Improving student experiences in Learn: usability testing showcase and workshop

On 1 March, the IS User Experience (UX) Service, in partnership with the School of Informatics, ran a [Learn usability testing showcase event](). Participants from across the University watched screencasts of students using an Informatics Learn course, before prioritising the usability issues identified.

Five students in total took part in the testing — four from Informatics, including those enrolled on single programmes, joint programmes with other Schools, and those from our Undergraduate Apprenticeship Scheme — and one from the School of Economics. Each was presented with the following scenario and four 'typical' tasks to perform.

A copy of the Learn course for [Computer Security]() was used for testing purposes. This was chosen as it aligned closely with the Learn template developed for the School.

Scenario

You're a third year student on the joint programme BSc Artificial Intelligence and Computer Science. This semester you are studying a course called Computer Security. It's week 3 of the course, and you're preparing for your first piece of coursework.

Tasks

Task 1: You want to check the deadline for the first piece of coursework and see if it clashes with any other coursework deadlines. Using the Learn course site, find out the deadline for the first piece of coursework, and then see if it clashes with coursework deadlines for any other courses on which you

are enrolled.

Task 2: You missed the third lecture of week 1 because of sickness. You'd like to watch the recording so you can catch-up. Using the Learn course site, find and play the third lecture of week 1.

Task 3: You're going away for the weekend and you'd like to do some reading while you're away. You're not sure you'll have access to the internet, so you'd like offline access to your reading. Using the Learn course site, find the required textbook for the course and see if you can download or print a section of the textbook.

Task 4: You'd like to familiarise yourself with the content of the last lecture you attended, called Cryptography – asymmetric encryption. Can you open the lecture notes from this lecture?

Results

Task 1: Most users found the coursework deadline relatively quickly and with ease. One student checked both the *Course Information* and *Course Content* pages prior to selecting the *Coursework and feedback* page.

However, no users were able to easily find the link to the [personalised coursework planner.](#) This was expected, and one of the reasons why I included it in the task.

Coursework Details

CW1 **Cryptography (Formative)**	start	01/02/2019
	submit	15/02/2019 16:00:00
	return	01/03/2019
CW2 **Network Security**	start	18/02/2019
	submit	08/03/2019 16:00:00
	return	22/03/2019
CW3 **Software Security**	start	15/03/2019
	submit	29/03/2019 16:00:00
	return	12/04/2019
mitm	start	
	submit	unknown time
	return	

Everyone found this. →

No-one clicked on this! ↓

We are prototyping a coursework planner for all Informatics students. Please go to student.inf.ed.ac.uk

to access your coursework planner for all courses on which you are enrolled. Please report any missing information to your class rep.

Task 2: Most users found the link to the lecture recording overview page with relative ease. Some users were expecting to find a direct link in the table on the *Course content* page. This was not surprising as the Semester 1 course Informatics 1: Introduction to Computation includes this.

There was, however, a significant usability issue identified for all users when it came to identifying a particular recording from the Media Hopper Replay course overview page. This was caused by the unhelpful automatic naming convention of recordings (see below). Users performed a lot of cross-checking between different pages on Learn, various online calendars and and the Media Hopper Replay course overview page to identify the recording from the "third lecture of week 1".

Computer Security_Lecture/01	January 14, 2019 12:10pm-1:05pm	
Computer Security_Lecture/02 <26-29, 32-36>	January 16, 2019 12:10pm-1:05pm	
Computer Security_Lecture/03 <26-29, 32-37>	January 18, 2019 11:10am-12:05pm	
Computer Security_Lecture/01	January 21, 2019 12:10pm-1:05pm	
Computer Security_Lecture/02 <26-29, 32-36>	January 23, 2019 12:10pm-1:05pm	
Computer Security_Lecture/03 <26-29, 32-37>	January 25, 2019 11:10am-12:05pm	

Task 3: The course organiser had used [Leganto](#), the centrally supported Resource List tool, for the course. Users could access the text on Leganto via both an in-text link, or an icon associated with the service link. Most Informatics users found the link to the required textbook with relative ease. There was one instance of users navigating to the table on the *Course content* page where references to specific chapters are included.

This particular textbook was behind an EASE login. As the students were using a dummy account, they were prompted to enter their EASE credentials which would not be the case when logged in as themselves.

Interestingly, the student from Economics searched for the textbook by navigating to the Handbook. This highlights the different approach to content curation and the various roles course and programme handbooks perform across the University.

Task 4: Four users found the link to the lecture notes with ease. One (visiting) student initially checked the *Coursework and feedback* page. It was noted that the terms *lecture notes* and *lecture slides* are sometimes used interchangeably.

Schedule ⌄

Week #	Date	Title	Slides	Reading
	1	Introduction to the course	PDF ⌄	Chapter 1.1: Fundamental Concepts
1	2	Network security: Networking Principles	PDF ⌄	Chapter 5: Network Security 1
	3	Network security: ARP, TCP/IP and its vulnerabilities	PDF ⌄	Chapter 5: Network Security 1
	4	Cryptography - introduction	PDF ⌄	
2	5	Cryptography - stream ciphers	PDF ⌄	Chapter 8.1.3: one-time pads Chapter 8.1.4: pseudo-random number generators
	6	Panoramix: anonymous communication	Guest speaker: Dr. Yiannis Tselekounis	Panoramix video
3	7	Cryptography - block ciphers	PDF ⌄	Chapter 8.1.6: the advanced encryption standard (AES) Chapter 8.1.7: modes of operation Chapter 8.5.1: details for AES
	8	Cryptography - hash functions and MACs	PDF ⌄	Chapter 8.3: cryptographic hash functions
	9	Cryptography - asymmetric encryption	PDF ⌄	Chapter 8.3: public-key cryptography Chapter 8.5.2: details for RSA
4	10	Cryptography - digital signatures and PKI	PDF ⌄ , PDF ⌄	Chapter 8.4: Digital signatures From Cryptography and Network Security - Principles and Practice, by William Stallings: • Chapter 14.3 - Distribution of Public Keys • Chapter 14.4 - X.509 Certificates • Chapter 14.5 - Public Key Infrastructres

Action Points

- Feature request for Media Hopper Replay team: can we automate naming of recordings by date? Venue information would also be helpful here.
- Request for Media Hopper Replay team: can we facilitate production of individual URLs for each recording which will work for enrolled users — *even when they haven't selected initial LTI link*. Only when this can be a achieved, should we encourage course instructors to include links to Media Hopper Replay recordings in the table on the Course Content page.
- Promote coursework planner across the school. Posters / monitor displays etc.
- Include a thumbnail of a 'typical' coursework planner in the next iteration of the template.
- Can the coursework planner display full course name rather than acronym?
- Enquire into possibility of responsive design for

coursework planner.

- Can we have the coursework planner work for tutors (eg marking loads)? Do we need this?
- Work with the web and communication team to research how Informatics students use the yearly handbook.

Reflection

I thoroughly enjoyed working with [Duncan Stephen](#) on this mini project. The feedback was informative, encouraging, and a call to action. I'm looking forward to embedding similar practice across the School for alternative platforms for content delivery.

The results of the 'prioritisation of issues' aspect of the workshop can be found below. If you would like to know more about this particular round of testing, or would like to use *your* course for further testing, please don't hesitate to [get in touch](#).

Further links

- User Experience Service: http://www.ed.ac.uk/is/ux
- Join the UX community: http://bit.ly/UX-meetup-blogs

- UX mailing list: http://bit.ly/uoe-ux-mail
- Steve Krug's Rocket Surgery resources: http://bit.ly/1I1muXo
- David Travis's prioritisation flowchart: http://bit.ly/1I1mCWW