

# **COURSE GUIDE:**

**Understanding Learning in the  
Online Environment**

**Session 2016 / 17**



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## Introduction

Welcome to *Understanding learning in the online environment*. This course is one of the optional elements of the MSc in Digital Education at the School of Education of the University of Edinburgh. For more information about the full MSc Programme you should contact the Programme Director, Dr Christine Sinclair (Christine.Sinclair@ed.ac.uk)

This course guide will give you information on the course structure, the assessments, and other organisational details that you will need. For further details about this course in particular you should contact Dr Hamish Macleod, the Course Organiser (h.a.macleod@ed.ac.uk).

Hamish Macleod



## Prerequisites

It is assumed that participants on this course will previously have participated (or will concurrently be participating) in the foundation course for the MSc in Digital Education *An introduction to digital environments for learning*.

## Aims and learning outcomes

The formal aims and anticipated learning outcomes for *Understanding learning in the online environment* are as follows.

### Aims

The course is aimed at practitioners within post-compulsory education and training who wish to further their understanding of the various theories that have been developed as to how people learn, form personal understandings and construct knowledge. Although not addressing course design *per se*, it will consider the ways in which understanding of the processes of learning can inform the practices of teaching, particularly in technologically mediated contexts. The view will be presented that learning online is not fundamentally different from learning through other media, but will also explore the potential for online approaches radically to alter the social and interactive aspects of learning.

## Learning outcomes

On completion of the course, participants will be able to:

- demonstrate a critical understanding of a range of theoretical perspectives which have been developed to understand learning;
- analyse and assess these perspectives in terms of the insights they offer into the nature of learning in online environments;
- critically evaluate these perspectives, and synthesise their knowledge into an understanding of the implications for the participant's own practice.

The whole notion of "learning outcomes" is troublesome, and will no doubt arise as a topic of conversation on this course. Suffice it to say here that while learning outcomes can be expressed in a general advisory way for a course as constructed, the most important learning outcomes will be those identified and owned by the learner.

## Delivery and workload

The course will run for 12 weeks from **Monday 16th January** until Sunday 9th April 2017. This will be made up of 1 week of introduction and orientation, 9 weeks of reading on the topic, and a further two weeks for completion of the final assessed assignment.

The course will be primarily based on guided personal reading, supported by 'tutorial' participation mediated through asynchronous online discussion. All of the essential core readings will be provided online through the course Moodle site, with optional secondary references provided for consultation at the participants' discretion, led by their interest. Participants will be encouraged to browse a small number of key journals (also available online through the University Library) to develop a feeling for the issues current in the field.

Participation in the course online discussion (which will use the discussion forum tool within Moodle, and about which more in the Programme Technologies Handbook) will be expected of all course members. The quality of participation will be assessed, and will contribute to the overall course grade. This is outlined below under the 'Assessment' section, with further details provided online within the course Moodle site. While participants are, of course, welcomed and encouraged to drive online discussion in those directions that seem relevant to them within the defined aims of the course, stimulus to discussion will be provided by :

- details of the course reading;
- specific questions for general discussion offered on an approximately two weekly cycle.

## Participation etiquette

All participants on this course will be assumed also to have participated (or to be concurrently participating) in the foundation course *An introduction to digital environments for learning*, and will be expected to import their experiences from that setting. As a participant on this course, you are expected to contribute regularly to the class discussions, and that when you do so the basic rules of 'netiquette' will apply. While robust

debate is to be encouraged, please ensure that your contributions are polite and supportive. Someone who expresses an opinion with which you profoundly disagree is doing you a great service; he or she is helping you to articulate an understanding that you may previously not have had. As a recipient of robust criticism understand that the critic is doing a courtesy in engaging with your ideas, and is helping you to refine them.

Some more detailed recommendations about the structuring of your online contributions are provided on the course Moodle site. In the mean time, general guidance can be summed up in the words 'little and often'. Each post should primarily **make one point**, or relate to one topic. If you want to make more than one point, make separate posts. Such a discipline will make it much easier for a reply to be shaped, and will make it easier for the reader to follow what is going on. To quote from a previous course guide for *An introduction to digital environments for learning*:

*Contributions to the discussion don't have to be beautifully structured and written in formal, typo-free academic prose, but they should be reasonably clear and – very important – should function to drive the discussion along in a positive way. Try also to keep your discussion postings reasonably short and to the point – long, very intricate contributions tend not to be read, and can put others off contributing themselves.*

Reflect on your experiences developed through participating in *An introduction to digital environments for learning*, and act accordingly.

## Social Networking

Social networking is an important technologically mediated social phenomenon, and we feel that anyone interested in the potential of technologies in education should be aware of it, and develop a position on its relevance and significance. A (relatively) recent survey suggested that something in the order of 97% of the undergraduate population of the University of Edinburgh report making regular use of some form of social networking site, such as Facebook. Further, 64% claim that they have used social networking activities for academically relevant purposes<sup>1</sup>.

More particularly however, the Programme has established its own social "Hub" for participants. You will find this at :

<http://hub.digital.ed.ac.uk/>

If you have not already doing so, you are encouraged to visit the Digital Education Hub, set up a profile, and contribute.

The course, like many other areas of the Programme, will also make use of Twitter to pass around comments and links to information discovered. We will colonise the hash-tag **#deuloe**. Please add this tag to Tweets relevant to the course, and keep an eye on what others Tweet.

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<sup>1</sup> Undergraduate Technology Use and Attitudes  
<http://www.ed.ac.uk/schools-departments/information-services/about/organisation/edl/news/news-archive-2012/undergraduate-technology>

## **The Learning Analytics 'Report Card'**

During this instance of ULOE (2016 / 17), students are invited to participate in an ongoing research project from the Digital Education team under the leadership of Dr Jeremy Knox. The Learning Analytics Report Card (LARC) project seeks to develop ways of involving students as research partners and active participants in their own data collection and analysis, as well as fostering critical understanding of the use of computational analysis in education.

The project will pilot bespoke data analysis software during ULOE that captures Moodle data from an individual student's course-related activity, and presents a summary of their academic progress in textual and visual form – in other words, a 'report card'! However, rather than manifesting through hidden and inaccessible institutional data aggregation and analysis, the LARC offers students an opportunity to play with their data; to choose what is included or excluded, when the report is generated, and how it might be presented.

Participation will of course be voluntary, but we hope you will enjoy the chance to get involved in the research, and to reflect on the increasing prevalence of data analysis in education. Such considerations will be relevant to many of our central concerns on this course, for example in relation to motivation, and identity.

## **Computer skills and equipment/software that you will need**

There is no assumption that participants on this Course, or the Programme, will be advanced computer users, although you will be expected to be a regular user of the computer for communication, information search and retrieval, and for writing.

To participate you will need regular access to a computer capable of connecting to the Internet and to the course's Moodle site. You should consult the Programme's Technologies Handbook for further, more specific advice and guidance.

You may wish to print copies of the recommended reading materials – unless you are comfortable reading from the screen – in which case access to a printer will be necessary.

The basic software applications that you will require will be:

- a Web browser to access the Moodle resources and other recommended sites;
- Acrobat Reader to access course readings.

You are also likely to want a word processing application for your writing.

Some additional web-based tools and browser plugins will be suggested in relation to particular exercises from time to time. Participants are likely to have evolved their own patterns of working and "personal learning environment" (PLE).

## **Course structure and format**

*Understanding learning in the online environment* runs over 12 weeks from the start of the second semester of the 2016 / 17 academic session, from **Monday 16<sup>th</sup> January** until Sunday 9<sup>th</sup> April 2017.

The course Moodle site will be accessible for purposes of **induction and orientation** one week before the formal start of the course activities; **Monday 9<sup>th</sup> January 2017**.

The outline content of the course is set out below.

### **Outline content**

#### **Week 1; Introduction and orientation**

A major part of the interaction on the course will be conducted through the medium of asynchronous text conferencing. Activity in the first week will be directed towards allowing participants to refresh their experience of the discussion tool, and to interact online with other course members. Participation in the discussion activity of the course will contribute to an element of assessment on the course, and the operation of this assessment criterion will be set out for the group over this first week.

The other assessment exercises will be introduced.

#### **Week 2; The mind and the understanding of the processes of human cognition**

This section will provide an introduction to the understanding of how the human mind processes incoming information and derives from that processing an understanding of the world. A historical perspective will be given, tracing the development of ideas of learning from Behaviourist and Associationist roots, through cognitive notions such as Constructivism, to the socially situated and distributed ideas of cognition.

#### **Week 3; Learning and the nature of knowledge**

The business of teaching is sometimes discussed as if it were a matter of transmission, and we speak of 'delivering' a course to a group of students. This section will seek to call into question a 'transmissive' or 'instructionist' notion of the educational process. When we consider how knowledge is constructed and stored in the brain we realise that it is not possible for understanding to be passed from the teacher to the learner. The best that the teacher can hope to achieve is to cultivate the circumstances in which the learner will be encouraged and enabled to construct his or her own understanding.

#### **Week 4; Learning as the construction of understanding in the mind of the learner; learning as an active process based on experience**

In this section we will consider the evidence that learning occurs through active engagement with meaningful experiences. Psychological notions



such as 'levels of processing' will be linked to educational heuristics such as Bloom's Taxonomy, Kolb's 'Learning Cycle', or Bruner's 'Spiral Curriculum'. A case will be made for digital and online environments providing rich opportunities for active learning.

### **Week 5; Knowledge in the head and knowledge in the world; the notion of distributed cognition**

In this section we will consider how knowledge is only partly located within the head, and that it is also related to our bodily existence, it is situated in particular contexts of action in the environment, and may be distributed across the various members of a team.

### **Week 6; Learning as socially situated and collaborative**

Personal knowledge construction through active engagement with the physical environment can only be part of the story. Human learning is located within, and crucially resourced by, the activities of other people. Social interaction provides a relevance and motivation for learning, and the intervention of peers and mentors provides a 'scaffold' within which new knowledge construction is supported. Learning is also importantly tied up with the development of one's own identity in human society and culture. This section will consider the nature of this social and collaborative grounding of learning, and the ways in which the online environment alters and supports it.

### **Week 7; Learning as 'Legitimate Peripheral Participation'; communities of practice; learning and identity**

Education is a process of constructing and developing an identity. The student is as much learning to 'become' an engineer or a historian as he or she is learning 'about' engineering or history. It can be shown that the strength of the expert is not that they know more about a given topic than the novice (often they do not) but rather that they know how to perform in a given domain of knowledge, to gather insights and to solve problems. This section will consider the perspective on learning that suggests that it is about a gradual and supported progression towards membership of a community of practice.

### **Week 8; Motivation**

Learning will not proceed without the motivation of the learner. Motivation to learn can come either from intellectual interest in, and curiosity about, the topic in hand (intrinsic motivation) or be derived from some external influence such as fear of failure, desire for good grades, or from some pragmatic goal such as the bettering of employment prospects (extrinsic motivation). Different sources of motivation will lead to different approaches to learning, and to different patterns within the knowledge structures created. Consideration will also be given to the influence of assessment practices on learner motivation.

## **Week 9; How learners differ; student beliefs about themselves as learners, and their approaches to studying**

If learning is a constructive process, based on the foundation of previously acquired knowledge structures, it therefore follows that learning will proceed differently for every learner based on the background context which he or she brings. This section will consider the ways in which learners may differ. Students' perceptions of themselves as learners (for example, 'not good with numbers') and their overall levels of self-belief and self-efficacy can constrain their potential, as can their approach to study, be it based on constitutional cognitive propensities, or acquired from previous encounters with learning. Particular mention will be made of the rise of the so called 'net generation' and how experiences of new media technologies may be changing the ways in which young people relate to knowledge.

## **Week 10; Learning to learn, and the development of study skills**

Central to the business of any educational endeavour not only will be the learners' grasp of the subject domain in question, but also their development as autonomous and self-regulated learners. Following on from the notion that a learner can differ in their approaches to study is the possibility that, through appropriate guidance and personal reflection, they can come to configure themselves as more effective learners. In addition, new technologically supported information ecologies are coming to change the range of skills that the scholar requires to remain effective. This section will consider the construct of 'study skill' and the new range of opportunities and challenges that networked environments afford.

## **Week 11 & 12; Assignment**

Consultation on final assignment, and preparation for assignment submission.

## **Assessment**

Assessment of the course will be based on four elements:

### **1) Discussion participation**

A grade will be awarded for participation in the online text-based discussion activity of the course, and this grade will contribute 10% of the variance in the overall course grade. The approach to grading discussion participations and contributions will be based on that described by Ravoi (2000) 'Online and traditional assessment: what is the difference?' *Internet and Higher Education*, 3, 141 – 151.

This grade will be assigned on the basis of contributions over the entire course. While regular and frequent contributions are assumed over the entire period of the course, it is understood that some inevitable gaps will exist due to other commitments or technical difficulties. Please therefore keep the tutor informed when your engagement with the course will have to be interrupted.

The grade for discussion participation will **contribute 10%** of the variance in the overall course grade.

Further details are provided on the course Moodle site.

## 2) Learner analysis

Participants will carry out a brief analysis of the learning needs and orientations of one group of learners with which they have been involved, or are likely to be involved in the future. The written report on this analysis should be **around 1000 words** in length, plus or minus 10%. This activity will, of necessity, be highly speculative. The grade will therefore not be based on any idea of pragmatic or theoretical "correctness" but rather upon the richness and variety of the issues reflected upon. Participants will be given detailed guidance as to how this task should be carried out, and the criteria by which it will be assessed, on the course Moodle site.

Work on this assignment would commence in Week 1 of the course, and the written report would be submitted at the end of Week 5 (**Sunday 19<sup>th</sup> February 2017**). Please note that while references to the literature should be included in this assignment report, this will not be weighted in the assessment as heavily for a submission at this (early) stage in the course. Early submission is intended to get the assessment process under way, so that you can receive early formative feedback on your work, and so that a peer feedback element can be included. Seek to make use of the literature, but the writing should come, first and foremost, from your own knowledge of the characteristics and needs of your learner group.

The grade for this exercise will **contribute 20%** of the variance in the overall course grade. This grade will be assigned partly through a peer assessment procedure.

Further details, including details of the peer assessment approach, are provided on the course Moodle site.

## 3) Learning Challenge

Participants will acquire a previously un-mastered motor skill, which (if time and circumstances afford) they will then go on to impart to a cooperative family member, friend or colleague. The particular skill of focus will be selected, by negotiation with the individual participants, from a list of suggestions provided by the course, or suggested by the participant. Where the skill is suggested by the participant, criteria for acceptance will be primarily that the skill is of an appropriate level of challenge, and that the participant has, or can obtain access to, the necessary learning resources. Participants will write a brief reflective summary of their learning (and perhaps teaching) experiences, highlighting the barriers that they encountered and the insights that were gained. This summary should be of **around 1000 words** in length, plus or minus 10%. An appropriately analytic and theoretical approach to this piece of writing should be taken, and references to relevant literature will be expected.

Work on this assignment would commence in Week 1 of the course, and the written report would be submitted at the end of Week 10 (**Sunday 26<sup>th</sup> March 2017**).

The grade for this exercise will **contribute 20%** of the variance in the overall course grade.

Further details are provided on the course Moodle site.

## 4) Essay

The major component of assessed work on the course will be a conventional essay based on a title selected from a list developed by the course participants. The grade for this exercise will contribute 50% of the variance in the overall course grade. The essay should be **in the order of 2500 words** in length, plus or minus 10%.

The three core criteria for the assessment of this work will be:

- Knowledge and understanding of concepts  
Does the writing show a critical engagement with the concepts and theories that it introduces?
- Knowledge and use of the literature  
Have the relevant key references been used? Have other relevant sources been drawn upon and coherently integrated into the analysis?
- Constructing academic discourse  
Has the writing been produced with careful attention to the quality of expression and presentation, and with skilful exposition of ideas?

The essay topic **should be agreed between each student and the Course Tutor** by the end of the 5th week of the course (Sunday 19<sup>th</sup> February 2017) and the final work will be due for submission one week after the end of the 12th week of the course (**Sunday 16<sup>th</sup> April 2017**).

The available essay topics / titles will be decided by discussion among the course participants that will take place over the first three weeks of the course. Further details of how this process will be conducted are provided on the course Moodle site at the start of the course.

## A note on word counts

The absolute minimum/maximum for each of the written assignments is +/-10% (so, the minimum for a 1000 word piece is 900 words, and maximum is 1100). However, this is *not* an invitation to write 1100 words! Aim for as close to the limit as possible, but don't worry if you go a little over or under – that's the purpose of the margin.

Word counts *include* anything in the assignment up to the references (including tables, footnotes, and so on). References and appendices are not included in the word count. Please state the word count somewhere in your assignment. Those going over or under the 10% margin will be considered not to have met the requirements for the assignments, and **mark penalties are therefore very likely to result**. Addressing your objective while keeping within a constrained length limit is an academic discipline which should be cultivated.

## Submission dates

A summary of the submission dates for the four assessed elements of work is given below:

- 1) **Online discussion.** Compliance with this assessment requirement will be an automatic consequence of participation over the period of the course.
- 2) **Learner analysis.** Submission is due at the end of Week 5 of the course; **Sunday 19<sup>th</sup> February 2017.**
- 3) **Report on Learning Challenge.** Submission is due at the end of Week 10 of the course; **Sunday 26<sup>th</sup> March 2017.**
- 4) **Course essay.** Submission is due one week after the end of Week 12 of the course; **Sunday 16<sup>th</sup> April 2017.**

A School-wide policy on **penalties for late submission** exists, and is set out in the current Programme Handbook (for the 2016 / 17 academic session). I have no wish to have to apply penalties. We could, within the context of this course, discuss the destabilizing motivational impact that mixing the "economic" model of penalty with the "academic" model of a grade, might have. However, a School policy exists, and I have to apply it. But within the School policy exists the provision for the negotiation of extensions in advance of the arrival of the original due date. So I would urge anyone requiring an extension on a submission date – based on good reasons of personal, health, or work-related, circumstances – should contact me as early as possible, and certainly more than 48 hours before the originally set date. Personal email to **H.A.Macleod@ed.ac.uk** will be the best route to contact me.

Dates are, however, important. They allow us to synchronise our activities as a group, and benefit from that group interaction. A particular example built into this course is the element of peer feedback associated with the "Learner analysis" exercise. So I encourage all to strive to work to the dates originally set. The fact that they are advertised in advance should allow for forward planning, to address any anticipated conflicts; for example, the confluence of assignment due dates from other courses.

## The postgraduate common marking scheme

Grades will be awarded in line with the University's postgraduate common marking scheme:

Mark	Grade	Description
70% - 100%	A	An excellent performance, satisfactory for a distinction
60% - 69%	B	A very good performance
50% - 59%	C	A good performance, satisfactory for a masters degree
40% - 49%	D	A satisfactory performance for the diploma, but inadequate for a masters degree
0% - 39%	E	Fail for the diploma

Further details on the University's common marking scheme, and other matters relating to assessment regulations, can be found in the Assessment Regulations on the Web at:

<http://www.ed.ac.uk/schools-departments/academic-services/policies-regulations/regulations/assessment>

For more detail on the regulations that govern the course and the programme you should consult the University's *Degree Regulations and Programmes of Study* (DRPS) which are to be found on the Web at:

<http://www.drps.ed.ac.uk/>

Follow the links from there to the general regulations, or to those regulations that apply particularly to taught postgraduate programme.

## Credit and continuation of study

Successful completion of this course will give you 20 Scottish Credit and Qualifications Framework (SCQF) points at postgraduate level 11. More details of the SCQF can be found on the Web at:

<http://www.scqf.org.uk/>

The full MSc in Digital Education will comprise 120 credits of taught courses in total, plus the dissertation component of the Programme which counts as 60 credits. Some of you may have taken the (earlier) 20 credit version of the foundation course (*An Introduction to Digital Environments for Learning*), in which case you have to take five additional 20 credit courses, plus a dissertation. Those who have taken, or are concurrently taking, the 40 credit version of the foundation course will require to complete four additional 20 credit courses, plus the dissertation. The list of options is available on the programme web site at:

<http://digital.ed.ac.uk/courses>

The regulations governing satisfactory progress for continuation to Masters level by work on, and submission of, a dissertation are given in your Programme Handbook.

## Course reading

All core, and many useful secondary, references for the course are provided online. These will be linked to from the specific weekly sections of the course Moodle site, and will be gathered together in the Library section of the site. In most cases these readings are published papers or chapters for which specific copyright clearance has been obtained, and which are held by the University Library as Portable Document Format (.pdf) files. You would be well advised to keep a systematic collection of these readings on your computer (or in printed form) for future reference. Participation on the course entitles you to access and use these materials, but access may not continue beyond the end of the course in some cases.

There is therefore no need to purchase any books for the course. Should you **want** to buy a reference book in the general area however, some suggestions may be offered. First of all, if you already have a background in some area of psychology or education and would like to increase the depth of your study Bruning, R. H., G. J. Schraw and M. M. Norby (2010) **Cognitive psychology and instruction** (Boston, Pearson) would be highly recommended. Should you wish a lighter, yet highly scholarly, text on the theories of learning Bransford, J.D., Brown, A.L. and Cocking, R.R. (2000). **How people learn: brain, mind, experience, and school** (Washington, D.C., National Academy Press) would be the recommendation. Much of the text of this book is available online at : [http://www.nap.edu/catalog.php?record\\_id=9853#toc](http://www.nap.edu/catalog.php?record_id=9853#toc)

Another suggestion (sadly now out of print, although still available second hand from Amazon and others) is Caine, R. N. and G. Caine (1994). **Making connections: teaching and the human brain** (Menlo Park, Calif., Addison-Wesley Pub. Co.). This book provides a highly accessible overview of the processes of learning, and the circumstances under which learning is facilitated, taking a biological perspective.

## Course evaluation

There will be a formal, questionnaire-based evaluation at the end of the course and we will greatly appreciate your contributions at that point.

Please do not allow any day-by-day concerns to go unaddressed however. We ask you to be patient with any technological problems that we may encounter. But please feel free to bring any questions or issues to the Tutor when they arise, be they academic or technical, and we will do our best to amend, or work around. We want you to get the most possible out of the course, and all feedback will be valuable for the future development of the course, and of the programme of which it is a part.

## Contact information

For help or advice on any aspect of the course, please contact the Course Tutor, Hamish Macleod. The normal academic business of the course can be conducted through the Moodle Discussion Forums. To attract attention more urgently it will be better to use 'Internet' email to the address below.

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