

USING AN ONLINE DISCUSSION FORUM IN A SUMMATIVE COURSEWORK ASSIGNMENT

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ABSTRACT

The widespread availability of educational technology has made online discussion forums (ODFs) an increasingly viable teaching resource, but teachers may lack guidance on approaches for making effective use of ODFs in their curricula. The current study reports on how an ODF was incorporated into a summative coursework assignment for an English for Academic Purposes (EAP) course for undergraduate business students at a Joint Venture university in China. As part of the coursework assignment, the students were organized into online discussion groups for a topic related to Corporate Social Responsibility (CSR). Students were required to post an opinion, reply to three other opinions, and then include an account of their online discussions in a summative coursework research report. Content analysis of a sample of these coursework reports showed evidence of engagement with forum posts through: a) synthesis of students' views, b) relating views to theory or practice, c) critical and reflective thinking about the forum posts, d) critical thinking about the forum methodology, and e) explicit stance-taking. This study demonstrates a potential application of ODFs in the context of a coursework assignment and supports the view that ODFs may provide an effective platform for students to share opinions in a course-related task outside of scheduled classes.

Keywords: Online discussion forums; collaborative learning; online interaction; EAP.

INTRODUCTION

Multiple learning objectives can be achieved by students working collaboratively on tasks that provide opportunities for constructing knowledge through a dialogue with others (Hoppitt & Laland, 2013). So, while students may engage with and learn from each other within in-class activities and social learning groups, online discussion forums may also provide opportunities for collaborative student interaction.

Online discussion forums (ODFs) can benefit student learning in a range of contexts. The use of ODFs in teaching may enhance students' participation, interaction, and the quality of their communication. For example, Asoodar, Marandi, Atai, and Vaezi (2014) found that students reported satisfaction associated with group collaboration,

and Bensoussan, Avinor, Ben-Israel, and Bogdanov (2006) noted that students reported a positive attitude towards ODFs, arguing that ODFs create a motivating environment that is beneficial to student learning. Margerison (2013) suggests that ODFs provide a platform within which constructivist learning develops; furthermore, several studies have indicated that ODFs may be beneficial to students' academic writing (Cheng, 2007; Lin & Kuo, 2011; Zhao & Lei, 2017), oral proficiency (Shamsudin & Nesi, 2006; Vetter & Chanier, 2006), and group participation and collaboration (Cheng, 2007; Lin & Kuo, 2011; Vetter & Chanier, 2006).

Online discussion forums have many advantages. They can be asynchronous, so students can write their comments and questions anytime and anywhere, allowing time for students to reflect,

comprehend, and write responses (Kol & Scholnik, 2008). Interviews with students have identified a range of benefits, including having time to reflect on their views before making posts, having access to other students' ways of seeing, being less likely to respond impulsively, having access to thoughts that might otherwise be lost, and having the ability to comment and debate (Jahnke, 2010). Students are thereby able to put together well thought out and better structured arguments (Clark, Stegmann, Weinberger, Menekse, & Erkens, 2008).

Online discussion forums also allow for interactions outside of class among students and with teachers (Zhao & Lei, 2017), and they may encourage less socially outgoing students to participate in social discussions in a way they might have avoided face-to-face. For example, Lehman, Richardson, Ertmer, Newby, and Campbell (2009) observed that online discussions made it easier for students to express their opinions and to participate, even if those students are relatively inexperienced with ODFs, and Zhao and Lei (2017) found that students may use an online platform to ask questions that they were reluctant to ask in class. The use of ODFs has been found to be a source of social support for collaborative learning (Asoodar et al., 2014), motivating (Bensoussan et al., 2006), and transformative learning (Garrison & Kanuka, 2004). De Villiers and Pretorius (2012) also noted the "synergistic balance" of social- and study-related engagement in ODFs (p. 73). Discussion forums can be opportunities for students to reflect on and critique their learning (Faulkner, Aziz, Waye, & Smith, 2013) and to enhance the quality of their communications (Dashtestani & Stojković, 2016); moreover, ODFs have a "consciousness-raising" function when students are learning to write (Lin & Kuo, 2011, p. 121). With ODFs, it has been argued that learning activities can be more directly related to practical scenarios (Asoodar et al., 2014; Spedding, Jenner, Potier, Mackway-Jones, & Carley, 2013).

Much research on ODFs has involved surveying students about ODF use and/or analyzing ODF transcripts. However, while tutors might like to take advantage of the potential benefits of incorporating an ODF into their courses, they may not have time to interview students or analyze or mark ODF transcripts (Klisc, McGill, & Hobbs, 2017), particularly if they have large class-sizes.

Likewise, although tutor participation in ODFs may be beneficial (Schindler & Burkholder, 2014), this may be very demanding on tutors' time (Wah & Ngoh, 2005; Zhao & Lei, 2017). The present study reports on how an ODF was incorporated into a summative coursework assignment for undergraduate business students taking an English for Academic Purposes (EAP) course. Student participation in the ODF was checked, but tutors did not participate. Also, transcripts from the ODF were not analyzed; instead, the students' accounts of their participation were included as part of an assessed coursework project. The authors report on how this ODF was implemented, including an analysis of student coursework reports that was undertaken to assess whether students' accounts of their ODF participation showed evidence of substantive engagement with the ODF, which might be indicative of enhanced student learning.

METHOD

Background and rationale for the ODF

The ODF was implemented on a second year EAP module for 833 undergraduate students at the Business School of an English-medium, Joint-Venture, Sino-British university in Jiangsu Province, China. Students were required to pass the module to progress to the third year of the four-year program.

The learning outcomes assessed within the coursework assignment included being able to identify, understand, and interpret information as required from a variety of readings; also, students were expected to use references and citations skillfully to correctly synthesize material from outside sources into original work by using techniques such as paraphrasing, quoting, and summarizing. Tutors typically had class sizes of around 20 to 25 students and had two (two-hour) classes with each class per week, which contrasts with year one EAP modules which had five classes per week. A key advantage of incorporating the ODF was therefore that it provided a further opportunity for students to interact and engage with course materials outside of the scheduled classes.

One of the summative assessments on the module was a coursework assignment requiring students to take part in, and write up, a research project based on a study by Tian, Wang, and Yang (2011), to investigate students' perceptions of the

aspects of Corporate Social Responsibility (CSR) as defined by Carroll (2016). This project presented learners with a combination of challenges, including using the research report genre and interpreting results (Braun & Clarke, 2006).

As part of this assignment, the students were asked to complete portfolio tasks as formative learning activities. First, the students completed an online quantitative survey about Corporate Social Responsibility (CSR). This survey included three demographics questions (gender, country, and province of origin) and 20 Likert-style questions (1 = strongly disagree to 5 = strongly agree) to assess students' awareness of and attitudes towards CSR themes.

Second, the students were required to participate in an ODF to discuss their buying intentions. The ODF required students to answer questions relating to their perceptions of CSR and whether these perceptions influence their intentions to make purchases. Students were given guidelines to "contribute to a group discussion: answer the questions you find there and reply to the other students in your group." They were asked to write an initial post and reply to at least three other students in their discussion group (four posts total) with a minimum of 200 words per post. Students were advised to "think about whether you agree or disagree with what other students write" and to "use critical thinking to challenge any assumptions you identify." They were also suggested to "reflect on your personal experiences and use personal pronouns (I/ you/ we)."

The total cohort of students was divided into groups to discuss the five themes relating to CSR (Carroll, 2016), i.e., Ethical, Environmental, Legal, Philanthropic, and Economic. Each group was assigned one of these themes to discuss. Sample questions from the Ethical theme are:

- When selling food and electronic goods, for example, companies need to act morally and "do the right thing"—How do you feel about buying a product from a company which is unethical?
- Is it important for you that a product is produced by a worker who is not working excessive hours? If so, why? If not, why not?

- Is it important for you that a product you buy is made without causing any harm to animals? If so, why? If not, why not?
- Is it important for you that a company pays adequate wages to its workers? If so, why? If not, why not?
- How do the above ethical considerations affect your intention to buy products from a company?
- Given a choice, would you buy a product from a company with a more ethically responsible record? If so, why? If not, why not?
- Would you be willing to pay a little extra for a product from a company with a more ethical record? If so, why? If not, why not?

As a follow up exercise, students were asked to write a qualitative analysis of the ODF by identifying "themes from the discussions" and were told that "themes are commonly found topics and concepts." A task requirement of the report coursework was that students had to critically discuss the findings from both the quantitative survey and the qualitative ODF in their summative research report about student attitudes towards CSR issues. The marking criteria were modelled on the Common European Framework of Reference for Languages (CEFR), with bands for a pass corresponding to a CEFR grade B2, and grade 70% corresponding to CEFR grade Low C1 (Council of Europe, 2017). Assessment involved Task Fulfilment (50%) and Language Use (50%).

The ODF task thus provided an opportunity for students to express and share views about the coursework topic outside of scheduled classes. Course tutors did not participate in, or monitor, the ODF. In evaluating the usefulness of the ODF a key issue was to assess how well students followed the guidelines for the forum task (Kol & Scholnik, 2008), how well students in fact engaged with the ODF, and if the ODF generated useful discussions (expressive, critical, and reflective, rather than cursory) that may have helped students develop their understanding and views about the ODF topic. This was assessed through the extent that students showed evidence in their coursework reports of substantive, reflective, and critical engagement with the ODF, which was indicative of

a challenging task that potentially enhanced their learning during the completion of the assignment.

Setting up the ODF

The university's Academic Enhancement Centre assisted in helping set up discussion groups on Moodle, the (English-language) Virtual Learning Environment. Six students were included in each group, with group allocation done quasirandomly according to ID number. The ODF activity was open from Monday, Week 1 of the semester, and the deadline for completing posts was Monday, Week 3. However, the ODF remained open until Monday, Week 8 (the submission date of the summative coursework assignment) to allow students to continue to contribute to the discussion, if they wanted to. It was possible to check on Moodle whether or not a student had contributed to a discussion forum. Failing to contribute to the discussion forum was penalized by a reduction of 5% of a student's grade for the coursework task, but the students were given a second chance to contribute by their tutors. Finally, after several reminders, 33 students (approximately 4% of the cohort) were found to have still not written a contribution by Week 4.

Research Participants

An email was sent to the cohort of students explaining the purpose of the study and requesting their consent to include their coursework report in the analysis; 66 students (approximately 8%) gave their informed consent. However, one had not submitted a final report, and one was found to have not contributed to the online discussions, so both were excluded leaving a total of 64. All the students in this sample were from mainland China and were aged 19–20 (one was 21); there were 19 males and 45 females; the students' major subjects were: Economics and Finance, Accounting, Business Administration, International Business with a Language, Information Management and Information Systems, and Human Resource Management. Ethical approval for this research was obtained from the university's Research Ethics Subcommittee.

Analysis of student coursework

A content analysis was undertaken of the students' accounts of their ODFs, as written in the Results and Discussion sections of the 64 student-coursework reports. Content analysis

involves coding text into categories that include all the features found in the text and are mutually exclusive (Stemler, 2001). This was achieved in the following steps:

Step 1: From a literature review of research on the use of ODFs, the first Author identified potential ways in which students might show engagement with their online discussions. For example, synthesizing the views of students in the group (i.e., integrating the "perspectives of others"; Jahnke, 2010, p. 32), relating views to practice (Spedding et al., 2013), and thinking critically or reflectively on posts (Faulkner et al., 2013; Jahnke, 2010).

Step 2: Both Authors informally analyzed several coursework papers to assess if these and/or other potential forms of engagement with the ODF content, or reflection on participation in the ODF, could be discerned. Following review and discussion, the Authors developed several categories for engagement with the ODF. They then independently analyzed the sample and recorded which categories were demonstrated in each paper.

Step 3: The category classifications made by each Author for each paper were then compared to check the level of agreement. Any problems with the interpretation of the definitions of each category were identified and discussed. The categories were then revised for greater clarity and precision, and the independent analyses were then repeated by the Authors. After five iterations of this process, all category definitions were agreed upon and the independent analyses yielded acceptable levels of interrater reliability.

RESULTS

The content analysis produced five categories of engagement with the ODF: (A) Synthesis of students' views; (B) Relating views to theory or practice; (C) Critical or reflective thinking about forum posts; (D) Critical thinking about the forum methodology; and (E) Explicit stance-taking. Table 1 shows the frequencies for each category as identified in the independent analyses. Interrater reliability between the two authors (the extent of agreement in the classifications) was assessed with coefficient *Kappa*, which provides a measure of interrater reliability including an adjustment to account for chance agreement; values between .21 and .40 = fair; .41 and .60 = moderate; .61 and .80

= substantial; and $> .81$ = almost perfect (Stemler, 2001). The interrater reliability was moderate for category C, substantial for categories A, B, and E, and almost perfect for category D.

Table 2 lists some selected (uncorrected) examples of students' writing to illustrate each of the five categories (A–E) relating to their forum participation. This is followed by a more detailed discussion of each category.

(A) Synthesis of Students' Views

This was defined as a synthesis (explicit integration) of other students' ways of seeing, as expressed in the forum posts (e.g., explaining how two or more students agreed on a point or had similar views, or explaining how the views expressed in the forum posts differed from each other). Many instances of this kind of synthesis were identified, such as where students would summarize the extent of agreement in their group:

Four contributors in this discussion have the same viewpoints and agree with

each other, while student E holds a slight diverse opinion ...

Environmentally-friendly record is one of the key points expressed by students. Every respondent in this group support that an environmentally-friendly record will influence students' intention to buy.

Some students explained the expressed views in more detail:

In the discussion forum, one of the key arguments mentioned by opponents is that most consumers will not consider whether the products that they may buy were manufactured by legitimate companies or not. According to the opinions of 4 students, qualities and prices may be more important to consumers. However, 2 students think that consumers need to consider CSR records especially legal responsibility of companies.

As for whether or not students will pay a

Table 1. Frequencies for Each Category of Engagement with the ODF.

Category	Number of papers showing the category		Overall agreement	Coefficient Kappa
	Author 1	Author 2		
(A) Synthesis of students' views	60/64	59/64	61/64 (95.3%)	.642
(B) Relating views to theory or practice	56/64	55/64	59/64 (92.2%)	.661
(C) Critical or reflective thinking about forum posts	59/64	55/64	58/64 (90.6%)	.524
(D) Critical thinking about the forum methodology	19/64	16/64	61/64 (95.3%)	.882
(E) Explicit stance-taking	1/64	2/64	63/64 (98.4%)	.660

Table 2. Examples of Each Category of Engagement with the ODF.

Category	Example/s
(A) Synthesis of students' views	"Every respondent in this group support that an environmentally-friendly record will influence students' intention to buy."
(B) Relating views to theory or practice	"Companies need to maintain the quality and price level of products with practicing CSR. Companies would be better off if they took note of these and targeted young adult market."
(C) Critical or reflective thinking about forum posts	"In conclusion, philanthropy does not affect the students' intentions to buy to a great extent. This seems to contrary to the above findings, but it is actually reasonable to some degree."
(D) Critical thinking about the forum methodology	"... the number of students in each discussion forum was not enough which may affect the comprehensiveness of the research."
(E) Explicit stance-taking	"Student C states that ... [deleted for anonymity] ... which is have a common theme of my statement. Worker interest is an important aspect in my concern."

little extra for the company with better legal record, most of students said “yes” to support original companies. However, when talking about whether or not students will buy original products, some of them stated that they cannot ensure the product is original or copying. And some of them said that some of copying products are more cost-effective than original one. In this case, they may choose the copying one.

(B) Relating Views to Theory or Practice

This was defined as relating the views expressed in the forum posts to theory or practice—i.e., explaining how a post referred to implications or applications for industry or government practice or policy, explaining how a post referred to implications or applications for business theory; making connections between a post and previous research findings, or making connections between a post and real-world examples. Again, many instances of this were noted, such as where recommendations for companies’ practice were made based on the views expressed in the forum discussions:

Companies have to be conscious that students’ purchasing perceptions and subsequent purchasing decisions are forcefully influenced by a company’s CSR track record. Corporations that target the Chinese lucrative university young people market would pay attention to this report.

Various opinions manifest themselves in the qualitative data. To begin with, the improvement of employees’ working conditions is considered as one of the most important aspects in ethical issues, and Student A points out directly that ethical responsibility is the best advertisement for a company.

The following example includes a synthesis of the group member opinions and relates the view to previous research:

Student A, B and D all agreed the view that if a company donated money to charities or engaged in philanthropy actively, the company would be more easily to catch consumers’ attention... It seemed to be related to Lee, K. H. & Shin, D. (2010)

[who] thought that consumers might hold positive attitudes toward company engaging in charity.

(C) Critical or Reflective Thinking about Forum Posts

This was defined as critical and reflective thinking about views expressed in the forum posts—i.e., critical comments about forum posts, or reflective thinking about forum posts, as shown in implications directly drawn from posts or conclusions drawn from posts by deductive or inductive reasoning. Examples included summary conclusions of forum discussions:

To sum up, it can be concluded that there does not exist a clear and positive relationship between philanthropic records and purchase intentions.

The results of the discussion forum are similar to the online survey. It probably claims that legal responsibility is important for companies because students prefer products without copying others’ designs. Students possibly will select a firm with a positive legal record when they purchase. They would refuse to buy illegal copying products since they suggest that they have the responsibility to decrease copying behavior. Hence, students’ intentions to buy are absolutely affected by legal responsibility of CSR issues.

The following example noted an unexpected view emerging from the forum discussion and offered a speculative explanation:

Surprisingly, the most striking result to emerge from the discussions is that students seem to [be] unwilling to purchase products from the companies which support the development of poorer countries. Theoretically, a possible explanation for this result may be that poorer countries’ productivity are lower than developed countries, but students are eager to [purchase] better quality. Therefore, they are more willing to support local high quality products.

The following example synthesizes the group’s views, noting that they contrast with results

from the quantitative survey, and it suggests that communication with group members may have led some to change their opinions:

In conclusion, in the whole discussion forum, most students (4 out [of] 5) considered more about quality when compared with working excessive hours, and all thought it could be acceptable that animals would be harmed in some extent through production. It is appreciably different from the data of above two figures. A possible interpretation is that the students in the discussion forum will be persuaded by others, thus they gradually agree to concentrate more on quality and distinguish between poultries and wild animals.

(D) Critical Thinking about the Forum Methodology

This was defined as critical/evaluative comments (positive and/or negative) specifically about the forum methodology. There were fewer instances of this category compared to categories A, B, and C, but critiquing the forum methodology was not a task requirement for this assessment. Some students noted the limited number of students in each discussion group (see the example in Table 2), and another criticism was that some group members may uncritically follow the views of others:

Some students may complete qualitative discussion forum after they refer to previous students' ideas, which is lack of critical thinking and is similar with each other in a group.

... the qualitative data is collected in a discussion group openly, former participants may have a possible effect on latter students, which might lead to an inaccurate result.

Although uncritically following, or even copying, others' opinions is a valid concern, it also seems that some students may have mixed views about opinion-changing and may not have appreciated that the ODF provided an opportunity for legitimate changes in opinion as students were exposed to different views that they may not otherwise have had an opportunity to consider. For

example, one student, while noting that changing opinions may be a limitation of the discussion forum, also explained a contrast between the results of the quantitative survey and the discussion forum in terms of changes in opinion following the discussion (as quoted above in section (C) *Critical or Reflective Thinking about Forum Posts*). This student further noted that the discussion forum offered more flexibility for such sharing of opinions compared with the quantitative survey:

... in the discussion forum, students can share and exchange their own opinions, their position may be changed by others through communication, while in the survey, students finish the questionnaire alone, and the answers are not allowed to modify.

(E) Explicit Stance-taking

This was defined as explicitly stating a stance about an issue expressed in the forum posts—i.e., by explaining how or why the writer agrees or disagrees with a view/s expressed in the forum posts. Explicit stance-taking is indicated by the use of personal pronouns or possessives—"I," "me," "my," or "mine." Very few instances of this category were identified in the sample of student essays, with the only example agreed by both authors being:

Student C states that ... [deleted for anonymity] ... which is have a common theme of my statement. Worker interest is an important aspect in my concern.

DISCUSSION

This study has demonstrated how an online discussion forum (ODF) can be integrated into a summative coursework assignment. While much research on ODFs has involved surveying student attitudes towards ODFs and/or analysis of ODF transcripts (e.g., Jahnke, 2010; Khlaif, Nadiruzzaman, & Kwon, 2017; Kol & Scholnik, 2008; Lin & Kuo, 2011; Tajeddin & Alemi, 2012; Wah & Ngoh, 2005), this current research involved the analysis of students' coursework accounts of their online discussions. Analysis of these accounts showed evidence for active engagement with, and reflection on, the content of the online discussions. The ODF task related to the learning outcomes required by the assessment as, for example,

students demonstrated their understanding with written communication skills within the ODF task in collaboration with other students. Furthermore, students paraphrased, summarized, and synthesized each other's comments into their final reports, in addition to the external sources they would usually be expected to include.

Both authors identified many instances of synthesis (category A), in which students brought together, compared, and contrasted the views expressed in the ODF. There were also many instances of relating expressed views to theory or practice (category B), and many examples of critical and reflective thinking about the opinions expressed by group members (category C). Some instances of evaluative comments about the forum methodology (category D) were also noted, showing critical reflection on the ODF. However, although students had been advised to “think about whether you agree or disagree with what other students write,” very few students explicitly stated a stance about an issue expressed in the ODF (category E). A possible factor involved in this could be the use of personal pronouns: Although students had been advised to “reflect on your personal experiences, and use personal pronouns (I/ you/ we)” for the ODF, when they wrote their accounts of the ODF in their reports they may have avoided the use of personal pronouns as is often recommended (on EAP modules) for academic writing.

The current results showing reflective and critical engagement with the ODF are consistent with previous research findings. For example, the majority of students in the sample competently synthesized other students' ways of seeing (their “perspectives”; Jahnke, 2010, p. 32). The students were also able to relate views expressed in the forum to theory or practice (Spedding et al., 2013), and they demonstrated critical and reflective thinking about views expressed in the forum posts (Faulkner et al., 2013; Jahnke, 2010).

The current findings are also consistent with the view that ODFs are beneficial to student learning (Dashtestani & Stojković, 2016) and may provide potential opportunities for constructivist learning (Margerison, 2013). Although it is not possible in the current study to establish whether the ODF participation directly caused learning, the potential benefits from the ODF participation are evident. The act of participating in the ODF allowed for

exposure to alternative views, opinions, and perspectives that students may not otherwise have considered, and such exposure alone may contribute to the development of critical thinking (Klisc et al., 2017). Students also worked asynchronously, which may have helped them to construct better thought-out and structured arguments, as has been argued in previous research (e.g., Margerison, 2013). Also, participation in the ODF may have provided a useful opportunity to practice existing skills (Klisc et al., 2017) and apply them to new contexts, such as in critically reflecting on and analyzing the opinions of peers rather than information from published academic texts. The ODF may also have helped to develop students' knowledge, understanding, and perspectives on the discussion topic. For example, there were instances where students highlighted apparent inconsistencies between the results of the quantitative survey data and the views expressed in the ODF, and they offered possible explanations.

In sum, the ODF promoted interaction with course materials and other students outside of scheduled classes (Kol & Scholnik, 2008; Stallard, 2016; Zhao & Lei, 2017). This organized, goal-oriented interaction involved opportunities for students to explore and consider different viewpoints about the course topic while also practicing their English (L2 communication). Thus, ODFs may offer a useful platform for extended student interaction outside of scheduled classes, which may be particularly useful when limited class time is available for group discussions. ODFs also allow more opportunities for all students to participate, whereas this might not be the case in the classroom (Schindler & Burkholder, 2014). Furthermore, having a written record of each contribution allows for more time to reflect before answering and also makes the information available for further use (Jahnke, 2010), such as in the coursework assignment reported on in the present study.

Despite their many advantages, it is essential to design, manage, and facilitate ODFs effectively (Lehman et al., 2009). For example, Hull and Saxon (2009) note that success in achieving learning outcomes from ODFs depends on the instructional strategies applied, and Schindler and Burkholder's (2014) review identified that critical thinking is more likely to be promoted in ODFs that include detailed, structured prompts, and

include scaffolding such as providing exemplars of forum posts and responses. Requiring students to reflect on and then make revisions to the arguments they produce in online discussions may improve argumentation skills (Iordanou & Constantinou, 2015), and metacognitive prompts may also facilitate understanding and argumentation (Zhao & Lei, 2017). Assigning discussion roles to students may also help to promote student collaboration and critical thinking (Klisc et al., 2017). The design of the ODF used in the current study could be improved by the addition of these features.

An additional consideration is the size of the discussion groups. Some students felt that the groups were too small, but very large groups may not be effective: More critical thinking and higher levels of cognitive engagement have been found in groups of around 13 or fewer (Schindler & Burkholder, 2014). Also, although the limited time available to tutors is an important consideration (Wah & Ngoh, 2005), having some participation from them in the ODFs may be valuable. For example, tutor prompting of students through questioning might help promote critical thinking in the forum (Schindler & Burkholder, 2014), and tutor monitoring and moderation of the ODFs may improve student engagement (DiPasquale & Hunter, 2018) and could help to deal with issues such as students copying forum posts, not engaging with the discussion questions, and occasional off-topic responses.

However, as Zhao and Lei (2017) note, providing an online platform for student interaction does not guarantee productive engagement; some form of assessment of the ODF task seems to be important, although the form of this assessment may not be so critical. For example, Klisc et al. (2017) found no significant difference between assessment of discussion contributions and assessment via a postdiscussion task in terms of promoting critical thinking skills. So, the approach taken in the current study, of integrating the online discussion into a summative task, may have some benefits to student learning while also being a practical method allowing for assessment in an assignment that may assess a range of course learning outcomes.

It is, though, important to ensure that clear instructions are provided, both for the ODF and for assessments of ODF participation (Klisc et al., 2017). For example, as noted above, very few

students in the current study explicitly stated a stance in their summative reports, so clearer instructions about taking an explicit stance seem necessary. Stance-taking, justified with argument and counterargument, may also promote more use of critical thinking (Schindler & Burkholder, 2014). Also, in the current study, although critical discussion of the ODF findings was a task requirement, the assignment additionally included other task requirements, and the final grade/mark for the assignment was based on overall task fulfilment. It could therefore be useful in future assignments to include separate grades/marks specifically for the ODF component.

The current study involved a limited sample of student work, so further research on the use of ODFs in coursework would benefit from including larger samples. In addition, students' attitudes about using the ODF in their coursework report could be studied through interviews and/or questionnaires. Further research could also investigate how ODFs can be usefully supplemented with additional online support, such as an online database of task-relevant information at a level of complexity appropriate to the level of the students' ability (Iordanou & Constantinou, 2015). The online extension of syllabus coverage may be further expanded with the development of an online classroom that provides students with further opportunities for discussions and perhaps includes more choice about the topics, which may increase student motivation (Stallard, 2016).

In conclusion, this study has shown how an ODF can be utilized as part of a summative coursework assignment. Analysis of the students' coursework accounts of their online discussions indicated that the ODF was a useful platform on which to share ideas, and it demonstrated reflective and critical engagement with the online discussions. Tutors may consider the use of ODFs to provide opportunities for meaningful interaction between students and with course topics outside of scheduled classes. However, deep learning will also depend on syllabus design, including integrating assessed activities, taught materials, and in-class face-to-face teaching.

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