Open knowledge across boundaries— a case-study on controversies

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Abstract

Complex and controversial issues in society benefit from a social process of learning. Social learning is argued beyond utilize pluralism and diversity also to challenge mental models and require new learning approaches. The use of open educational resources is a new learning approach for collaboration both within and across disciplinary and organizational boundaries.

Focus group discussions are used in this study to analyse how the creation and use of an open educational resource about slaughter of farm animals (with creative commons license) can be used as a boundary object. Participants were representatives from the food industry, academia and non-governmental organisations. The discussions between involved stakeholders are video recorded, transcribed in their fully length and analysed.

The study indicates that academia has high responsibility for the creation of open educational resources in times where learners have difficulties to differentiate between reliable and inaccurate, biased or unsubstantiated information. Discussions in the public domain about provocative topics are often typified by inaccurate and uncorrected opinions in need of moderation. Advantages of open educational practices such as empowerment of citizens and information symmetry and robustness of science are also discussed. Disadvantages such as difficulties in handling polarised discussions on controversial issues, cultural differences, scarcity and quality also worried the participants. Furthermore, productive discussions around sensitive food topics may lead to greater collaboration, connectivity, and commonality between these stakeholders.

Keywords

Inclusiveness, controversy, empowerment, focus group, ethics
Introduction

Many global and complex challenges have been identified within the food sector where facts and values are often intertwined and not always visible (Kaiser and Algers, 2016). The recent sugar scandal discloses that scientists have been biased and almost exclusively published research in favour of the sugar industry (Mandrioli et al., 2016). If science reduces its requirements for quality and credibility it can be expected to create disregard of expertise.

However, problems with accuracy when disseminating scientific results are not the only risk when access to knowledge and information is infinite. Since food concerns us all, there is a tendency that everyone has a view on the food we eat and social media has become a way for lay to spread his or her opinions.

Thus, the well-described problem with experts sitting in their ivory tower not having any contact with the needs and perceptions in society (Etzkowitz et al., 2000) is now combined with social media, which has made it possible for non-scientific and normative statement to go unchallenged (Milan, 2015). Since algorithms behind social media profile users on the basis of their behaviour and select, personalize and rank content according to user data they “provide a means to know what there is to know and how to know it” (Gillespie, 2014, p. 167). Examples of these algorithms include the use of Likes (Gerlitz and Helmond, 2013), Newsfeeds on Facebook (Bucher, 2012) and Twitter’s Trending algorithm, which automatically list the 10 most popular topics (Gillespie, 2012). Some people argue that by constantly being confirmed thanks to these algorithms ”we are replacing the tyranny of experts with the tyranny of idiots” (Keen, 2007).

Wright and Middendorf (2008) have suggested that higher education should reinvigorate a reciprocal and inclusive process with the citizens within the subject of food. A model for academy and society to inform each other about food through a reciprocal process could be open educational practices based on open educational resources (OER) as boundary objects.

In open educational approaches, students are given agency in the knowledge production. This places special demands on the OER, but also on the teacher at the individual level and on the university at the systemic level. Several articles have discussed the difficulties in introducing open learning approaches in higher education (see e.g. Downes, 2007; Wiley, 2007).

Different aspects of openness have been discussed during the last decades. Downes (2007, p. 32), states that ”while open on the one hand may mean 'without cost', it does not on the other hand, means 'without conditions’”. He argues here for the aspect of openness related to the difference between copyrighted materials and openly licensed materials. However, he also describes openness as an aspect of making knowledge openly accessible as opposed to hidden knowledge (Downes, 2007).

The OER studied was an open and creative common licenced website with information about how farm animals are slaughtered in commercial slaughterhouses and how this handling influence the welfare of the animals before they lose consciousness. The OER was created by
a group of academics after consultancy with industry. They collaboratively identified learning objectives and after that created the content in an interdisciplinary way and in collaboration with industry and non-governmental organizations.

This study takes its start at the launch of the first version of this specific OER that resulted in conflicts between industry and academia. Industry wanted to keep the information hidden behind passwords and tried to stop the openness by contacting the project leader, the vice chancellor at the university, the Swedish Board of Agriculture and the Ministry of Agriculture. After put under pressure by the industry the funder, the Swedish Board of Agriculture, suggested to disregard a signed contract and hide the information about how our farm animals are slaughtered behinds passwords. The initial conflict came to an end when the lawyer at the university wrote to the industry: “In the choice between meeting the requirements from upset stakeholders and safeguard academic integrity, a university must always choose the latter”.

This study intends to reflect on the advantages and disadvantages of the creation of an OER in a controversial food related issue.

**Methods**

The OER in focus for the study has the format of a website with a Creative Commons license, and is accessible online at [http://disa.slu.se](http://disa.slu.se). The creation of the OER started in 2015 and is still ongoing. In the creation process a great number of people were involved such as representatives from authorities, universities, student groups, NGOs, industries and religious groups.

In spring 2016 a focus group study was carried out in order to discuss and better understand the open educational practices. This article is a qualitative study based on these focus group interviews, which are structured group discussions where the process manager allows the participants to influence the content (Bryman, 2012). Two focus groups of 9 and 7 participants were meeting for two hours on January 15th and 20th year 2016. Thirteen individuals were involved in the study (8 female/5 male; 2 from authorities/2 from industry/1 from NGO and 8 from academia). The meetings were video recorded through a videoconference system where it was possible to see and hear every participant; the participants were in 4 different geographical localities during the first meeting and in three places at the second meeting.

The two video recordings, both two hours long, were transcribed in their whole length and these documents include: who speaks, what is said and in some cases how it is said. After transcription the data was anonymized. All the excerpts were organized under advantages and disadvantages, across all the respondents in order to identify consistencies and differences.
Results

Based on the thematic analysis of the discussions in the two focus groups the identified advantages and disadvantages of a collaborative OER are presented below.

Advantages

Through a collective creation process authors with diverse competencies could develop this interdisciplinary OER in which stakeholder representatives shared e.g. visual material and improved text about practical details. This resulted in richer content than would have been created with traditional methods. The involvement of many people with diverse competencies in both creation and review of the OER was a deliberate strategy to increase inclusiveness and thus control quality, as exemplified with the invitation to representatives from religious groups to scrutinize the OER. One person in the focus groups argued: “that openness indirect provide the OER a quality stamp”. It should be noted that the participants did not discuss the license as a quality measure, however one participant emphasise that “people can use it as a dictionary because it ha an open license”.

The participants in the focus groups pointed at the use of OER for information symmetry and empowerment of the users. This was argued to be particularly important when ethical values are in focus. Citizens are often included in ethical committees, because the scientists can be biased and need guidance and governance. One of the stakeholders argued along the same lines that they need to be involved in the creation of OER because: “It is imp ortant to have both citizens and scientist to inform each other what is fair and what is cruel”.

Another advantage is to reduce the risk of biased research by making the process transparent and allowing everyone to make their voice heard. One suggestion for improvement was to identify who is not heard in the discussions within the specific food issue and let this prescribe the further development of the OER. A participant stressed that “it is an uneven discussion – it is the industry’s voice that is the loudest – the NGOs have a hard time to make their voice heard”.

The creative common license implies that the OER can be used beyond formalized courses for informal learning. The discussion clarified that the main purpose is to use the OER for dissemination of basic knowledge to students and industry, but that making the OER a link between academy, the food sector and the citizens is equally important. One participant said: “…there is a gap between the industry and the consumers and this is actually a way of trying to close that gap and start to speak the same language”.

The discussions also targeted the difference between dissemination of information and learning: “Learning requires interactivity, participation and meaningful dialogue”, as argued by one of the participants. Higher education is concerned about academic and pedagogical
quality and has a high responsibility for organizing learning situations. The argumentation even focused on how new knowledge can impact on people’s behaviour: “it is good to make people more aware so that they can make informed decisions … change their minds about their eating habits…”.

Disadvantages

One participant takes examples from social media and state that discussions in open fora very rapidly become polarized and not so civilized. There is a high risk of conflicts when creating OER on contested issues. One of the participants in the discussions argued that ”It is generally fairly difficult to achieve consensus with such an emotional topic…and often that is what hampers a constructive discussion”. The more sensitive the subject becomes, moderation is needed and one of the participants was worried and said, ”we don’t want to turn this OER into a media flashing thing”.

However, the participants agreed that there are both advantages and disadvantages to beat the drums about the OER. One participant argued that the advantages of making the OER openly accessible outweigh the disadvantages; another participant said ”we do not actively guide the public to [the OER], since we do not want to create conflict”. Another risk is that extreme types of statement can stand unopposed. Scarcity of users has been discussed in the literature as a quality problem as one of the participants state: ”Since [the specific OER] only has few users we cannot rely on this material to be self-repairing”.

This developed into a discussion about the difficulties to guarantee correct and current information. ”Because this OER is very detailed it requires constant updating. We want to have only one proper source to go to in case of conflict, and therefore it is important that this OER is constantly updated and of high quality”, one of the participants claimed.

The discussion not only focused on accuracy, it also touched upon legitimacy. One of the participants argued that the OER could increase the risk of controversies because: ”What a lot of people see online – they don’t think that what they see is legal. When they get to know that this [handling of animals] is legal and that there is science behind it, it can create conflicts”.

Another layer of complication is related to the cultural or contextual aspects of controversies in this kind of content. One of the participants asked: “How should one handle that dimension in a material like this?... digging in a Swedish context will be already a handful”. Another participant argued: “I have heard from Spain and Britain that … they are not allowed in the slaughter houses - they cannot make any footage…for their education for their teaching practices they need more [visual material]”. Yet another participant filled in: “Especially for the vet-education, there are vets who are supposed to work in the inspection and if they have never seen a video or have never been into a slaughter house its really difficult for them to do their job as an official control staff…”.
Discussion

If citizens are misinterpreting or falsely believing non-scientific or misleading information about food it will result in more opinion based than evidence based discussions. If industry is not transparent or tries to hide what is happening in the production and processing of food, it is to be seen as a political agenda to open access to these practices (Algers, 2015).

By offering an extended review by citizens’ use of OER it may not only lead to more knowledgeable citizens but also more socially robust knowledge. Thus, the benefits go both ways. A boundary object is according to Star and Griesemer (1989) an object you introduce to achieve boundary activities and to connect actors from different worlds. Recently, OER have been conceptualised as “boundary objects” (Algers, 2015; Orr et al., 2015).

You could argue that expert organizations and expert institutions are more and more governed by the lay, exemplified by citation analysis for quality assessment of the universities. In order to make it possible for lay to govern the way food is produced, distributed, processed and consumed they first of all need to get insight (openness as opposed to hidden) and secondly to be able to voice their views (openness as supposed to non-participatory).

It has been argued that digitalisation generally has the potential to both improve vertical communication between citizens and officials and to foster horizontal communication amongst citizens (Wessels, 2015). This vertical and horizontal communication could be argued to be most important when values are involved. Fraser (2008) argues for the involvement of the citizens in food when it has ethical implications because our values play a role at three different levels: 1) what to consider important when choosing research questions, 2) how scientific evidence should be assessed, and 3) how we should act morally in response to the research findings. Thus, you could argue that involving the citizens in knowledge about food creates the foundation for food governance.

Open educational practices (OEP) has been defined "as practices which support the (re)use and production of OER through institutional policies, promote innovative pedagogical models, and respect and empower learners as co-producers on their lifelong learning path" (Ehlers, 2011). While the concept of OEP has been widely discussed in scientific literature during the past decade, the number of articles reporting about OEP are still few (e.g. Iiyoshi and Kumar, 2008). It is, however, a fair speculation that the use of OER will become more common for academia and society to discuss and evolve a mutual understanding of a topic.

The OER in focus was originally made for the Swedish context, but much of the visual material was from other countries. A new English remixed version is under development since teachers in other countries have requested such a resource. However, this resource needs either to include a disclaimer about cultural aspects or to develop further the multi-cultural characteristics of the resource.
This study has pointed at a number of disadvantages when using OER in issues with controversies, such as conflict of interests and culture differences between users, the problem of scarcity of users that will affect the quality, and issues about accuracy and legitimacy of the content.

When Wiley and Gurrell (2009) discussed the quality of OER they claimed that it had two dimensions; one that is context free and has to do with the accuracy of the information communicated by the resource, and one that has to be assessed in the context between a specific user and a specific resource. One could argue that the first dimension is about the accuracy of the OER per se and the second dimension about the contextual values or the legitimacy of socioscientific issues. The same argumentation is used for the involvement of citizens in science as a way of democratizing science, even though concerns can be raised over quality and the possibility of conflicts of interest among volunteers (Kullenberg and Kasperowski, 2016).

References

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