Curriculum for RLO ASPIRE training

Train the Trainer Guide

Deliverable 1.2 of the ACoRD project

1.0 Background

1.1 Theoretical and Pedagogical Underpinning of RLOs and ASPIRE

Figure 1 The ASPIRE process for developing co-designed, peer reviewed open learning objects

(A- Aim S-Storyboard P-Populate I-Implement R-Release E-Evaluate)

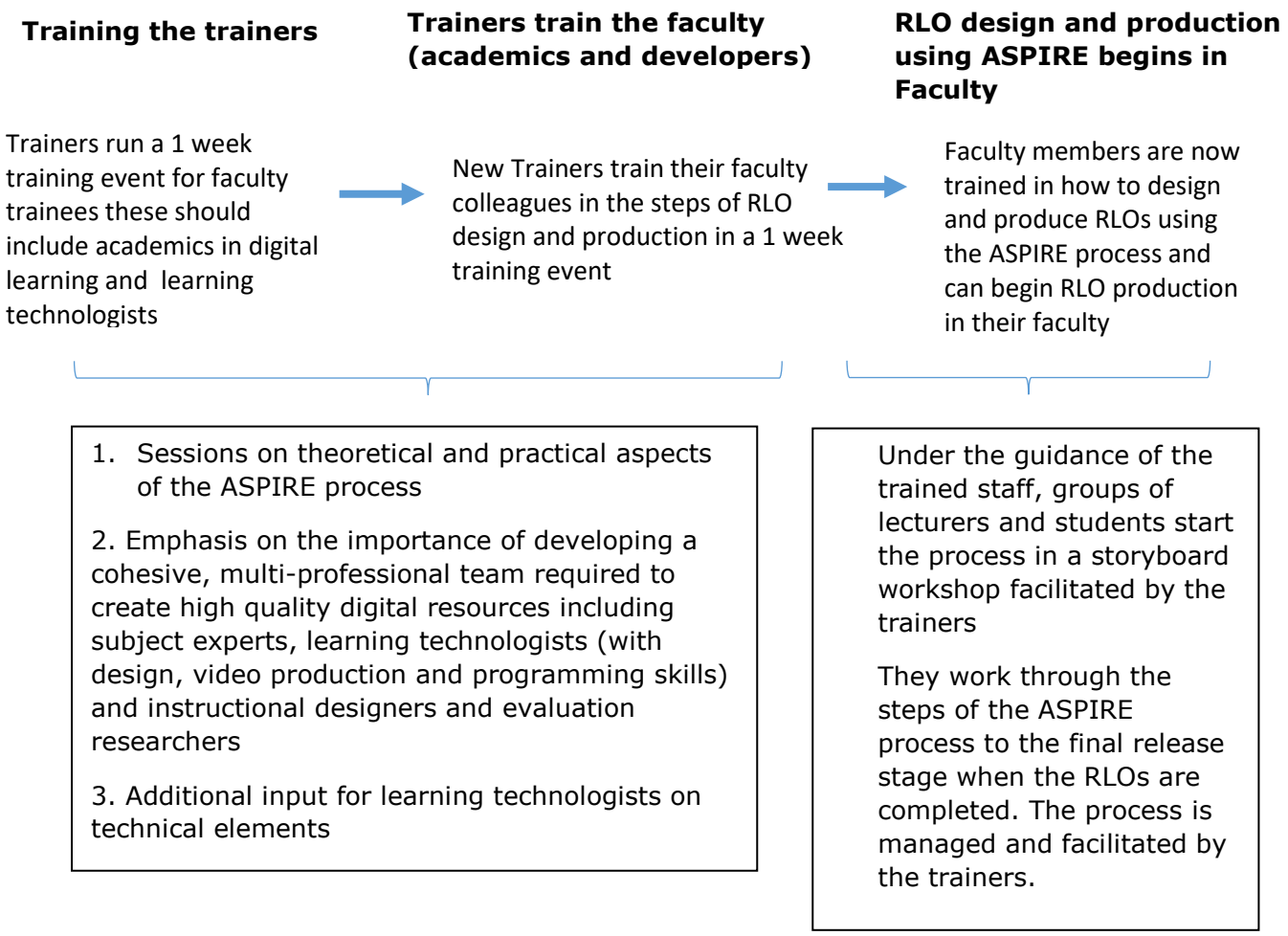
RLOs are developed using the validated and well used 'ASPIRE' approach (3) (Figure 1). The process begins with a communities of practice based workshop (4) involving key stakeholders to 'unlock' and co-create the content resulting in story boards which form the blueprint for the RLO development (Steps A and S in ASPIRE - Aim and Storyboard). This co-design process has proven to be crucial in ensuring that RLOs are aligned to user needs and effective in changing knowledge and behaviour in both student and patient populations (5,6,7). Through an iterative process including peer review to ensure high quality content, the process moves from storyboard to detailed specification, gathering of media content (audio, video, animations and textual components) and carrying out the technical implementation (Steps P and I in ASPIRE) to produce a prototype RLO to be released and evaluated (steps R and E in ASPIRE).

1.2 Training the trainers

A learning by doing approach is adopted whereby the participants learn about what is an RLO and about each step in ASPIRE by starting with the theoretical basis and moving to hands on practical exercises. Training introduces participants to all six steps in the ASPIRE process and the development tools used (storyboard templates, online collaborative specification writing tool, peer review forms, and evaluation tools).

Training should include teams of digital pedagogy academics and learning technologists who have or can develop the expertise in delivering train the trainer workshops to their colleagues on the theoretical and practical aspects of the ASPIRE process. Within these workshops there is an emphasis on the importance of developing a cohesive, multi-professional team required to create high quality digital resources including subject experts, learning technologists (with design, video production and programming skills) and instructional designers and evaluation researchers (8).

Schematic showing the Train the Trainer model for RLO/ASPIRE faculty training



1.3 Identifying areas of the curriculum to embed digital learning

When introducing e-learning into curricula it is important to establish with staff and students which areas of the curriculum would benefit from the introduction of e-learning resources. This can be established in a number of ways including reviewing student feedback from course evaluations or carrying out surveys with staff and students (9).

1.4 Curriculum structure

The curriculum for 5 days of training was based on the MOOC 'Designing e-Learning for Health' designed and run by the HELM team in 2016, 2017, 2018. Each of the 6 weeks followed the 6 steps of ASPIRE. For the ACoRD project, we created a 5 day train the trainer curriculum covering the key steps in ASPIRE and RLO production.

1.5 Teaching Goals

Day 1

To present the format and pedagogical principles underpinning the RLO format

To show the learning value of RLOs

To show the impact and effectiveness of RLOs in HE locally and globally

To outline the co-creation ASPIRE methodology for creating RLOs

To show the role of stakeholders and community in RLO design

To explain storyboarding and facilitating co-design workshops

To provide the opportunity for trainees to do storyboarding

Day 2

To provide the opportunity for trainees to share experiences of digital content creation

To share experiences of the ASPIRE process from a range of projects highlighting the potential issues that arise and tips to overcome these

To enable participants to understand how to distil content from one or more storyboards into a detailed specification (using word template, powerpoint or other platform)

To present experiences of quality review processes and tools

Day 3

To familiarise participants with the tools and discuss process of reviewing learning objects

To provide guidance and tips on using audio, video, narration and interactive elements, when to use them, things to look out for, limitations of different types of media

To share some guiding principles on e-resource technical design and development

To consider the processes involved in RLO production, IPR/copyright issues and release

Day 4

To explain the importance of educational theory and pedagogical design frameworks in digital learning design

To show some of the theories and frameworks used in RLO design and the ASPIRE process

To provide opportunity for participants to critique learning theories and design models

Day 5

To present the principles and format of the reusable learning object web resource from a technical perspective.

To introduce the tools that make up the RLO development workspace

To show how to access and download the RLO template and examine the RLOs file structure, including guidance on where to find and store the assets (e.g. images, audio, video and activities).

To demonstrate how to create a basic html5 web page structure.

To demonstrate the role Bootstrap plays within the RLO template.

To demonstrate the role CSS plays within the RLO template.

To demonstrate Adobe Premiere Pro and alternative open-source Video development software.

To demonstrate the audio editor Audition and alternative open-source Audio development software.

To demonstrate Photoshop, including how to add an image to a template.

1.6 Curriculum Structure and Content

Day 1

Day Session	Time	Presentation/Activity	Video examples of sessions	Learning environment and tools
Day 1	15 minutes	Welcome, introductions, aims of the training. Context of this training event. Overview of day 1 activities		Classroom with tables allowing group work around A0 size laminate sheets and discussion
S1 1 hour	30 minute presentation followed by interactive discussion	Reusable learning objects – What are they and do they work?	Link 1, Link 2	Slide presentation Access to web to demonstrate HelmOpen repository
S2 1 hour	30 minutes presentation	Designing educational resources using a co-creation methodology (ASPIRE)	Link 1, Link 2	Slide presentation
S3 30 minutes	Group discussion: Experiences from programme countries and partners	Role of stakeholders in co-creating e-resources		Slide presentation
S4	30 minutes	Introduction to creating a RLO storyboard	Link 1	Example storyboards and blank storyboard sheets
S5	2 hours	Hands on workshop on co-creation of reusable e-resources	Link 1, Link 2, Link 3, Link 4, Link 5, Link 6, Link 7, Link 8,	Blank storyboard sheets, wipeable pens, wipes for cleaning boards, post it notes
S6	30 mins	Feedback on features and content of storyboard		Participants hold up completed storyboards in groups
Closure of day 1	10 mins	Summary of day 1 activities and lead into day2		Camera for taking pictures of storyboards

Day 2

Day Session	Time	Presentation/Activity	Video resources	Learning environment and tools
	15 mins	Welcome to day 2 Sum up of day 1; outline of day 2		Classroom with tables allowing group work around A0 size laminate sheets and discussion
Day 2 S7 1 hour	30 min presentation followed by interactive discussion	Other reusable learning object designs e.g. virtual patients – processes, tools and impact	Link 1 Link 2	Slide presentation
S8 1 hour	30 min presentation	Creating e-compendiums as Learning objects – process, tools and impact	Link 1, Link 2, Link 3	Slide presentation
S9 1 hour	30 min presentation	From Storyboard to formal Specifications - Tools, Tips and process	Link 1, Link 2	Slide presentation
S10	30 min	Demonstration of specification tools		Paper versions of specification document on each table and online demo of the specification tool
S11 2 hours	Hands on workshop	Hands on workshop on co-creation of reusable e-resources	Link 1	Groups have access to digitised specification document or to the online specification tool
S12	30 mins	Feedback from groups on distilling content from storyboard to specification		
S13	30 min presentation	Discussion of quality review of e-resources and introduction to peer review tools		Slide presentation
Closure of day 2	10 minute	Summary of day 2 activities and lead into day1		

Day 3

Day Session	Time	Presentation/Activity	Video resources	References
	15 minutes	Welcome to day 3 Sum up of day 2; outline of day 3		Classroom with tables allowing group work around A0 size laminate sheets and discussion
Day 3 S14 1 hour		Group activity: Using peer review (specification) and peer review (media) tools	Link 1	Each group has examples of peer review 1 and 2 forms and access to digitised forms to complete
S15 1 hour		Feedback from group on review processes	Link 1, Link 2	
S16 1 hour		Using and Creating Assets for RLOs (Images, video, narration, interactive elements)	Link 1 Link 2, Link 3	Slide presentation
S17		Show and tell session from a range of projects with group discussion on benefits and pitfalls of using various media		
S18 2 hours		RLO production (implementation and release)	Link 1, Link 2, Link 3	Slide presentation
S19		RLO production (implementation and release)		Slide presentation
S20		processes involved in RLO production, IPR/copyright issues and release		Slide presentation
Closure of day 3	10 minute	Summary of day 3 activities		

Day 4

Day Session	Time	Presentation	References
	15 minutes	Welcome to day 4 Sum up of day 3; outline of day4	Classroom with tables allowing group work and discussion
S21 1.5 hour	1 hour	Presentation on learning theories, pedagogical and development frameworks in the design and development of learning objects and e-resources	Slide presentation
S22	30 minutes	Interactive Discussion	
S23	3 hours	Critical reading activity Groups read various theories and articles on digital design.	
S24	1 hour	Discussion and debate of learning theories and digital design	
Closure of day 4	10 minute	Summary of day 4 activities	

Day 5 Technical development

Participants are expected before the workshop to:

Download the following software as trial versions and install it the day before in order not to expire:
Adobe
Dreamweaver: https://creative.adobe.com/products/download/dreamweaver?promoid=KMCYG
Adobe Photoshop:
Adobe
Premiere Pro: https://creativecloud.adobe.com/apps/download/dreamweaver?promoid=KSPDB

Day Session	Time	Presentation	Learning environment and tools
	15 minutes	Welcome to day 5 Sum up of day 4; outline of day 5	Computer room or connections for personal laptops
S25	30 mins	What is a Reusable learning object (RLO)? Discussion	Slide presentation
	30 mins	The setting up of the development workplace Introduction to Adobe Dreamweaver	Slide presentation
S26	20 mins	HTML5: A basic overview	Slide presentation and demo
	20 mins	Introducing Bootstrap	Slide presentation and demo
	20 mins	Introducing Cascading style sheets (CSS)	Slide presentation and demo
S27	1 hour	Editing Video in Adobe Premiere Pro, the top tips	Slide presentation and demo
S28	1 hour	Editing audio in Adobe Audition, the top tips	Slide presentation and demo
S29	20 mins	Editing images in Photoshop, the top tips	Slide presentation and demo
	20 mins	Showcasing different RLO activities	Slide presentation and demo
	20 mins	Replicating an existing activity	Slide presentation and demo
	20 mins	Modifying an existing activity	Slide presentation and demo
S30	30 mins	Putting it all together – looking towards developing your first RLO	Slide presentation and demo
Closure of day 5	10 minute	Summary of day 5 activities	

References and Resources

Day 1

Wharrad, Heather and Windle, Richard (2010) Case studies of creating reusable inter professional E-learning objects. In: Interprofessional E-learning and collaborative work: practices and technologies. IGI Global, Hershey, pp. 260-274. ISBN 9781615208890

Windle, Richard and Wharrad, Heather (2010) Reusable learning objects in healthcare education. In: Interprofessional E-learning and collaborative work: practices and technologies. IGI Global, Hershey, pp. 244-259. ISBN 9781615208890.

Research Exchange Online -University of Nottingham (2014) C2Hear: new how-to-multimedia videos to increase hearing aid use [online] available at: http://exchange.nottingham.ac.uk/research/c2hear-new-how-to-multimedia-videos-to-increase-hearing-aid-use/ [accessed: 6th February 2016].

C2Hear Online's YouTube Channel as reference in the presentation

M Ferguson, P Leighton, M Brandreth, H Wharrad Development of a multimedia educational programme for first-time hearing aid users: A participatory design International Journal of Audiology 57 (8), 600-609

Example storyboards. Click on the text to see some of the storyboards we have used over the years.

Wharrad H., Windle R. & Taylor M. Designing digital education and training for health Ch 3 in Digital innovations in healthcare education and training eds Konstantinidis S et al. Publ. Academic Press

Day 2

B Oftedal, E Navarro-Illana, H Wharrad, V Hvidsten, A Lokken, R Windle et al What can be learned about the translation and adaptation process from Norwegian interactive e-learning materials in nursing education implementation into Spanish and English Language INTED2018 Proceedings, 4770-4771

M Narayanasamy, E Navarro-Illana, K Whittingham, A Løkken, et al Evaluating effectiveness of e-resources re-purposed for European nursing curricula INTED2018 Proceedings, 8762-8767

Day 3

Benyon, D., Turner, P., and Turner, S. (2005). Designing interactive systems: People, activities, contexts, technologies. Pearson Education.

Jisc (2014) Quality considerations [online]. Available at: https://www.jisc.ac.uk/guides/open-educational-resources/quality-considerations [Accessed 15 January 2016].

Windle, R. & Wharrad, HJ. (2010). Reusable Learning Objects in Health Care Education. In: Bromage, A., Clouder, L., & Gordon, F., Thistlethwaite, J., eds., Interprofessional E-Learning and Collaborative Work: Practices and Technologies. IGI-Global.

Day 4

Windle, R. & Wharrad, HJ. (2010). Reusable Learning Objects in Health Care Education. In: Bromage, A., Clouder, L., & Gordon, F., Thistlethwaite, J., eds., Interprofessional E-Learning and Collaborative Work: Practices and Technologies. IGI-Global.

Wharrad H., Windle R. & Taylor M. Designing digital education and training for health Ch 3 in Digital innovations in healthcare education and training eds Konstantinidis S et al. Publ. Academic Press

Wharrad, Heather and Windle, Richard (2010) Case studies of creating reusable inter professional E-learning objects. In: Interprofessional E-learning and collaborative work: practices and technologies. IGI Global, Hershey, pp. 260-274. ISBN 9781615208890

H Wharrad, S Sarre, J Schneider, J Maben, C Aldus, E Argyle, A Arthur In-PREP: a new learning design framework and methodology applied to a relational care training intervention for healthcare assistants BMC Health Services Research 20 (1), 1-9

Day 5

Development Tools

Freely available online resources:
HTML5: https://www.w3schools.com/html/html5_intro.asp
Bootstrap: https://getbootstrap.com/docs/3.4/
JavaScript: https://www.w3schools.com/js/
jQuery: https://jquery.com/
RLO Template: https://github.com/aaron-fecowycz/RLO-Master-Template
Adobe Photoshop: https://www.adobe.com
Adobe Premiere: https://www.adobe.com
Adobe Dreamweaver: https://www.adobe.com
Adobe Audition: https://www.adobe.com
XAMPP: https://www.apachefriends.org/index.html
Audacity: https://www.audacityteam.org/
Handbrake: https://handbrake.fr/

Tutorial sites:
https://www.w3schools.com/

Browsers:
Internet Explorer - https://support.microsoft.com/en-my/help/17621/internet-explorer-downloads
Microsoft Edge - https://www.microsoft.com/en-my/windows/microsoft-edge
Chrome - https://www.google.com/chrome/
Firefox - https://www.mozilla.org/en-US/firefox/new/