

Developing reflective science trainees: An asynchronous ICT solution

Kate Mawson, CPE University of Warwick. Email: K.Mawson@warwick.ac.uk Tel: 02476522313

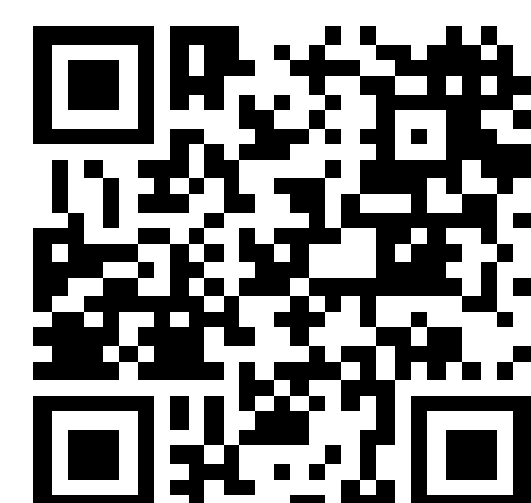
RATIONALE

Does using an online scaffold, harnessing technology to enhance learning, provide the support trainees require to write high quality reflective statements ?

- Mentors described mostly descriptive levels of reflection. RP1, the first reflective task trainees complete, had a 40% pass rate.
- Lack of tutor face to face time, due to large workloads.
- It is not sufficient simply to have an experience in order to learn. Without reflecting upon this experience it may quickly be forgotten, or its learning potential lost (Gibbs, 1998)
- Where it is appropriate for scaffolding to assist in the process, the scaffolding design will be an important factor in determining the outcome." (Mason, 2012 p. 186)

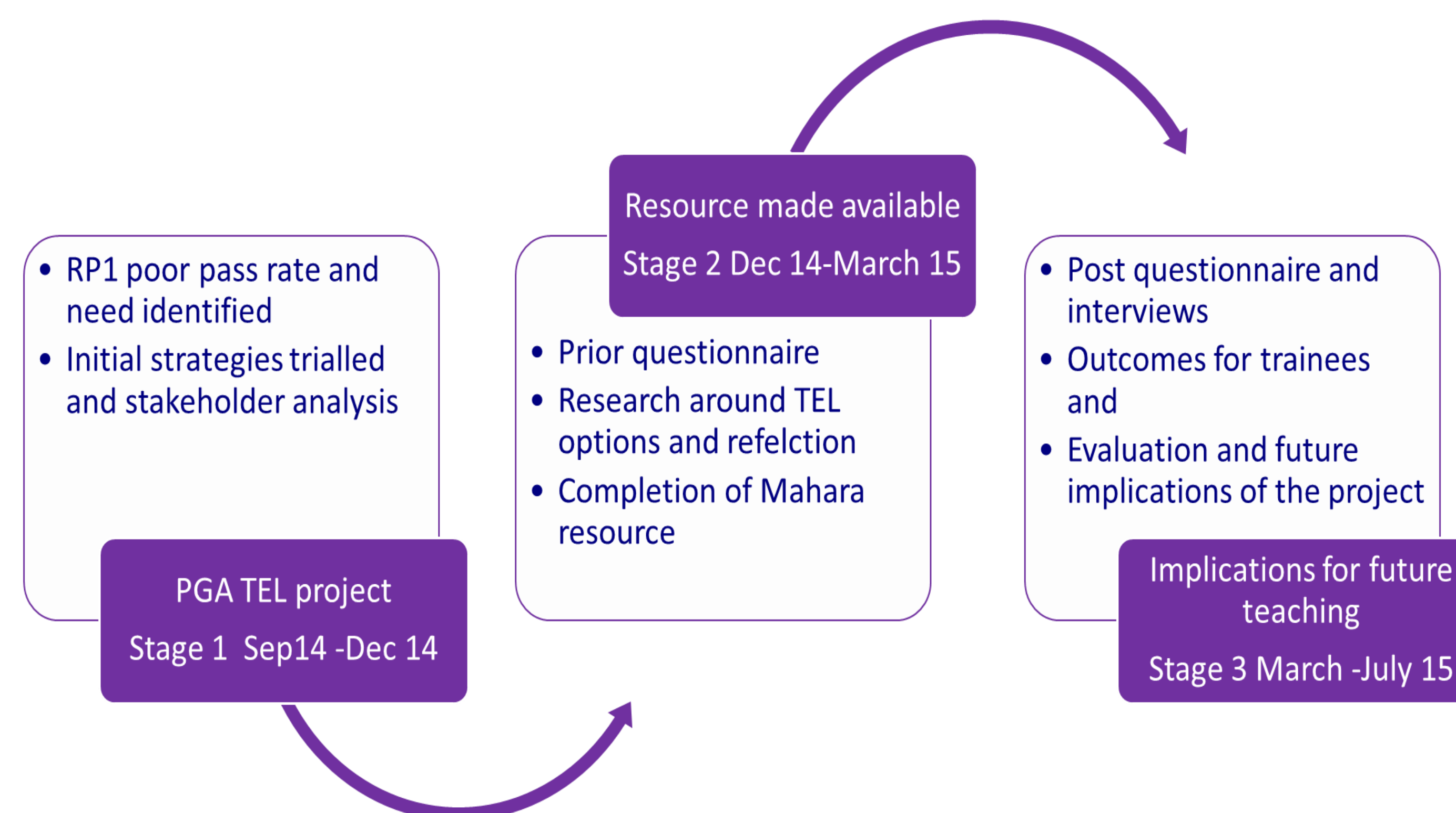
RESOURCE

- An original reflection scaffold was devised from a combination of the six stages of reflection (Dewey, 1933) and the six hats model (de Bono, 1985) The development of this is outlined in a Pecha Kucha presentation available on the resource.
- From the analysis of Hrastinski (2008) and Obasa et al (2013), and the requirement of the project to deliver learning for trainees, the best technical approaches were identified as asynchronous use of audio, video and slideshows.
- In order to effectively use technology, teachers need visions of the technologies' potential, opportunities to apply them, training and time to experiment (McKinney, 1998) therefore Mahara, an e-portfolio tool that was used for trainees PDP assessment, was used as the platform for the resource to provide this vision.



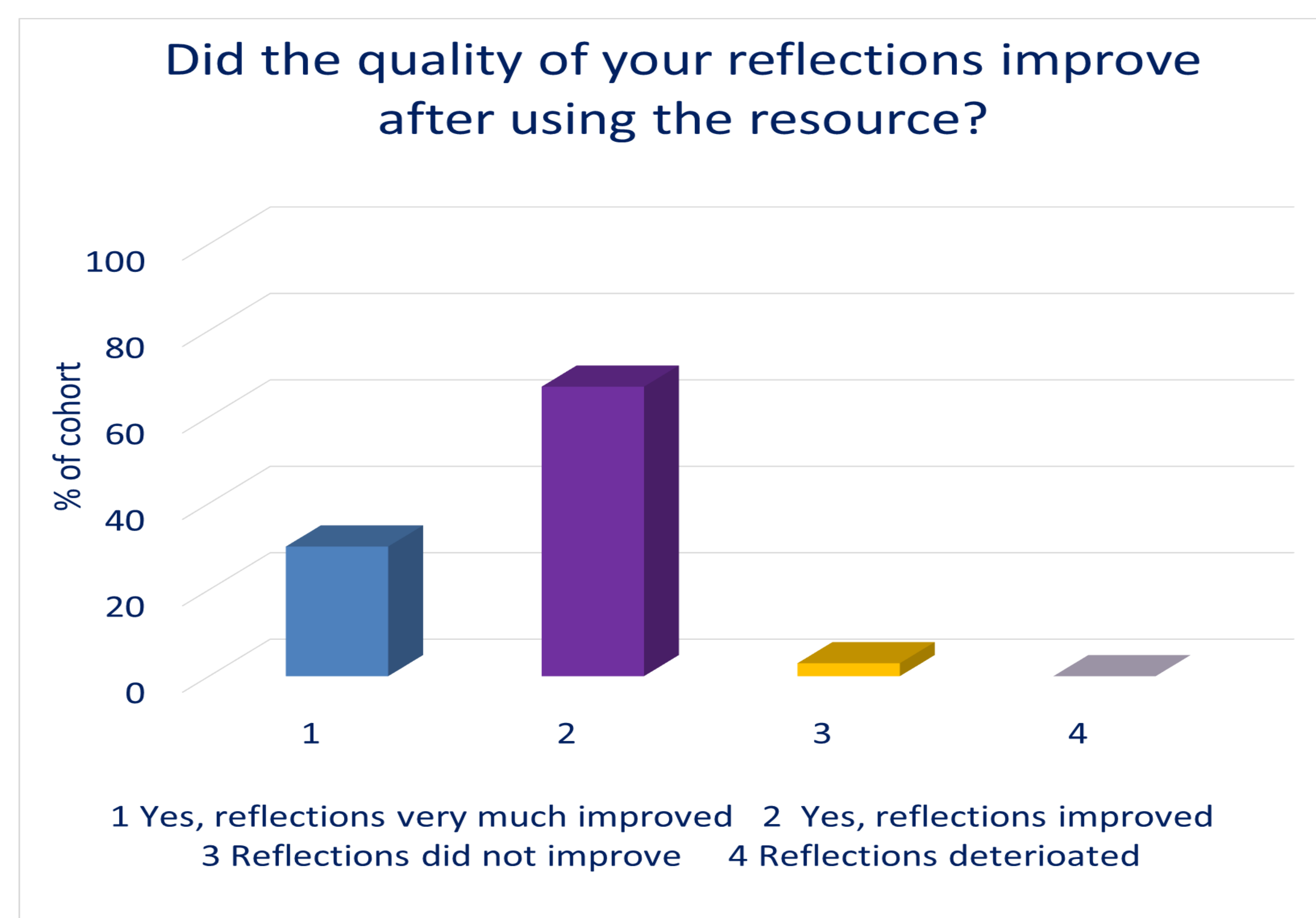
A reduced version of the resource, is available at:
<http://warwick.ac.uk/katemawson-pdp>

PROJECT STAGES



RESULTS

- **40% pass rate RP1** → **100% pass rate PDP**
- Accessed **2253** times by trainees
- Post resource questionnaire response:

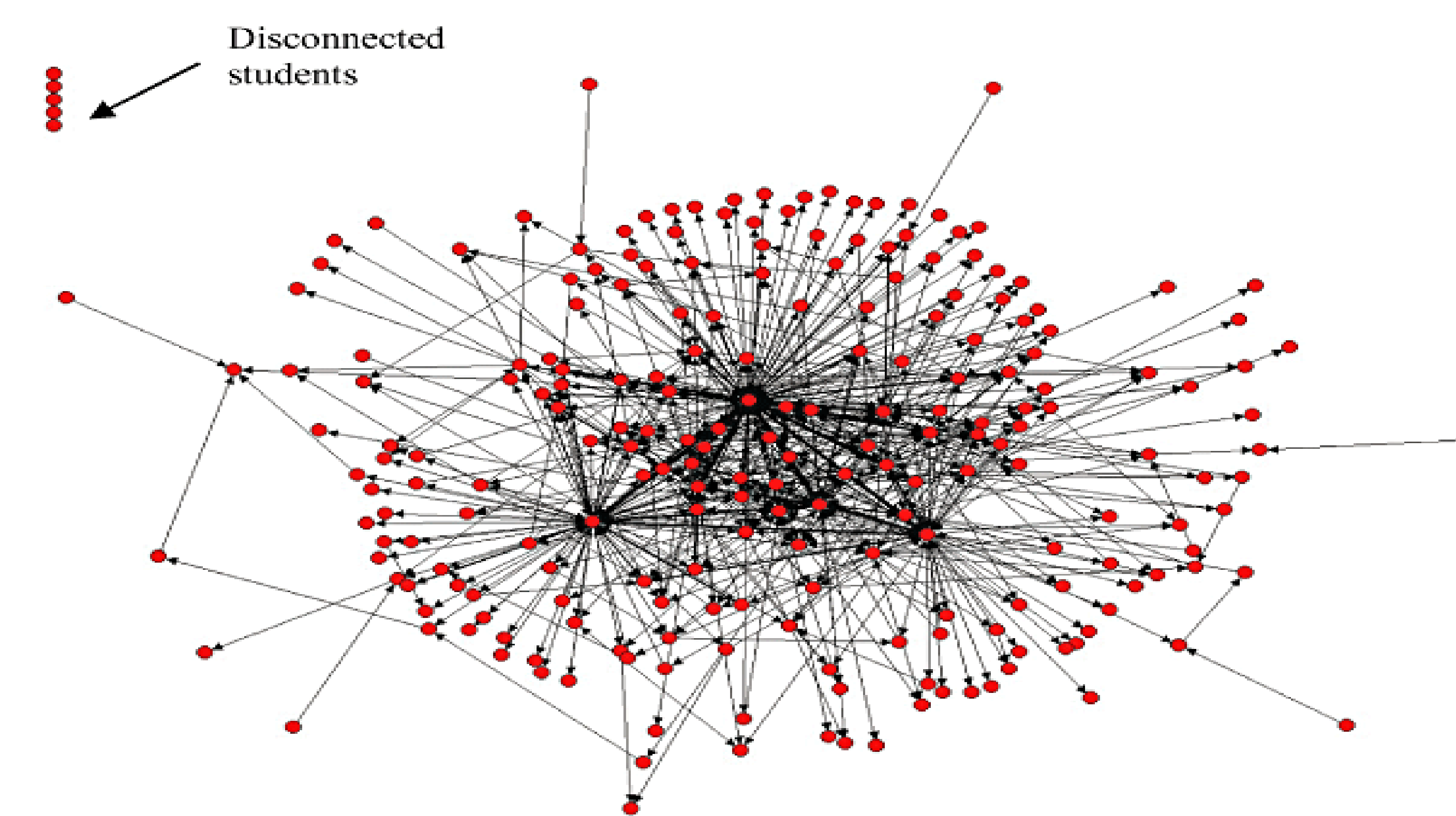


100% Outstanding or Good trainees at final exam board.

CONCLUSIONS

- "It helped me to visualise what my reflections should look like"
- "The variety of materials on the resource made it really easy to understand how to reflect more critically"
- The resource fulfils the criteria set out by Ryan and Ryan (2012) needed to support reflection in higher education.
 - It also provides technology based assistance "In some cases, tailored, technology-based assistance, such as inquiry maps, hints or simulations may provide support available via neither peers nor teachers." (Kim et al, 2011 p.410)

FUTURE WORK



SNAPP Diagram (Dawson, 2009)

Currently in progress is the addition of a forum and Social Networks Adapting Pedagogical Practice (SNAPP) software that will analyse online trainee interactions. The ability to view social graph structure and community evolution is crucial to successful facilitations and serves as an early indicator of the success of a learning activity design as well as information about student participation and potential performance. (Dawson, 2009)