This article reflects the activity conducted by Katrine Sundsbø within the framework of the Open Science International Staff Week celebrated at Universidad Carlos III de Madrid - November 6-8, 2019.

Open Access Escape Room: the key to OA engagement?

Open access (OA) has had, and will continue to have, a significant effect on the scholarly publishing landscape in academia, yet many academic staff publish OA in order to comply with policies, rather than engaging with the value of open scholarship and in debates that ultimately affect them. Training sessions and workshops are often arranged to increase knowledge and awareness in the academic community, but engagement is often low. On the other hand, some academic staff, who already do engage, will happily attend sessions and workshops to increase their knowledge even further. The struggle to increase OA engagement overall could be due to the training not being appealing enough, and academics not being aware of benefits until after they have attended workshops. At the University of Essex, we took a bold, brave and curious approach to increasing engagement during Open Access Week 2018, and created an OA-themed escape room. This resulted in great engagement from students, academic staff and professional services staff, some of whom reported that they never knew how relevant OA was for them. The Open Access Escape Room was a success, and provided a positive environment for conversations around OA.

Keywords

Open access; escape room; game; engagement; scholarly communications

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Background and idea

Open access (OA) has been a hot topic in academia for the last decade and more, not least because subscription costs keep increasing. The research community and funders have also been calling for more transparency, accessibility and openness in research. In the UK the Finch report in 2012,[1] the REF OA requirements for 2021[2] and now the international Plan S[3] are all initiatives to help accelerate the uptake of OA – but are all academic staff aware of why OA has become such a huge imperative or are they just engaging in order to comply with the rules? From my own experience, some academic staff members are really engaged and know a lot about OA and the impact it has on the academic community. On the other hand, some do not even know that green OA is an option, and pay out of their own research funds for gold OA in order to comply with policy.

Though these are only observations, several studies suggest that library and research support staff might take for granted that researchers fully understand OA and the ways to make their output open and freely available. A study by Rowley et al. from 2017[4] looked into researchers' attitude towards OA, and found that about half of the researchers were unsure about their intention to publish OA in the future – a finding that was consistent across all subject areas. It was suggested that this uncertainty might be because researchers were confused about OA, and suspicious about what the implications of making something freely available are. Another study from 2014 found that about a third of PhD students were not familiar with OA and that many were still confused about the concept and concerned about the credibility of OA journals.[5]

'are [academic staff] just engaging in order to comply with the rules?'

Perhaps it is simply the communication between library and research support staff and academic staff that needs to be improved so that the open research conversations continue with and within the academic community. However, it can be tricky to start a conversation with academic staff about OA, when many might not see the benefits of coming to OA

events until after they have attended. In several cases this means that workshops, forums or discussion groups on OA are not well attended, or attended by a few who are already engaging and want to engage even more with the open research community.

Further, though researchers are complying with OA policies, they do not necessarily know how much OA and the ever-changing publishing landscape affects them, perhaps other than reducing the perception of their freedom to publish where they want, which is one of the current responses to Plan S from the academic community.[6] On the other hand, a reluctance to embrace Plan S in its current form is possibly due to the focus on reputation and journal impact factors in academia, especially for early career researchers (ECRs). A study from 2017 found that ECRs do not prioritize OA in their publishing strategies despite often getting a 'first author' status where they have influence over the choice of where to publish.[7] Instead, the focus is on actions that will build reputation and increase the likelihood of gaining promotion. Moreover, the study found that awareness of 'open science' initiatives is low, and though ECRs would archive their work in repositories when obligatory, it was done without enthusiasm and interest. It can almost seem as if the positives of OA are drowned in the focus on practices geared towards reward in academia. How does one create a positive environment where the personal rewards and global benefits of OA become motivation enough for academics to take action? One way is to educate academic staff in the benefits of open research, but to do so they need to be willing to learn.

> 'a reluctance to embrace Plan S in its current form'

Many interactive and fun initiatives to encourage academic staff to engage with several important aspects of research and scholarly communications have been successful in the past, including the Publishing Trap,[8] the Game of Open Access[9] and Copyright the Card Game.[10] There have also been other creative ways of encouraging engagement in the academic community and beyond, for example the Research Café at Liverpool John Moores University.[11] As the University of Essex is the home to the 'curious, brave and bold'[12] it was appropriate for us to do something bold for the 2018 Open Access Week. The aim was to create a fun way to learn about OA as well as providing a positive environment where conversations could happen.

> 'the positives of OA are drowned in the focus on practices geared towards reward in academia'

As indicated above, one of the main problems of trying to get researchers to engage with OA is that they might not see the point of going in the first place; it is simply not appealing enough. A study by Lucardie from 2014[13] found that fun and enjoyment can help adults absorb learning and can motivate them to attend classes or training, and so creating a training session that would seem fun even before anyone attended was important in order to get academic staff, professional staff and students to engage.

This is how the idea of creating an OA-themed escape room was born. Escape rooms, like OA, have been of broadening interest for the last decade, so it is something most people have heard about and might be curious to try. Escape rooms are interactive adventure games where a team of players are locked in a room and have to solve a set of puzzles to 'escape' the room. These games are themed, usually have a story, can be adapted to almost any scenario, and have in recent years often been used in educational settings, for example a physics escape room for high-school students.[14] A survey from 2015 analysed 175 escape room facilities from around the world and found a wide range of themes, concepts, narratives and puzzles.[15] In other words, there were many versions to gain inspiration from. There is also a workbook available on how to make escape rooms for educational purposes.[16] Even with all these resources available, creating an OA-themed escape room proved to be a bit more time-consuming and not as straight forward as it might seem.

Creating an OA-themed escape room

Our escape room was created for people with no knowledge or understanding of OA. However, having more knowledge should not mean that players would have an advantage nor should it make the escape room obsolete as it would also create a safe place to discuss all aspects of OA.

Designing an OA escape room in a library space resulted in some restrictions. First of all, the space that was available could sadly not become a permanent escape room, so the game had to be quick and easy to set up and take down. Second, it needed to be affordable to create and easy to replicate, so props and puzzles were mainly made by reusing old books and items and using things from a stationery cupboard – things that others could easily obtain. Third, it had to be OA themed and include some of the basics of OA without being too confusing. Players needed to be taken on a journey where they would learn one step at a time, and the fact that they would learn about OA during a game was intended to help them remember in the future.[17] Fourth and last, it had to be fun, challenging and work well as a conversation starter.

The details of the layout of our final Open Access Escape Room,[18] the instructions,[19] script,[20] timer and hints (PowerPoint presentation)[21] and downloadable items and props[22] can be found online. To avoid spoilers, in case you want to take part in the game as a player, the specifics of each of the puzzles will not be revealed in this article, but be aware that they are all explained in the Open Access Escape Room project on figshare.[23]

> 'Players needed to be taken on a journey where they would learn one step at a time'

The Open Access Escape Room comes to life

The final design of our Escape Room has three main OA parts and seven puzzles. The game is set in the future and in this virtual future all research is published with no cost to the reader or author. The game was designed this way in order to introduce diamond OA to players without bombarding them with information about all the various routes to OA at once. It is also a way to create more discussion around the current publishing landscape after players finish the game.
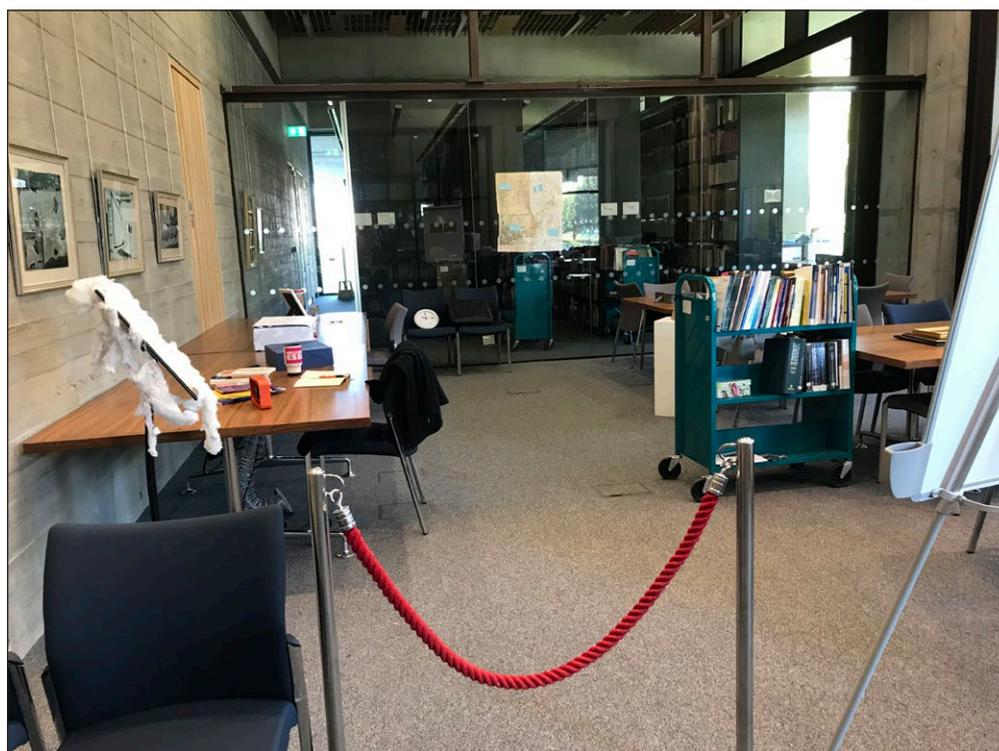
Open Access Escape Room Layout, University of Essex, October 2018

Before starting the game, players meet a villain who has locked away all the research at the University of Essex. The research was locked down because the villain was angry about not making any money from publishing any more (as everything was published through the diamond OA route). After a short, scripted rant, the villain walks away to lock down all the research in the world. The goal of the escape room is to stop the villain and make all research open again. The first puzzle starts with giving players a choice between green and gold, and is designed to teach players about one of these routes to OA. The one they do not choose will be explained in the conversation after the game. In the second puzzle, players learn about the benefits of OA. Then in the next four puzzles, players unlock four things that can be open: data, conference papers, books and articles. In the final puzzle, players complete the last task in order to defeat the villain and restore diamond OA.

> 'The goal of the escape room is to stop the villain and make all research open again'

Our Escape Room was not a 'break-out' one, as most escape rooms traditionally are. Instead, players win the game and defeat the villain when they complete the last task in the last item they unlock. This causes the villain to be very upset as the master plan is ruined, and the villain can no longer make money from locking down research outputs, leading nicely to a conversation about OA when the game finishes.

Testing

Once the Open Access Escape Room was created, it had to be tested to make sure there was no misleading information or ways players could easily cheat. The Escape Room was tested four times before the launch, with librarians, academic staff and two groups of undergraduate (UG) students. Adjustments were made after each test round. The first testing with librarians revealed that some of the puzzles were simply too easy, and some 'noise' was added to make some puzzles more difficult. During the second testing, the academic staff group 'solved' the whole Escape Room in four minutes as they broke open the last box in the game instead of following the puzzles. This led to some changes to the props to minimize the possibilities to go rogue, and additional information was added to the script for the beginning of the game urging players to not try to open things unless they were using the padlock. In the third testing round, this time with UG students, one of the boxes broke and had to be repaired. In the final testing, also with UG students, everything seemed to run smoothly, and the Escape Room was completed in about 50 minutes. The Open Access Escape Room was ready for its launch.

Launch in Open Access Week 2018

The Open Access Escape Room was advertised two weeks before Open Access Week 21–27 October 2018, and bookings were open for all staff and students on our Colchester campus. Nine sessions were advertised, where people could sign up as a team, or individually. Many of the slots were taken quickly and several of the sessions had waiting lists. Unfortunately, there were several last-minute cancellations and a few no shows, so in the end only five sessions were run. There was a good mix of players; some were students, some were professional service staff, and some were academic staff. Most of the teams that arrived knew each other before, but one group with only two players did not know each other at all.

Though many players said they did not pick up on all the OA references during the game, as they were so focused on winning, the conversation after they had finished became the key to OA engagement. This conversation provided an opportunity to explain OA in more detail, by using things players had just interacted with as reference points.

A team from the UK Data Archive after they completed the Open Access Escape Room, University of Essex, October 2018

Players were really positive after having just defeated the villain of the Escape Room so they were open to talking about OA, and it was easy to get a conversation going. Every conversation was different, but had the same basic elements in them: the routes to OA, the benefits of OA and what can be made open. There was also discussion around why some research is not freely available, the current landscape of scholarly communication and possible changes in the future, mostly linked to Plan S.

'they were open to talking about OA, and it was easy to get a conversation going'

Feedback

The feedback from both students and staff was extremely positive. Some said they never knew how relevant OA was to them, and everyone who took part talked about how much fun they had playing the game. Several of those who came to play asked many questions after the game and some even wanted more information and/or a summary of the conversation to be sent to their e-mail. Many also had suggestions on how the Escape Room could be used for team building in departments, student groups or leadership programmes.

'Some said they never knew how relevant OA was to them'

What next?

After the Open Access Escape Room was launched and the full project shared online,[24] the feedback from the global scholarly communications community has been very positive. The University of Kent ran a slightly modified version of the Open Access Escape Room on the 18 December 2018, where they built upon the original work to create an advanced version of the Escape Room, including licences and altmetrics. In addition, many other institutions have indicated interest in running the game.

The original Open Access Escape Room also ran again at the University of Essex during the Newcomers (Network for Early Career Essex Researchers) Research Week from 7–11 January 2019.[25] The sessions were for ECRs, and with individual booking only. Feedback was highly positive, and players had a lot of questions which resulted in great conversations and engagement after the game had finished. Interestingly, players also picked up on a lot

of the OA references during the game, which is promising considering previous studies have indicated that OA knowledge and engagement is low for ECRs.[26]

Given the success of the game, there are plans to create more versions of the seven puzzles in order to improve the game. By creating separate versions of each of the puzzles, the Escape Room can be adapted to the existing knowledge of the players, and one can pick and choose puzzles to set up a bespoke game. These modifications could include copyright issues, journal impact factors/rankings, metrics and more details of the green and gold routes. The specifics of each proposed puzzle version are yet to be designed. There are also plans to create a travel-friendly workshop version of the Open Access Escape Room, to be designed in collaboration with colleagues from the University of Kent.

> 'There are … plans to create a travel-friendly workshop version of the Open Access Escape Room'

In summary, the Open Access Escape Room was, and continues to be, a huge success and has resulted in many positive interactions between academics, ECRs and research support staff. Given the increasing focus on reward and policy in academia, it was timely to set up something light-hearted to increase engagement with such a relevant and important topic in scholarly communications. The positive feedback and reception from both players and the wider community has been beyond all expectations, and it is clear that many do want to engage with OA, but existing commitments and workload mean that there is not always the time or opportunity to do so. In conclusion, this initiative has not only become a successful educational resource, but also provides the opportunity of escape from the demands in academia by providing a positive environment for conversations about the benefits of OA and the sharing of any concerns one might have.

> 'positive feedback … has been beyond all expectations, and it is clear that many do want to engage with OA'

Abbreviations and Acronyms
A list of the abbreviations and acronyms used in this and other *Insight*s articles can be accessed here – click on the URL below and then select the 'full list of industry A&As' link: **http://www.uksg.org/publications#aa**

Competing interests
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