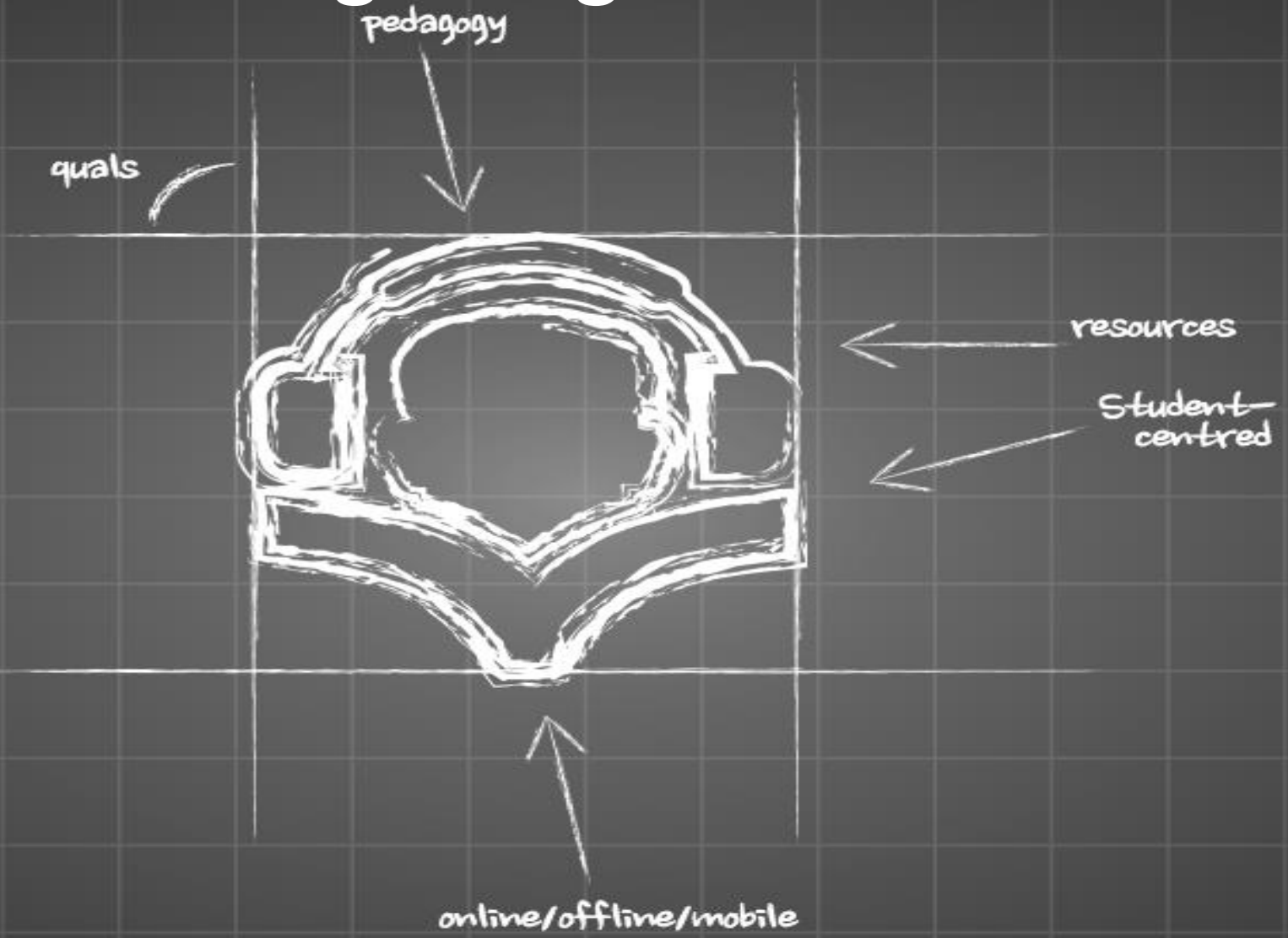
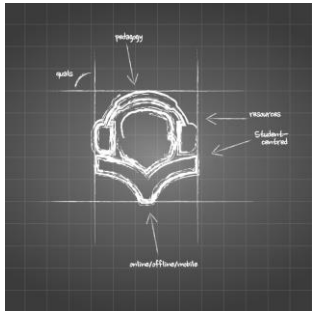
Learning Design



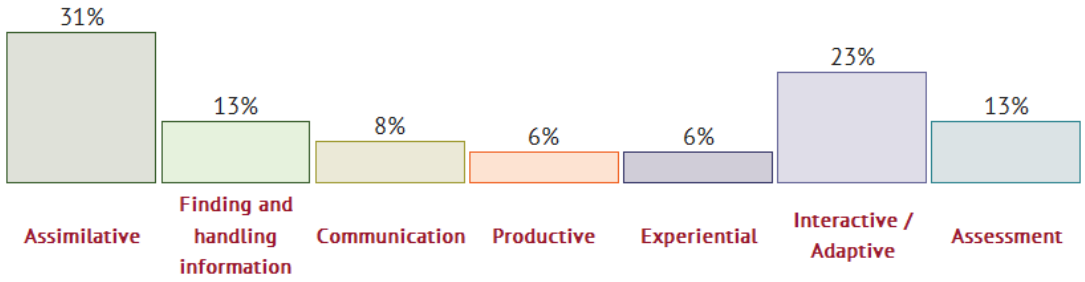
Martin Weller

Overview

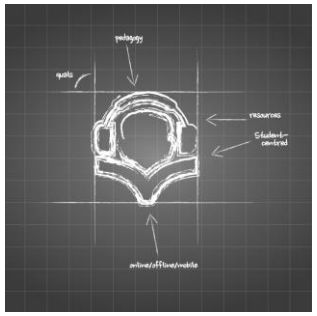


- Why we developed LD at the OU
- Benefits of LD
- Our approach & Tools
- Examples of application
- Some tools for you to try

What is Learning Design?



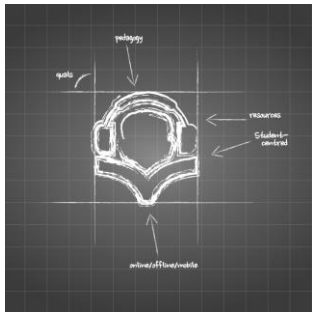
Learning design – what is it?



- “the practice of planning, sequencing and managing learning activities, usually using ICT-based tools to support both design and delivery.” – JISC Design Studio
- Applicable at all levels of learning:

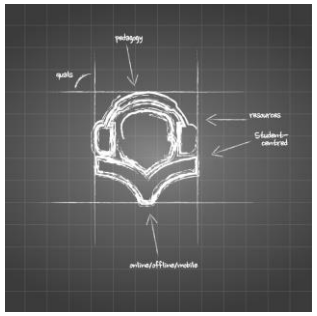
  activity, unit, module, curriculum, qualification…

The design approach



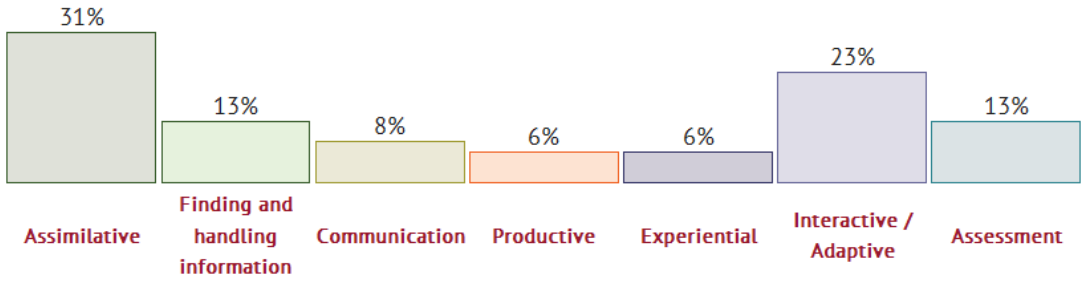
- Analogous to software design
- Take a user perspective
- Make design decisions explicit

The approach

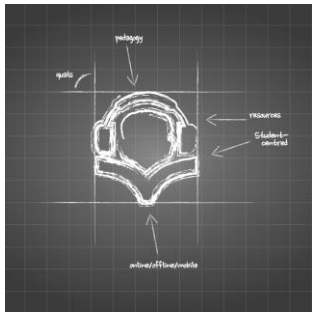


- The use of **design ‘views’**
- Mechanisms to encourage the **sharing and discussing** of learning and teaching ideas
- The development **of tools** to help guide the decision-making process

Why did we adopt it?

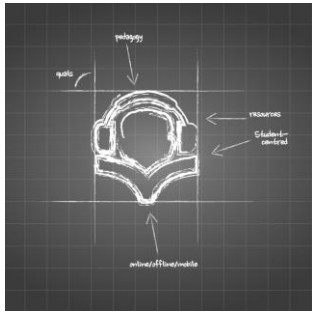


Aim



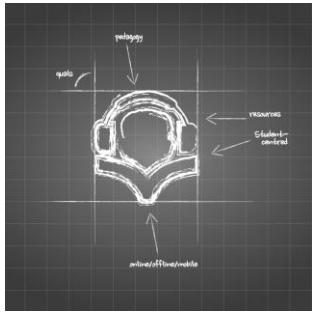
To aid the course design process by providing a set of tools that support a student-activity based approach

Drivers for change



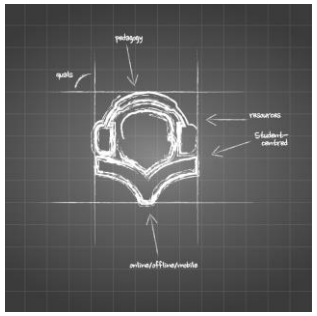
- New technologies, pedagogies are available,
- The process of course design and specification is inconsistent across the uni
- Best practice is not well shared
- Current design focus is centred on content and delivery rather than student experience

Design context at the OU



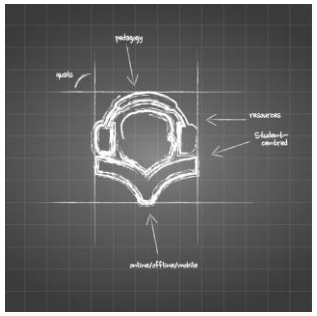
- Creating a course was becoming more complex
- Staff agreed that there was a need for clearer methods of representing the structure and key content/components of a course
- Belief in educational potential of ICT but confidence that this potential would be realised was weaker
- Many staff felt overwhelmed by the challenge of integrating ICT in courses

How LD supports design processes



- Introduced a consistent, structured design, specification and review process
- Provides a set of simple tools
- Reveals the costs and performance outcomes of design decisions
- Puts student activity at the focus of the design process
- Shared language for team
- Enables the sharing of best practice
- Supports faculty teams in choosing and integrating a range of media, technologies and pedagogies in OU offerings
- Tool to support Innovation eg MOOCs

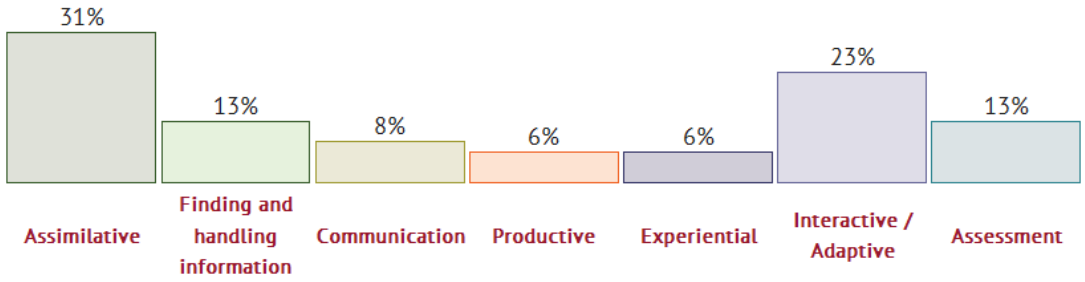
Activity



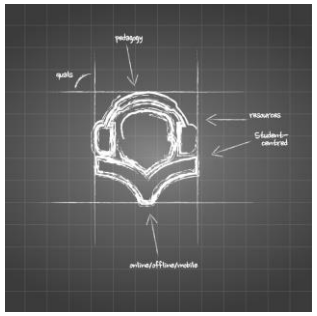
- Think of 1 or 2 ways to ruin an online/blended course
- Post in chat
- (Can be from your own experience or not!)

- What do these tell us?

Our approach



Products

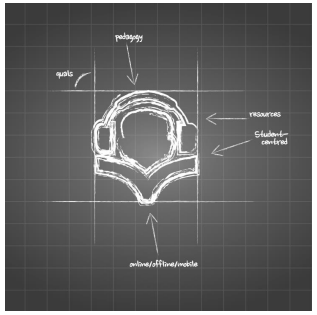


- Activity Planner
- Range of activities
- Tools

- Paper pack
- Software tools
- Exemplar library

- Staff support process

Positive impact across design roles



"From a Curriculum Managers point of view, it's definitely been positive. It's definitely helped me with getting involved with the whole module [...] I don't think there has been more work for me to do apart from those early workshops which is not much to be involved in, just half a day each and I've definitely benefited from it "

Curriculum Manager 2011

"...the workshops then meant that the regular team meetings started from a different point. We didn't have to go over some of that ground in subsequent team meetings [...] one of the difficulties I have witnessed in other modules is where the thinking hasn't really be made explicit, so therefore you have to spend a lot of time checking what you all as a team think and where you are heading [...] whereas it feels like with the early thinking that has been done, we can make the subsequent learning decisions more quickly"

Module team chair 2011

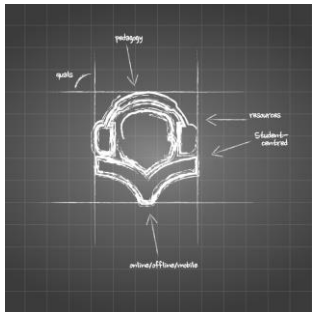
"What I want to do is to reinforce the case that this thinking in front has got benefits both pedagogically and financially, and that at the end of it all the student experience [is better]"

AD L&T 2011

"I think Learning Design will revolutionise the way we work"

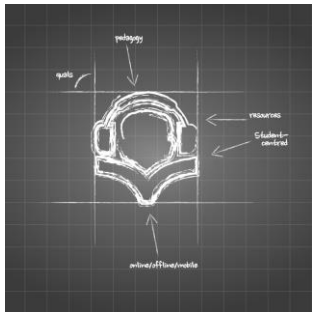
PVC L&T 2013

Principles



- Pedagogy neutral
- Start with student activity
- Integrate into standard practice
- Encourage innovation & creativity
- Facilitate the production process

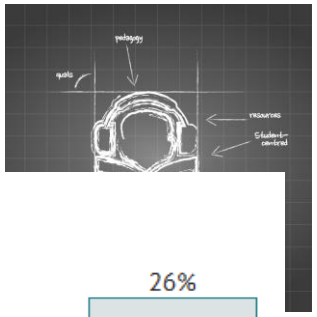
A standard framework allows



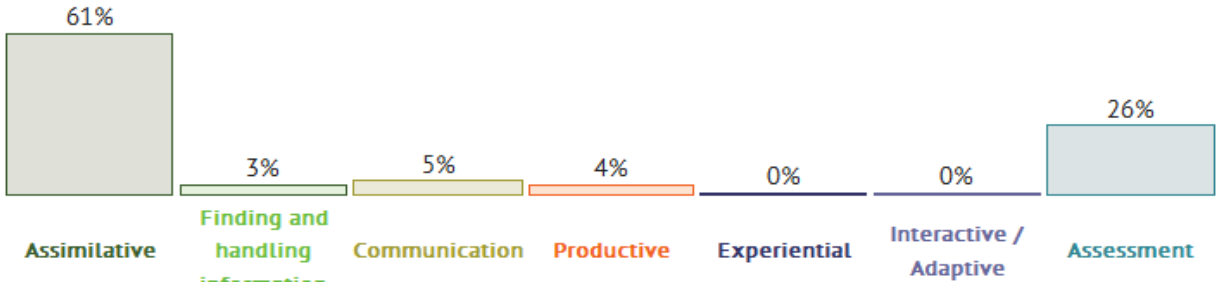
- Sharing of good practice
- A conduit for other teaching related projects
- Quality audit
- Review

Assimilative	e.g. Read, Watch, Listen, Think about, Access, Observe, Review, Study
Finding and handling information	e.g. List, Analyse, Collate, Plot, Find, Discover, Access, Use, Gather, Order, Classify, Select, Assess, Manipulate
Communication	e.g. Communicate, Debate, Discuss, Argue, Share, Report, Collaborate, Present, Describe, Question
Productive	e.g. List, Create, Build, Make, Design, Construct, Contribute, Complete, Produce, Write, Draw, Refine, Compose, Synthesize, Remix
Experiential	e.g. Practice, Apply, Mimic, Experience, Explore, Investigate, Perform, Engage
Interactive/ Adaptive	e.g. Explore, Experiment, Trial, Improve, Model, Simulate
Assessment	Include summative (graded) assessment only here e.g. Write, Present, Report, Demonstrate, Critique

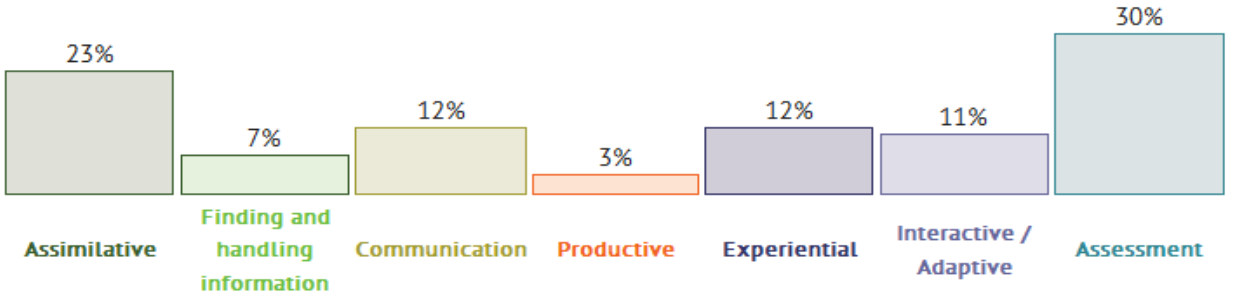
Topic/ week/ session	Assimilative	Finding and handling information	Communication	Productive	Experiential	Interactive/ Adaptive	Assessment
1	7	1		2			
2	6	1	1	2			
3	4					1	5
4	7	1		2			
5	7	1		2			
6	7	1		2			
7	7	1		2			
8	7	1		2			



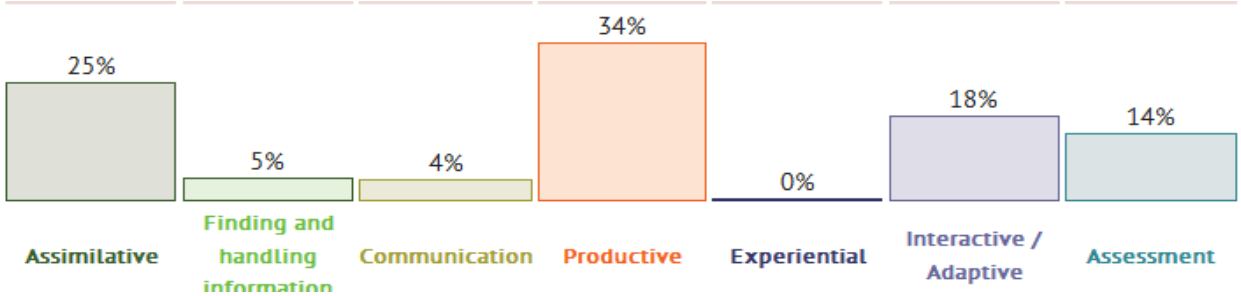
Law



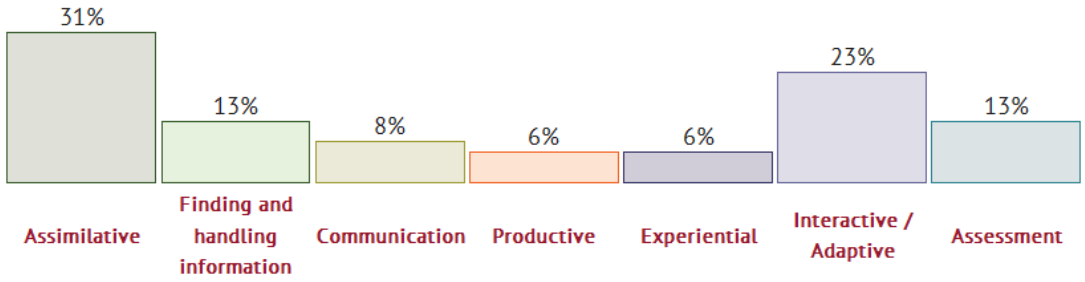
General science



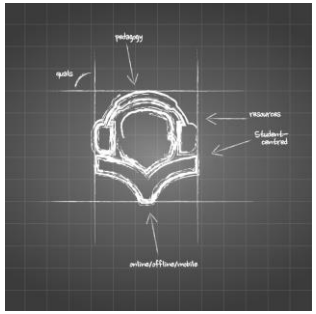
Intermediate Spanish



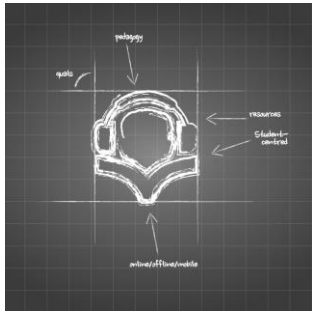
Some examples



LD as means of addressing

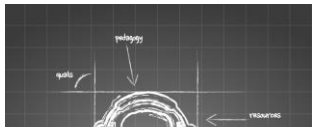


- Retention
- Workload
- Social media
- Open educational resources
- Diversity and inclusion
- Students as creators, etc



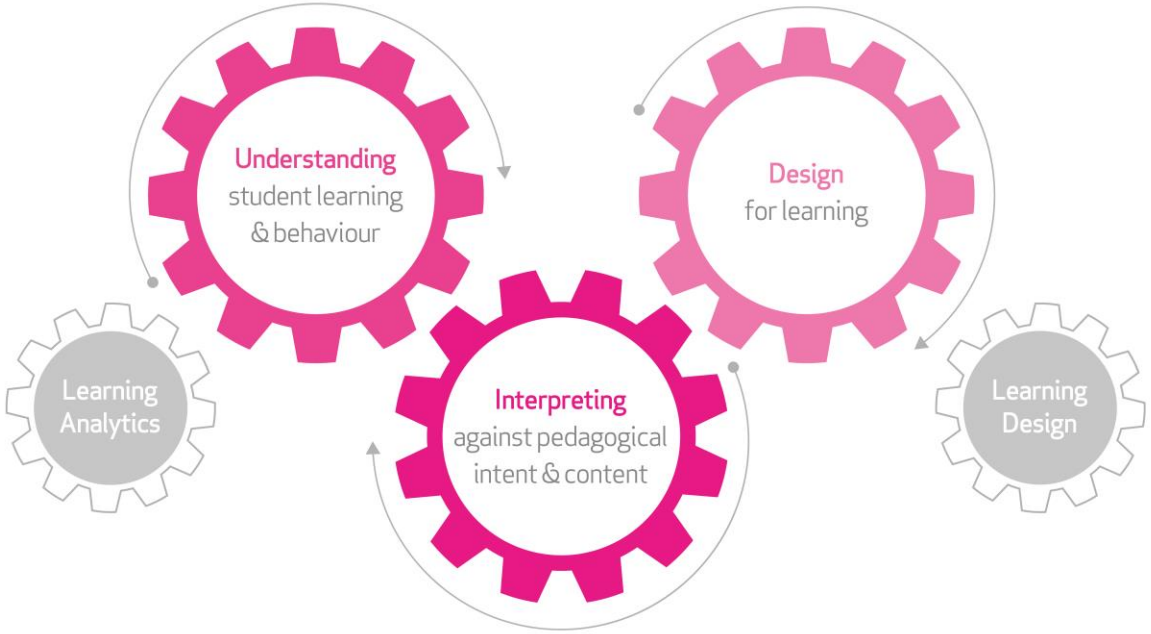
Analytics informs the design of new curriculum

Design data is combined with student satisfaction and performance data to identify the design features that appear to impact most commonly on student experience across the curriculum

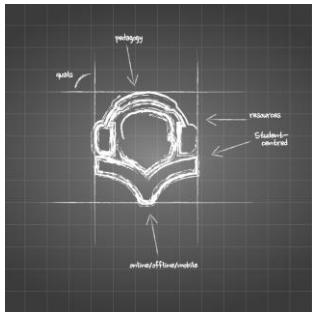


Virtuous circle of Learning Analytics and Learning Design

Translating analytics into pedagogical action

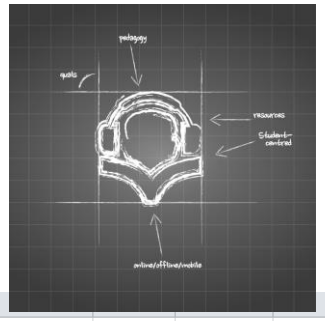


Example of analytics - Mapping Student Workload



- Initial workload mapping of 11 modules
- Mapping took place using the Learning Design taxonomy
- Times were estimated per activity to calculate workload per week

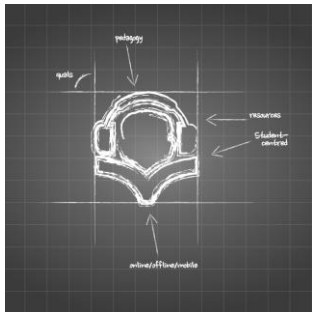
Mapping Student Workload



BLOCK 1

Item	Section	End of week	Assimilative									FHI (Mins)	Comm. (Mins)	Prod. (Mins)	Exper. (Mins)	Int/Adap. (Mins)	Assess. (Hrs)	Assimilative Total (Hrs)	Total (Hrs)	Cumulative time this week (Hrs)	Week no.
			Word count	Figures (no.)	Photos (no.)	Tables (no.)	Equs. (no.)	ITQs (no.)	Audio (Mins)	Video (Mins)	Other (Mins)										
Module Guide			4597	3														1.34	1.34	1.34	1
Study Guide week 1			1840															0.44	0.44	1.78	1
Book 1	Section 1		1650		4													0.53	0.53	2.31	1
TGF activity													60						1.00	3.31	1
Book 1	Section 2		6270	4	9													2.13	2.13	5.44	1
Activity 1.1											10							0.17	0.17	5.60	1
Activity 1.2														10					0.17	5.77	1
Activity 1.3														10					0.17	5.94	1
Activity 1.4														10					0.17	6.10	1
Activity 1.5														10					0.17	6.27	1
Interactivity 1.1											10							0.17	0.17	6.44	1
Interactivity 1.2									7					10				0.23	0.40	6.84	1
Activity 1.6											10							0.17	0.17	7.00	1
Activity 1.7											10							0.17	0.17	7.17	1
Interactivity 1.3									9					10				0.30	0.47	7.64	1
Interactivity 1.4										1				10				0.05	0.22	7.85	1
Interactivity 1.5										8								0.40	0.40	8.25	1
Activity 1.8												10							0.17	8.42	1
Activity 1.9												10							0.17	8.59	1
Study Skills											60							1.00	1.00	9.59	1
Good academic practice											30							0.50	0.50	10.09	1
Ground rules for forum		X	353															0.08	0.08	10.17	1
Study Guide week 2			1735															0.41	0.41	0.41	2

Student workload in the Online Learning Design Tools

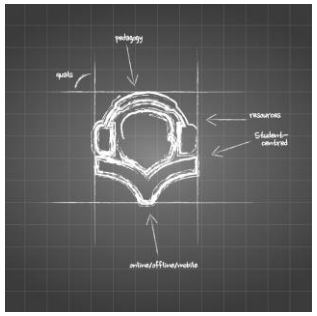


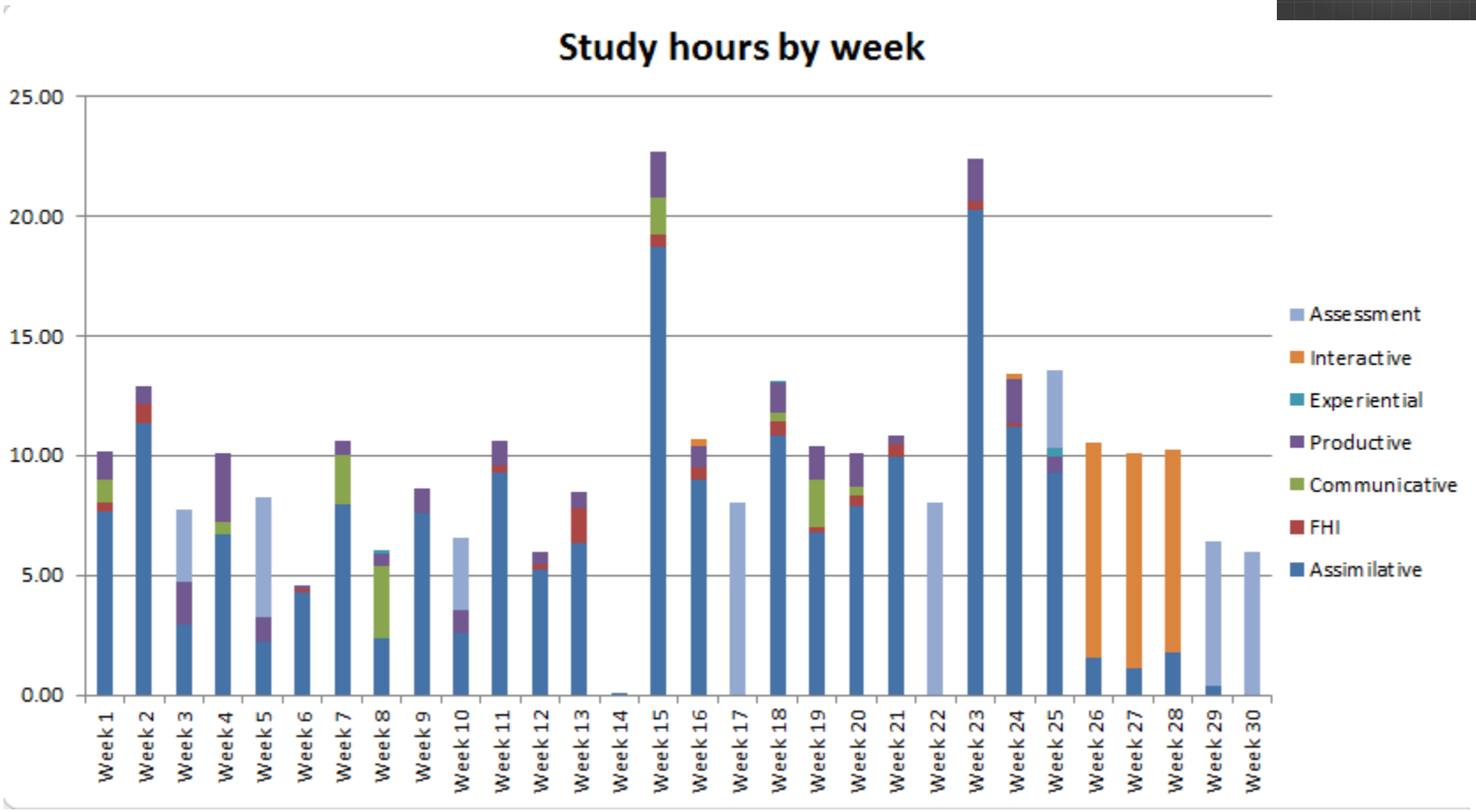
Module Summary | Learning Outcomes | Activity Planner | Module Map | Design Log

Hours spent undertaking each type of activity

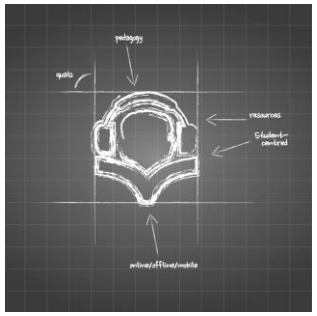
Topic, block or theme	Assimilative	Finding and handling information	Communication	Productive	Experiential	Interactive / Adaptive	Assessment	Total hours
Week 1	5.33	hours	0.5	0.72	hours	hours	hours	6.55
Week 2	9.5	0.5	0.5	0.46	hours	hours	hours	10.96
Week 3	2.74	hours	hours	0.7	hours	hours	0.5	3.94
Week 4	5.24	hours	0.33	0.95	hours	hours	hours	6.52
Week 5	2.42	hours	hours	0.31	hours	hours	5	7.73
Week 6	3.7	0.25	hours	0.33	hours	hours	hours	4.28
Week 7	6.42	hours	1.5	1.16	hours	hours	hours	9.08
Week 8	1.68	0.25	0.25	0.34	0.17	hours	hours	2.69

Student Workload weekly chart



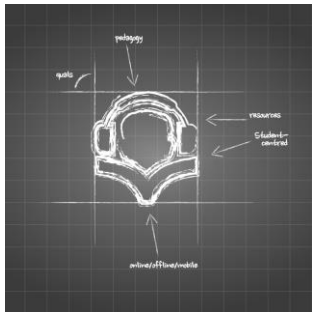


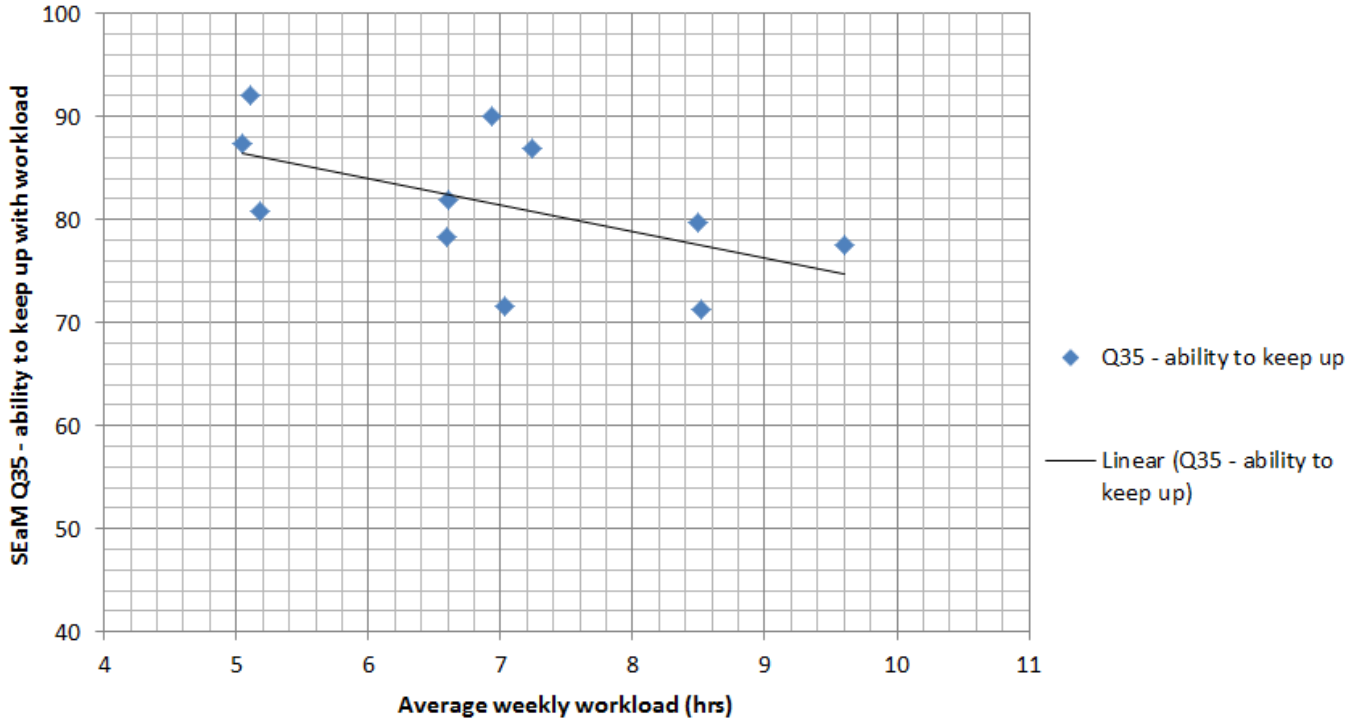
Mapping Student Workload



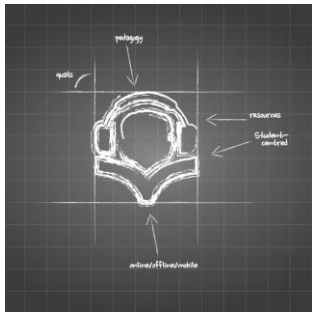
Module	average weekly workload	Workload spread	Q35 - ability to keep up	Completion (all)	Pass (all)
AA100	6.93	2.19	90.1	69.8	67.4
B120	5.05	2.56	87.4	62.1	58.4
B122	6.6	3.37	81.9	61.5	58.6
BU130	7.03	2.35	71.6	60.1	49.2
L120	5.18	1.02	80.9	68.2	66.5
LB160	6.59	2.17	78.3	62.3	59.5
MST124	9.6	4.25	77.5	44.3	39.7
S104	8.52	4.05	71.3	54.5	46.6
T174	7.24	2.91	86.9	63.6	62.2
U101	8.49	1.82	79.7	61.8	59.4
U116	5.1	1.4	92	75.7	74.7

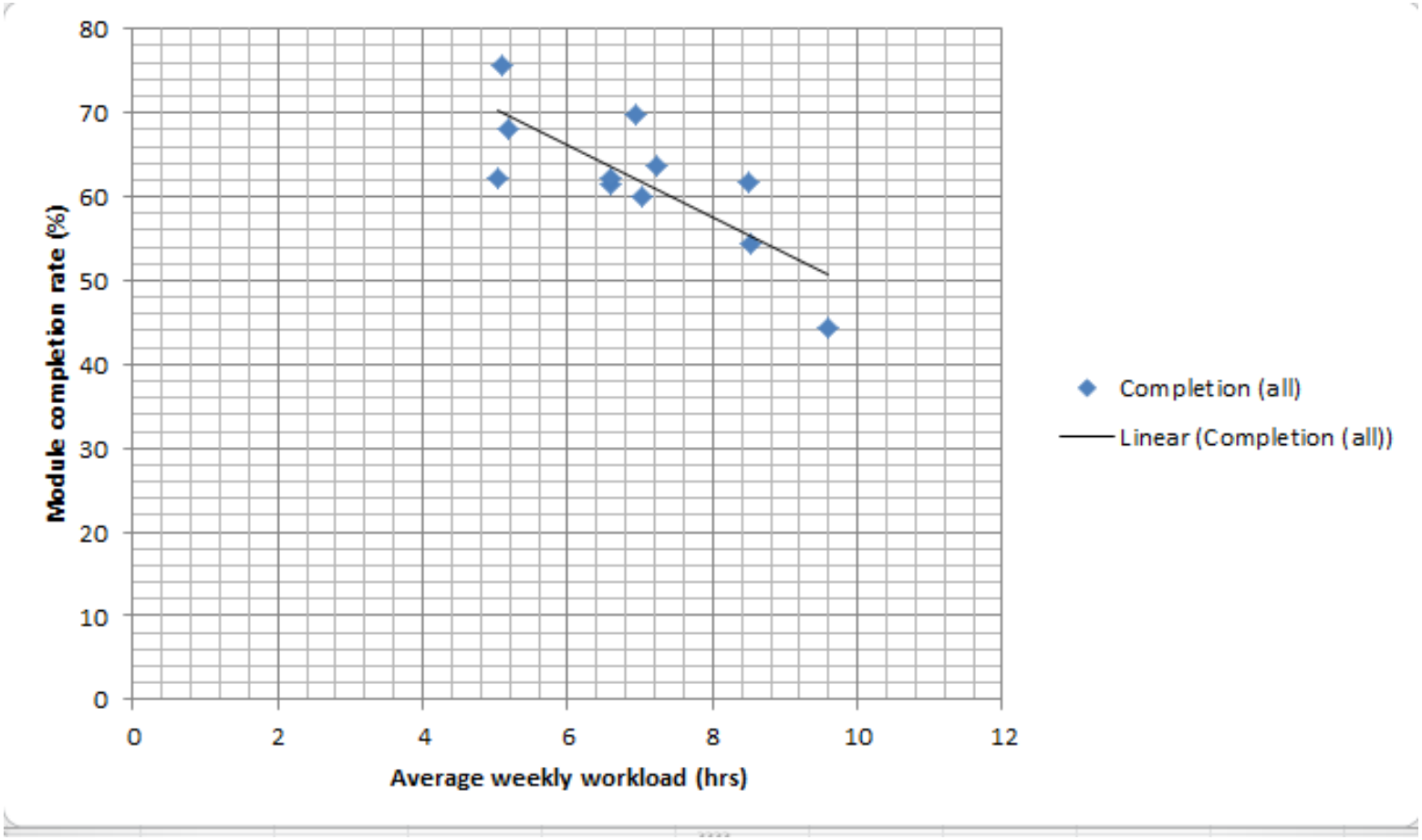
The impact of workload on ability to keep up



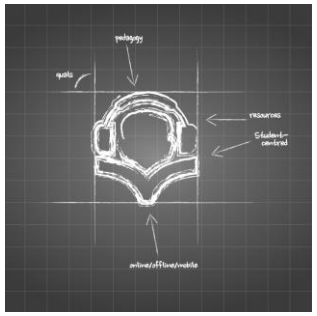


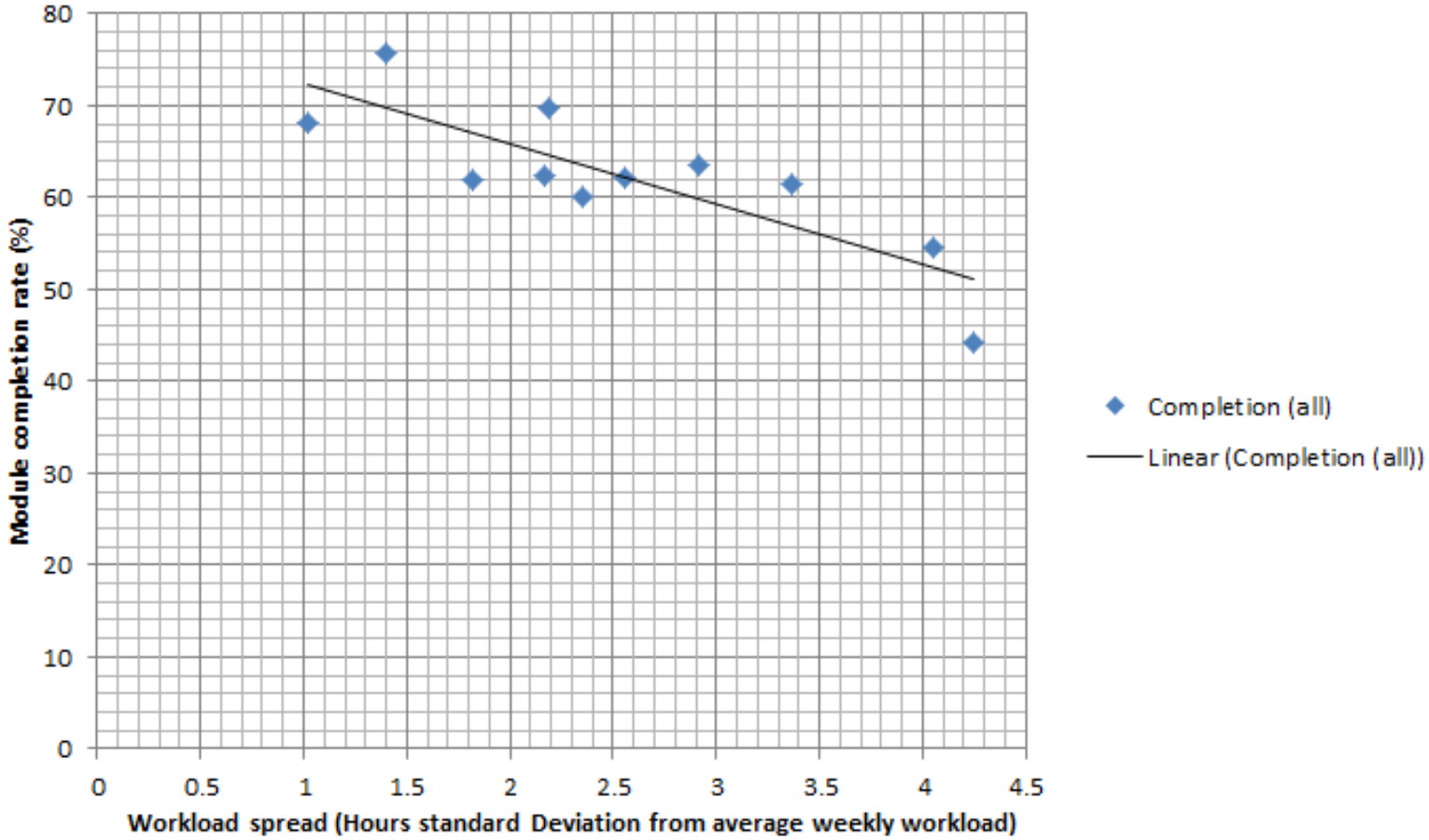
The impact of workload on completion



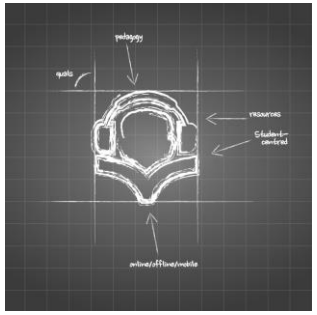


The impact of workload distribution on completion





Example – poor distribution of workload



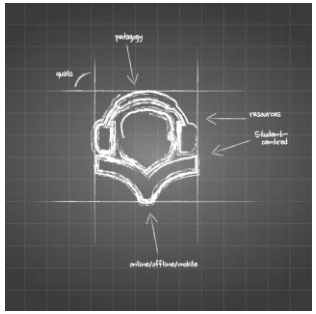
Module Summary | Learning Outcomes | Activity Planner | Module Map | Design Log | Evaluation

Hours spent undertaking each type of activity

Avg: 6.63 StDv: 1.89 Hide Guides

Week	Assimilative	Finding and handling information	Communication	Productive	Experiential	Interactive / Adaptive	Assessment	Total hours
Week 1	7.27	0.33	1	0.5	0.5			9.60
Week 2	6.58	0.17		0.33				7.08
Week 3	4.76						0.5	5.26
Week 4	4.63	1		0.5				6.13
Week 5	3.08						2	5.08
Week 6	4.72							4.72
Week 7	5.4			0.25			0.5	6.15
Week 8	6.66	0.75					0.5	7.91
Week 9	3.11						7.5	10.61
Week 10	5.76	1		0.67			0.5	7.93
Week 11	3.38			1.67		1.25	0.5	6.80
Week 12	6.56					0.33	0.5	7.39
Week 13	3.86						2.5	6.36
Week 14	4.04			1.25				5.29
Week 15	4.01			0.67			0.5	5.18
Week 16	3.51			1.67			0.5	5.68
Week 17	2.79			1			7	10.79

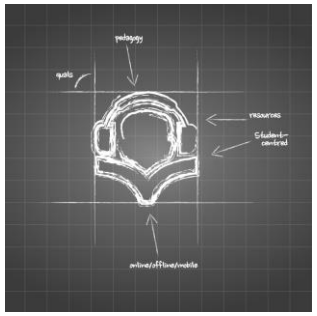
Example – balanced distribution of workload



Module Summary | Learning Outcomes | Activity Planner | Module Map | Design Log | Evaluation

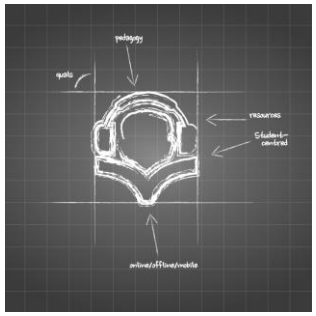
Hours spent undertaking each type of activity

Week	Assimilative	Finding and handling information	Communication	Productive	Experiential	Interactive / Adaptive	Assessment	Total hours
								Avg: 5.18 StDv: 1.02 Hide Guides
Week 1	2.61			2.61			0.67	5.89
Week 2	1.24			3.65			0.25	5.14
Week 3	1.33			4.17			0.59	6.09
Week 4	1.35			3.22			0.33	4.90
Week 5	0.72			2.72			2.42	5.86
Week 6	1.26			4.27			0.25	5.78
Week 7	1.47			3.77			0.49	5.73
Week 8	1.16			3.4			0.25	4.81
Week 9	1.3			3.11			0.25	4.66
Week 10	1.49			2.58			0.3	4.37
Week 11	1.53			3.4			0.65	5.58
Week 12	1.35			3.93			0.24	5.52
Week 13	1.3			3.51			0.33	5.14
Week 14	1.31			4.18			0.41	5.90
Week 15	0.72			2.18			3.08	5.98
Week 16	1.07			2.68			0.48	4.23



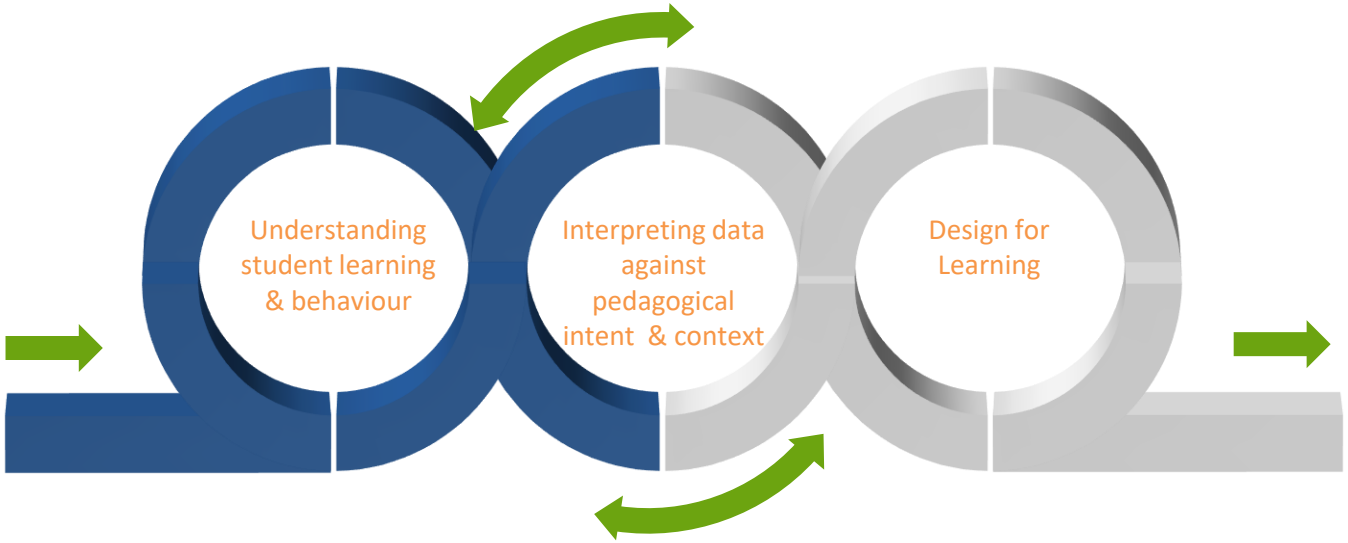
Action taken by module

- Informed tutors of distribution of workload in the module
- Simple message to students on ‘busy’ and ‘quiet’ weeks
- Moved workload to reduce workload in block 1



Translating Analytics into Pedagogical Action

How Learning Analytics and Learning design may work together to provide better understanding and evaluation of pedagogical intent in context.

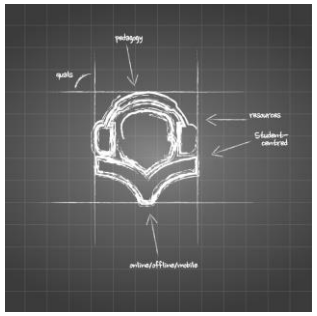


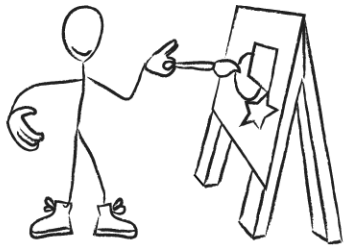
Learning Analytics

Triangulation of various data and information sources to gain holistic view of complex variables related to learning design. Strengthen links between learning analytical and learning design, module content and student behaviour.

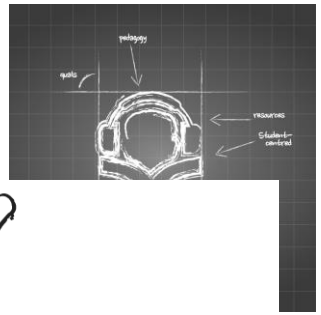
Learning Design

Case studies: work with Data Wranglers & Rebecca Galley's team (LTD) to support CAUs improving module design and student learning.





DESIGNING FOR STUDENT RETENTION



METHODOLOGY

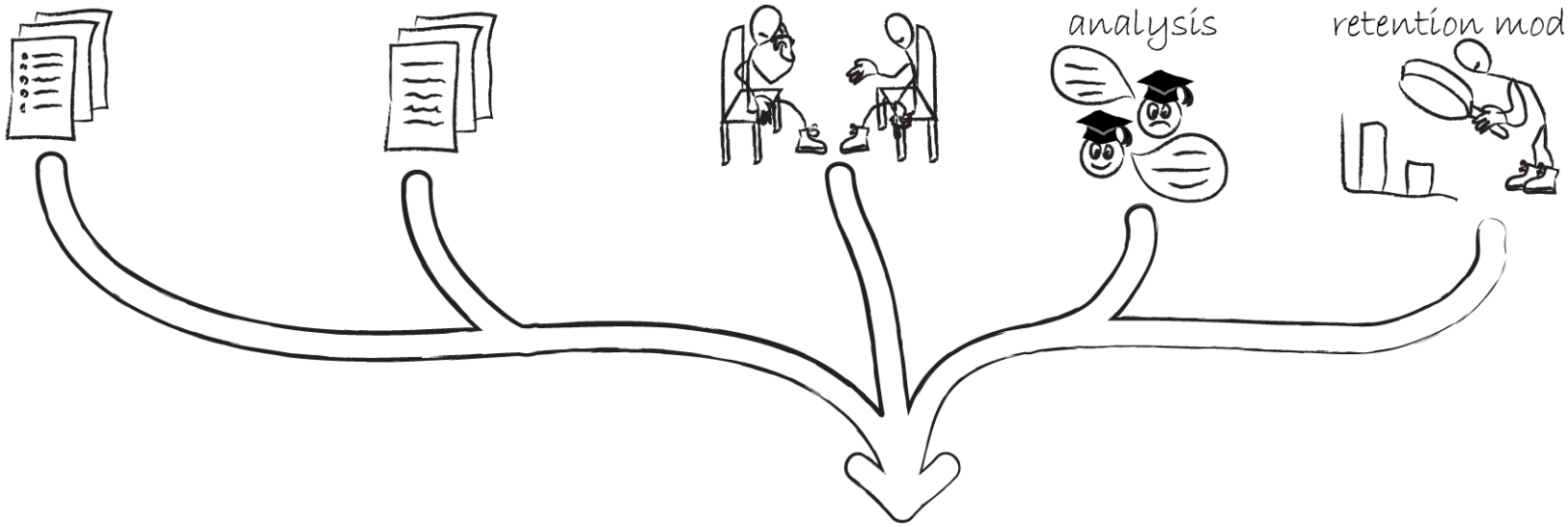
Internal retention activities review

External literature review

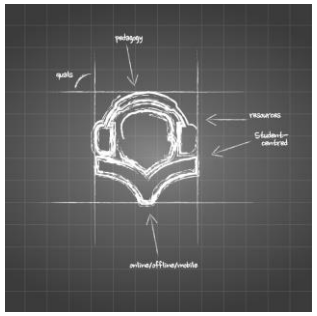
Module Team Chair interviews

SEaM Open Comment analysis

Comparison of high and low retention modules



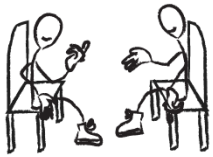
Designing for Student Retention Project findings



FINDINGS

Internal & external literature

- Lack of clear definitions around retention and mixed terminology
- Predominant emphasis on post-design interventions to support retention
- Some emphasis on workload, assessment design and tuition

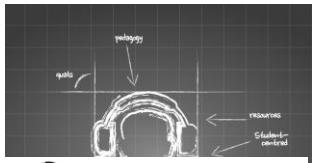


Module Team Chair interviews

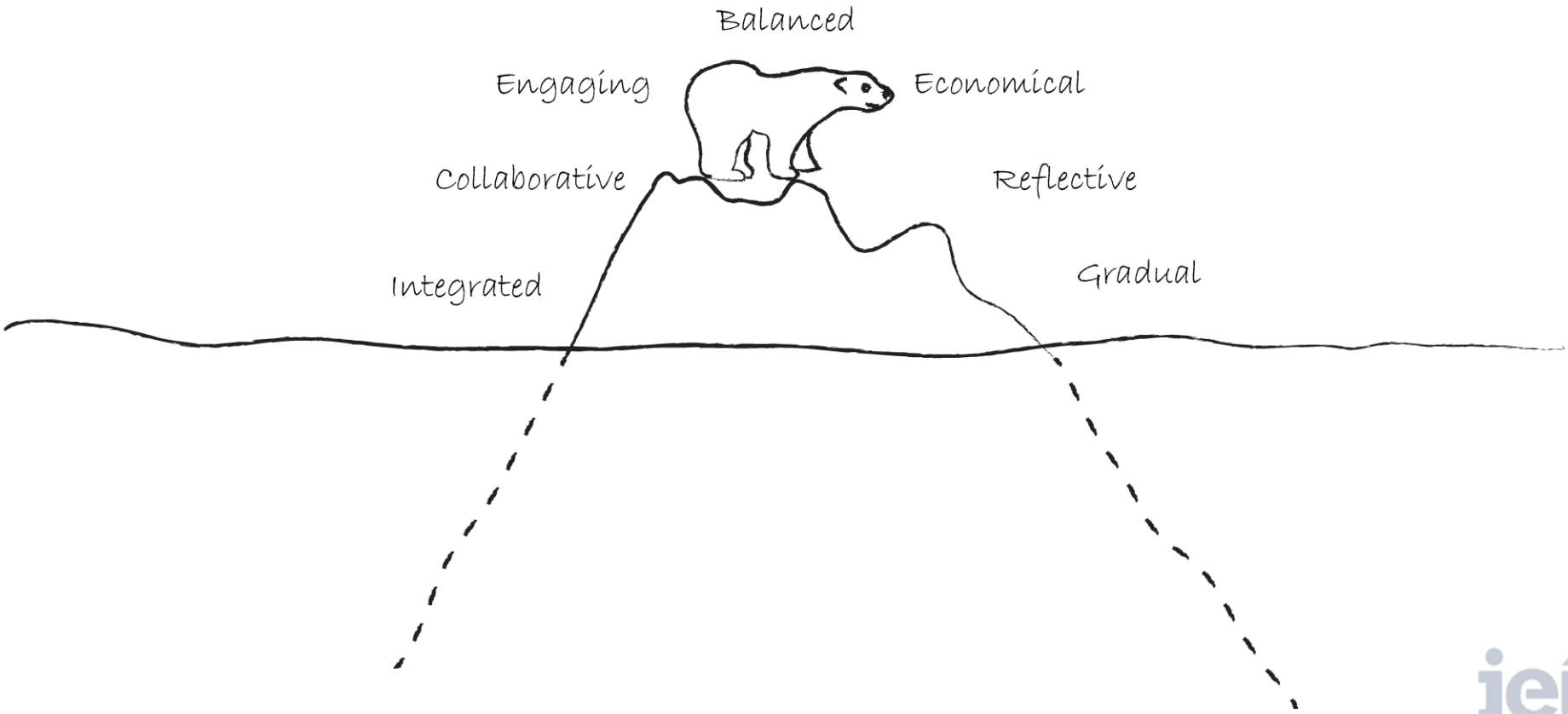
- Some MTCs focused on outcomes of good design, others on design process
- Effective engagement of students through interesting materials regularly mentioned
- Different MTCs focused on different design aspects and none had overall overview

SEaM Open Comments

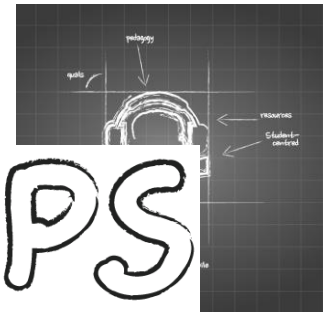
- Most commonly mentioned factor was out-of-date materials
- Next most commonly mentioned factor was importance of engaging materials
- Other factors included alignment between content and assessment, usefulness of SAQs and formative assessment



ICEBERG MODEL



10 RETENTION TIPS



1. Engage students early on in the module and make sure the first few weeks of study materials draw students in

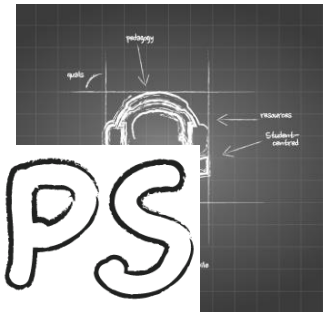
2. Look for potential retention blackspots and address these as far as possible

3. Monitor workload during production and conduct a final workload check before handing over to LTS

4. Make sure all materials, resources and media are easy to access by students and minimise usage complexity

5. Effectively break modules up in shorter chunks and explore ways of rewarding students for completing each

10 RETENTION TIPS



6 Build in sufficient opportunities for self-assessment and formative assessment

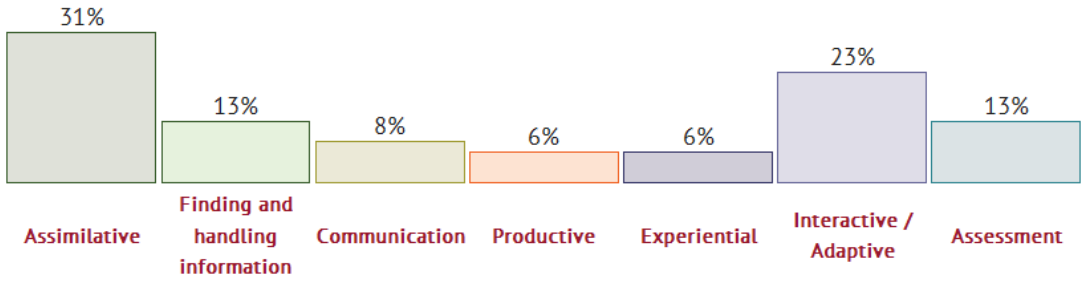
7 Make assessment relevant, interesting, challenging and perhaps even fun

8 Make sure the study planner is broken up on a week-by-week basis

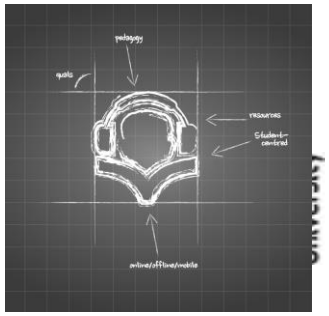
9 Build study, revision and assessment skills throughout the module and qualification

10 Build in sufficient reflection and revision time to enable students to consolidate their learning and prepare for assessments

Some tools


31%
13%
8%
6%
6%
23%
13%
Assimilative
Finding and handling information
Communication
Productive
Experiential
Interactive / Adaptive
Assessment

Personas



Name	Subject(s) being studied

Age	First language	Level of study

Practical Needs (for example, related to accessibility)

Study motivations / career plans

Living Situation

Previous Educational Experiences

Any other details you would like to share.

Tuition Likes

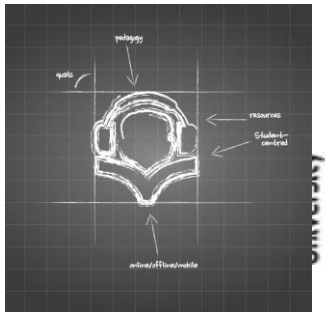
Study Skills Strengths

Tuition Dislikes

Study Skills Weaknesses

http://www.open.ac.uk/blogs/learning-design/wp-content/uploads/2020/07/Student-Profile-form-v2-updated-June-2018.pdf

Activity Planner



ACTIVITY PLANNER

MODULE TITLE

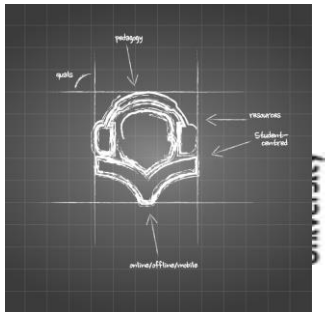
The Open University

Weeks / Topics	Learning outcomes and skills	Assessment	Communicative	Finding and handling information	Productive	Experiential	Interactive/adaptive	Assimilative
			⏱	⏱	⏱	⏱	⏱	⏱
			⏱	⏱	⏱	⏱	⏱	⏱
			⏱	⏱	⏱	⏱	⏱	⏱
			⏱	⏱	⏱	⏱	⏱	⏱
			⏱	⏱	⏱	⏱	⏱	⏱
			⏱	⏱	⏱	⏱	⏱	⏱

How to use this resource

http://www.open.ac.uk/blogs/learning-design/wp-content/uploads/2020/07/activity-planner-v4.pdf

Activity design



Activity design template

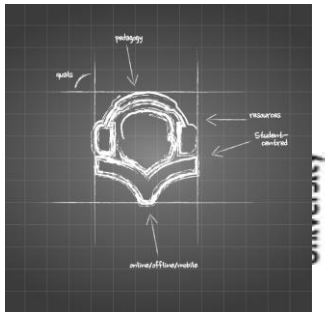
Learning Design

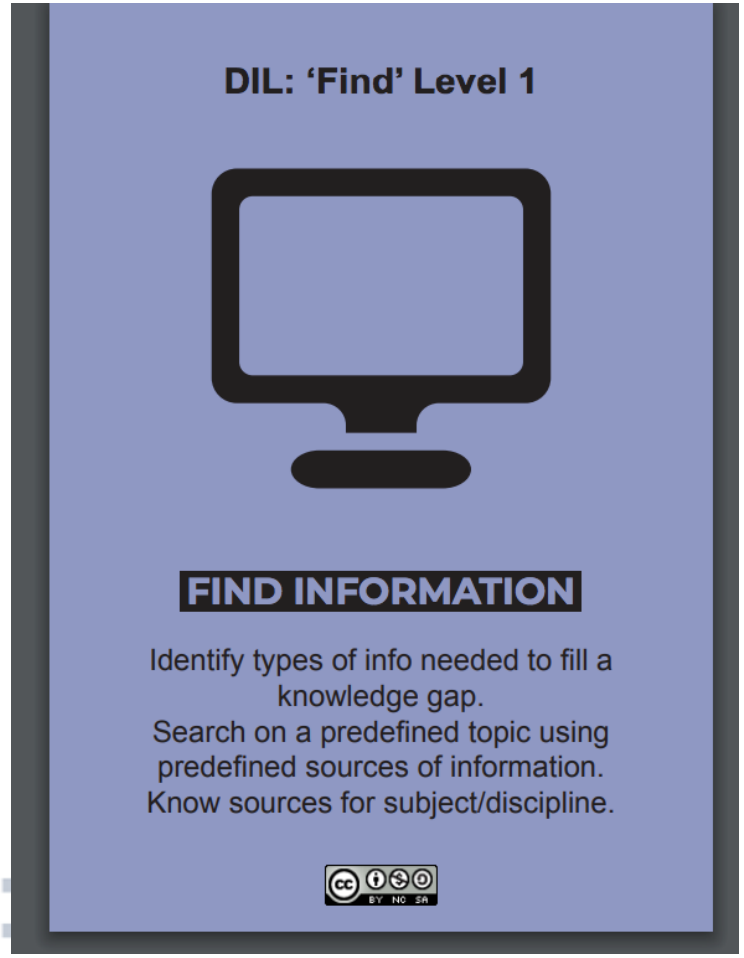
Course:_____ **Week(s):**_____

Purpose of activity (in 140 characters)	Steps: (What is the student doing?)	Timings (Per step)	Resources(Media, VLE tools, interaction with tutor/peers/VLE)
The learning outcome(s) it addresses:			
Which assessment it feeds into:			
Relevant curriculum features:			
Design challenges/innovations:			
Relevant activity types: ☐ Assimilative ☐ Finding & handling info ☐ Communication ☐ Productive ☐ Experiential ☐ Interactive/Adaptive			
Evidence: (Data to feed into the design)			
Evaluation: (Aspects to be tested and how, e.g. developmental/technical testing.)		Output(s):	

http://www.open.ac.uk/blogs/learning-design/wp-content/uploads/2020/07/Activity-design-template.pdf

Cards





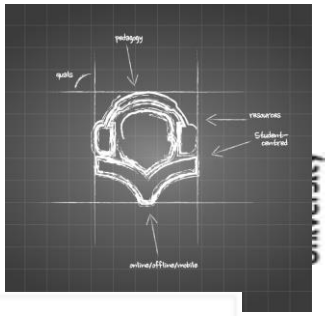
Academic skills
Digital Information Literacy
Employability

At UG Levels 1-3 & PG

Range of activities

http://www.open.ac.uk/blogs/learning-design/wp-content/uploads/2020/09/skills-cards_instructions-August-2020.pdf

Resources

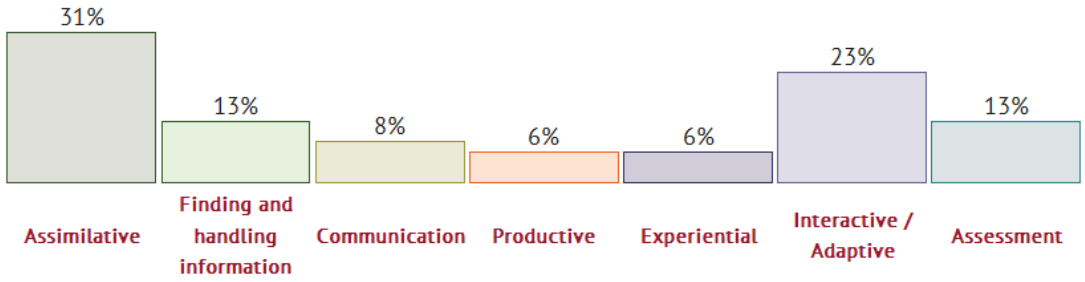


Design approaches to:

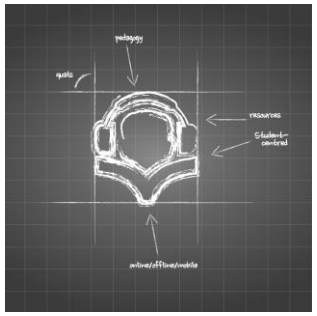
- Collaborative activities
- Employability
- Retention
- Inclusive curriculum
- Active learning

http://www.open.ac.uk/blogs/learning-design/?page_id=457

To consider/discuss

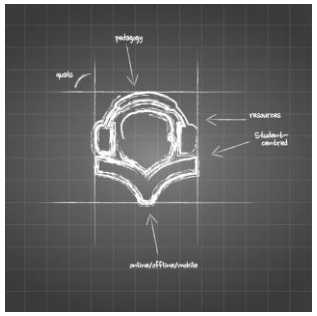


Academic concerns



- It restricts innovation
- It is just another bunch of forms
- These categories don’t suit my subject
- Telling me how to design courses…

Online pivot



- Physical architecture does a lot of work
- This needs to be designed in explicitly online
- LD is a means to achieve this
- Cost/resource issues
- Team vs individual
- Levels of LD
- Getting from here to there…