structured activities linked to group online discussions.
4- Education	260	2 -B.Ed	Professional studies	Blackboard	Year long course; blended approach.	Background course support Collaborative student planning for face-to-face student-led seminars.
5- Psychology	80	2	Cognitive Psychology	WebCT	Weekly lecture and lab. Classes. Assessment: final exam.	Lecture preparation; weekly assessment; discussion board.
6 -Psychology	175	1	Design, execution & analysis of research	Merlin	Mostly online; non-compulsory support workshops. Assessment: tutorial based practical report and final exam.	Email; weekly tasks, links to other resources.
7- Economics	216	1	Team working in Economics	Blackboard	2 lectures only (weeks 1 and 3). Working in teams. Assessment: group project.	Course information; group communication.
8- Economics	97	1	Introduction to Macro-economics	WebCT	Lectures and seminars weekly. Assessment: course work and end of module exam.	Lecture notes, seminar problems, links to resources and discussions.
9- Hospitality Management	400	1	Introduction to Business Research Methods	Lotus Learning Space	A 1 hour lecture, optional 1hour tutorial, participation in the VLE. Assessment: group project, presentation, online discussions. final exam.	Lecture notes, recorded lectures, tutorial activities, data sets, links to real-life data, discussion forums, group work
10. Further Education: Psychology	56	AS level	Social, Cognitive and Cognitive Development Psychology	Learnwise	One third of course taught using ILT (not just VLE) Weekly classes, plus external speakers and visits. Androgogical approach, with strong emphasis on peer teaching.	Weekly timetabled sessions – including resources, forum, quizzes, video clips, modelling student work

11. Further Education; Art and Design	13	National Diploma	Art and design/ Fashion and Clothing/Drawing Development and Visual Communication	Learnwise	Weekly classes – module is focussed on a theme. Working towards a portfolio – VLE used to show wide variety of examples, to encourage independent work and self reliance. Assessment: Portfolio of evidence/final show.	Use of the VLE in class and optionally outside class: research tasks, preparation/delivery of presentations and resources for revision and additional support.
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Table 2: Overview of the case studies and intended use of VLEs

## References

Phillips R. (ed), Bain J., McNaught C., Rice M., Tripp D. (2000) Handbook for learner-centered evaluation of computer facilitated learning projects in higher education. Murdoch University, Australia <http://www.tlc1.murdoch.edu.au/projects/cutsd99/>

Cook, J. and Timmis, S. (2002) Towards a theory of student motivation in virtual learning. Proceedings of ALTC 2002 Conference, Sunderland. Association of Learning Technology