Format: Presentation

Title: OER research findings

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Abstract: This talk will cover the findings of the OER Research Hub relating to 11 hypotheses regarding OER impact.

Goals: To disseminate research findings and generate discussion regarding focus of future research in the OER community

Content: The Open Educational Resources Research Hub (OERRH), based at The Open University (UK), is a project funded by the William and Flora Hewlett Foundation to research the impact of OER on learning and teaching practices whilst identifying the particular influence of openness. The project has operated an open collaboration model and worked with a range of initiatives and organisations across four education sectors (K12, college, higher education and informal) to test eleven hypotheses about open education:

- Performance: Use of OER leads to improvement in student performance and satisfaction;
- Openness: The open aspect of OER creates different usage and adoption patterns than other online resources;
- Access: Open education models lead to more equitable access to education, serving a broader base of learners than traditional education;
- Retention: Use of OER is an effective method for improving retention for at-risk students;
- Reflection: Use of OER leads to critical reflection by educators, with evidence of improvement in their practice;
- Finance: OER adoption at an institutional level leads to financial benefits for students and/or institutions;
- Indicators: Informal learners use a variety of indicators when selecting OER;
- Support: Informal learners adopt a variety of techniques to compensate for the lack of formal support, which can be supported in open courses;
- Transition: Open education acts as a bridge to formal education, and is complementary, not competitive, with it;
- Policy: Participation in OER pilots and programs leads to policy change at institutional level;
Assessment: Informal means of assessment are motivators to learning with OER.

The OERRH originates from the need for reliable empirical research on OER impact and the acute need for such research to aid the next phase of OER implementation. With over a decade’s investment in OER there is little reliable evidence on what works and what doesn’t, and why. Many published studies are reports of implementation projects, and state downloads or units released as evidence. Much of the literature is driven by belief or advocacy, and states the intended benefits of OERs without an adequate evidence case. Lately we have seen an increase in interest in rigorous empirical research, particularly focused on the use of open textbooks. The initial message of free, adaptable resources was successful in creating a global OER community who are now ready for more nuanced findings that demonstrate the different types of benefits for different audiences. The intention of the project is to provide an evidence base that will help inform the next phase of OER implementation.

The project has followed a mixed methodology approach that combines survey data, interviews and focus groups to gather data about the use of OER by educators, formal learners and informal learners across the globe. The emergent picture of OER impact is encouraging but also mixed. The two main hypotheses under investigation, namely that (a) OER improve student performance and (b) that openly licensed material is used differently to other online material, help support this view. While the implementation of OER can improve student performance, it is often indirectly through increased confidence, satisfaction and enthusiasm for the subject. With the hypothesis on openness, we find evidence that adapting resources is important to all types of users. David Wiley (2009) has talked of ‘dark reuse’ in that reuse is rarely found; we observed that reuse does occur on a wide scale, but it should be viewed as a continuum of adaptation, from finding inspiration to fully reversioning content. Openness is a key factor in facilitating this.

Other interesting findings to date include:

Access – Data indicate that learners are using OERs in a number of ways that can be interpreted as leading to greater access to education. Some are using them to replace formal study at low cost, whereas for others they are a support mechanism to formal study. Students in higher education are using OER to trial a subject before committing to formal study, and then to supplement their study both in terms of their primary subject and additional topics. Increasing costs in higher education will make this supporting function of OER of greater significance, and it is one currently under-reported in OER literature.

Retention – It can be established that the zero cost aspect of OER may have some effect on retention, but it was generally considered that at risk students have issues that OER alone cannot address. The use of OER to supplement formal study may have an effect on retention.
Reflection - there is strong evidence that OER use and exposure leads to reflection on practice by educators. It causes them to incorporate a wider range of content, to consider different teaching approaches and to reflect upon their role as educator. This is arguably the most significant impact of OER and one that is not widely promoted.

Finance - there is confirmation for savings with Open Textbooks that are used to replace compulsory set texts. The evidence for cost savings of other forms of OER is less clear. Often it is difficult for educators to know whether their institution saves money, and what happens to any such savings. The obvious cost benefits of free resources are a clear and easy benefit to articulate, but greater accountability is required to make these evident to all stakeholders.

Indicators - Informal learners do use a variety of indicators when selecting OERs, the most significant being relevance, a good description of learning outcomes and ease of download. There is general agreement between all groups of users on the significance of factors in selecting OERs, although for educators the presence of an open licence is more significant.

Support - It is noted that informal learners use techniques such as study notes, participating in online discussion forums and writing blogs to support their own learning. There seems to be little evidence that informal learners are compensating for lack of formal support with other mechanisms (such as social media), but rather that they view support as less significant.

Transition - We find that users indicate that they are less likely to take formal study than to carry on using OER. However, there is still a significant proportion who indicate that they would consider formal study. This means that using OER production as a recruitment tool can be a sustainable option for education institutions.

Policy - It is clear that while there are numerous top-down initiatives to drive OER adoption (especially with regards to open textbooks), examples of bottom-up policy adoption are rarer. There are some examples, particularly amongst community colleges where participation in OER projects has led to the formal adoption of an OER policy, however OER practice is often not formalised into a policy.

The OER Research Hub has found good evidence across each of the 11 hypotheses set out at the project inception. These findings will form the basis of the presentation. There are varying amounts of evidence against each of the hypotheses and varying degrees of support, but what is most significant is the overall weight of evidence. Our research represents one of the most complete pictures of the impact of OER in its current state.

Audience: Our findings are likely to be of interest to a wide range of OER stakeholders. Audience members will be encouraged to share their reactions to the data and reflect on how it compares with their own experiences. OER Research Hub
research instruments are available on an open license (CC-BY) so they can be reused and repurposed, and we encourage others to share results back to the overall data set to leverage the power of openness.