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USING SHORT QUESTIONNAIRES TO SUPPORT STUDENTS' EMOTION AWARENESS AND REGULATION DURING AN ONLINE GROUP PROJECT

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Abstract

Over the past two decades, research has highlighted the profound influence emotions can have on students' learning, achievement, and wellbeing. Being able to successfully regulate one's emotions is now viewed as crucial when learning in educational settings. To support students with this process, a growing line of research has explored various ways of helping students understand and manage their emotions (e.g., via the use of digital tools aimed at helping students become more aware of their emotions and prompting ways to regulate these emotions). Despite this, limited research has been undertaken in online group learning settings, where students work remotely together as part of their course using collaborative communication tools. These learning contexts present unique challenges which can make emotion regulation more difficult than in face-to-face learning environments (e.g., delayed response times when communicating with peers and teachers and a reduced sense of how others are feeling, due to limited emotional cues when learning online). In this paper, we describe an approach used at the UK Open University (UKOU) to assist students' emotion awareness and regulation during a 9-week group project. This involves the use of short questionnaires which have been embedded into the Virtual Learning Environment (VLE) of a module. Since their inclusion, these questionnaires have been found to enhance emotional awareness in many students, as well as support the regulation of emotions in the group project. To conclude this paper, reflections on using the short questionnaires are discussed and implications for educators and institutions are identified.

Keywords: emotion, emotion regulation, emotion awareness, online group project, distance education.

Introduction

Emotions and their potential impacts on learning processes and human functioning have historically been ignored in educational settings (Artino & Naismith, 2015). However, in recent decades it has become increasingly apparent that emotions play a critical role in students' learning, achievement, and wellbeing (Pekrun et al., 2018). For instance, the experience of pleasant emotions, such as enjoyment, may: enhance a student's motivation to learn; foster the use of flexible learning strategies; and positively influence mental wellbeing. Conversely, the experience of unpleasant emotions, such as disappointment, may: reduce a student's task engagement; have damaging consequences on physical and mental health; and increase the chances of students dropping out of their course of study. Although the exact relationship between emotions and learning is complex and still not fully understood, it is evident that being able to successfully regulate one's emotions is a crucial process when learning (Jacobs & Gross, 2014).

Emotion regulation refers to the processes by which individuals influence the type, intensity, and duration of emotion they experience (Gross, 2015). Typically, this will involve trying to reduce the experience of unhelpful emotions and maintain or increase the experience of helpful emotions. For example, if a student is experiencing anxiety which is hindering their performance in an online group activity, they may try to reduce these feelings by thinking more positively or seeking social support from their teacher. On the other hand, if they are experiencing excitement which is facilitating their engagement, they may try to maintain this feeling by increasing their involvement in the task or sharing their feelings with other students in the group.

For students to successfully regulate their emotions, it is important that they are aware of, and understand, the emotions they are experiencing (Boden & Thompson, 2015). Research has shown that if students can adequately understand their emotions, they are more likely to engage in emotion regulation processes (Feldman Barrett et al., 2001) and are more prone to use adaptive emotion regulation strategies (i.e., those associated with

beneficial outcomes) (Subic-Wrana et al., 2014). However, not all students are skilled at understanding and regulating their emotions, and many can find these processes extremely challenging (Harley et al., 2019). Finding ways to support students' emotional awareness and emotion regulation should, therefore, be an important consideration for educators (Coughlan et al., 2021; Järvelä et al., 2016).

Literature review

Emotions and online group learning

Investigation into the emotional experiences of students in online group activities is scarce. However, from the research that is available, it is evident that these learning environments can be highly emotionally charged, especially when they are linked to assessment (Hilliard et al., 2019). Previous research has highlighted that students experience a diverse range of emotional states when undertaking online group activities (Hilliard et al., 2019), but that feelings of anxiety and frustration are frequently experienced (Capdeferro & Romero, 2012; Hilliard et al., 2020). There may be many reasons for increased unpleasant emotions when undertaking online group activities. For instance, learning collaboratively can lead to conflict and tensions between group members (Hilliard et al., 2020). Study flexibility may also be reduced compared to working independently, due to the shared planning, discussion and creation often involved when working collaboratively. This can be challenging for students who learn online, as many may have chosen this mode of study in order to manage additional commitments (e.g., employment and caring responsibilities) and to have maximum study flexibility.

Emotion awareness and regulation in online group learning

Little is known about how and why students regulate their emotions in online group learning. When compared to face-to-face learning environments, online settings present novel challenges which can make emotion awareness and regulation more difficult (Marchand & Gutierrez, 2012). For example, in online environments, there are typically fewer opportunities for peer support compared to studying on a university campus (Barr, 2014). Response times when interacting with peers and teachers can also be delayed, as communication is often undertaken using text-based, asynchronous methods. Working online can also make it more challenging to be aware of, and understand, others' emotions due to limited emotional cues (Derks et al., 2008). This reduced visibility of emotional and affective experiences can limit the support offered to students that is often provided in face-to-face learning (e.g., by academic teaching staff and other students) (Barr, 2014).

Supporting students' emotion awareness and regulation when learning online

Over the last decade, researchers have started to explore various ways of helping students understand and manage their emotions when learning in both face-to-face and online settings. This has often used digital tools to help raise students' awareness of their own and other students' emotions, as well as to prompt and support emotion regulation (Coughlan et al., 2021; Feidakis et al., 2014; Järvelä et al., 2016; Lavoué et al., 2020). One example of such a tool is the Social Emotional Sampling Tool (SEST; see Webster, 2019 or Webster & Hadwin, 2013). This digital tool has been specifically developed for computer-supported collaborative learning activities and aims to support students' emotional awareness and regulation. More specifically, the SEST prompts students to assess their current emotional state (e.g., by asking them to identify an emotion they are experiencing and its cause) as well as plan ways to regulate their emotions.

Despite the growth of research exploring ways to support students' emotional awareness and regulation, there is still limited research which has been undertaken in naturalistic online group learning contexts. Gaining a greater insight would be of great value to educators and institutions who have adopted, or who are planning to adopt this pedagogical approach.

An approach used at the UK Open University

In this section, we describe an approach used at the UKOU to support students' emotion awareness and regulation during an assessed, online, group project. The assessed group project is part of a Level 2 undergraduate module in 'Communication and Information Technologies' and runs over a 9-week period. It requires students to work in teams of between 6 and 8 to design and build a website for a specific 'client' (e.g., the managers of a family-friendly hotel or community theatre), and then evaluate another group's work. To carry out the project, groups are provided with a version of WordPress for website development and an online forum

on the VLE for group discussion. A student's overall grade is made up of both individual and group marks and the assignment contributes 1/6 of the overall module grade. Although groups can largely work how and when they want, there are several milestones during the project (as shown at the top of Figure 1).
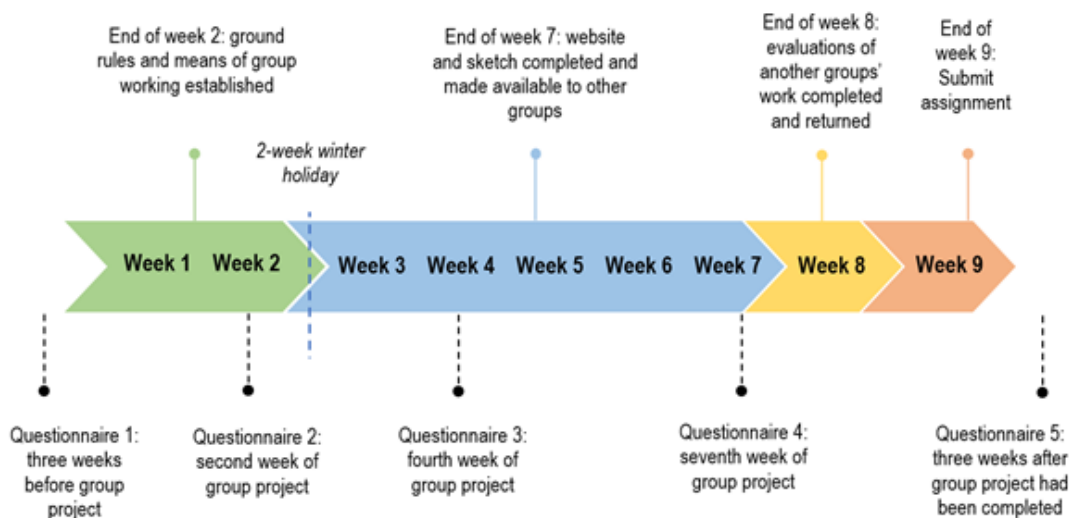

Figure 1. Milestones and timings of questionnaires through the group project.

To support the emotion awareness and regulation of students during the group project, five short questionnaires have been embedded into the weekly content of the module's VLE, with each questionnaire at a different point during the project. This type of questionnaire is known as 'real-time student feedback' at the UKOU and is used to gain information about students' experiences, with the intention of taking action to support students on a module. The timings of the questionnaires are shown at the bottom of Figure 1. The number and timings of questionnaires were agreed with the module team; the questionnaires were inserted at key time-points of the project without over burdening students during periods of heavy workload. It was considered important that questionnaires were placed before the project, at several points during it, and after it finished, so that students were supported at each stage.

Primarily, it was hoped that the questionnaires would: 1) allow students to reflect upon their feelings and help them understand the emotions they were experiencing; 2) prompt ways to regulate their emotions (if required); 3) support students' emotion management by providing positive, tailored feedback dependent on their questionnaire responses; and 4) allow module teams to implement actions/ interventions that would support students during the project, based on questionnaire responses (e.g., by alerting tutors to common issues faced by students or providing additional support to students via news items on the VLE). All responses to the five questionnaires are anonymous. Each questionnaire is open for two weeks; after this time, students are unable to access them. This is so that students' responses can be linked to specific stages of the collaborative project.

The first questionnaire (which is before the start of the group project) asks students about their initial feelings of undertaking the group project. Students respond by selecting one of three options: 'I am looking forward to it', 'I am uncertain about it', or 'I am very worried about it'. Based on their response, students are provided with tailored feedback aimed at acknowledging and supporting their feelings before starting the group project. An example of this is shown in Figure 2. Questionnaire 1 also asks students to reflect on why they are feeling the way they are, by responding in an open-ended textbox.

Feedback if students selected 'I am looking forward to it'

It's great that you are looking forward to taking part in the collaborative project! In the previous presentation, many students thought they gained a great deal from collaborating with other students.

Feedback if students selected 'I am uncertain about it'

It's OK to feel nervous about this activity. You can expect to encounter a few challenges but also benefit a great deal from collaborating with other students (some of them may feel as unsure as you are). You can also talk to your tutor and find help or advice on many aspects of your studies in the OU support area.

Feedback if students selected 'I am very worried about it'

Many students feel worried and anxious about taking part in collaborative activities. Although these feelings are often seen as negative, we've found that they can have positive impacts on participation and performance. For instance, these feelings may lead to increased effort and motivation levels and make students more proactive. We have also found that, although many students had worries before and during the collaborative activity, their reflections after the activity have been really positive.

If these feelings are very strong and persistent, and you think that they will make it hard for you fully take part in the activity, it is important that you get support. Your tutor will be able to give you help and advice, so do contact them. You can also find help or advice on many aspects of your studies in the OU support area.
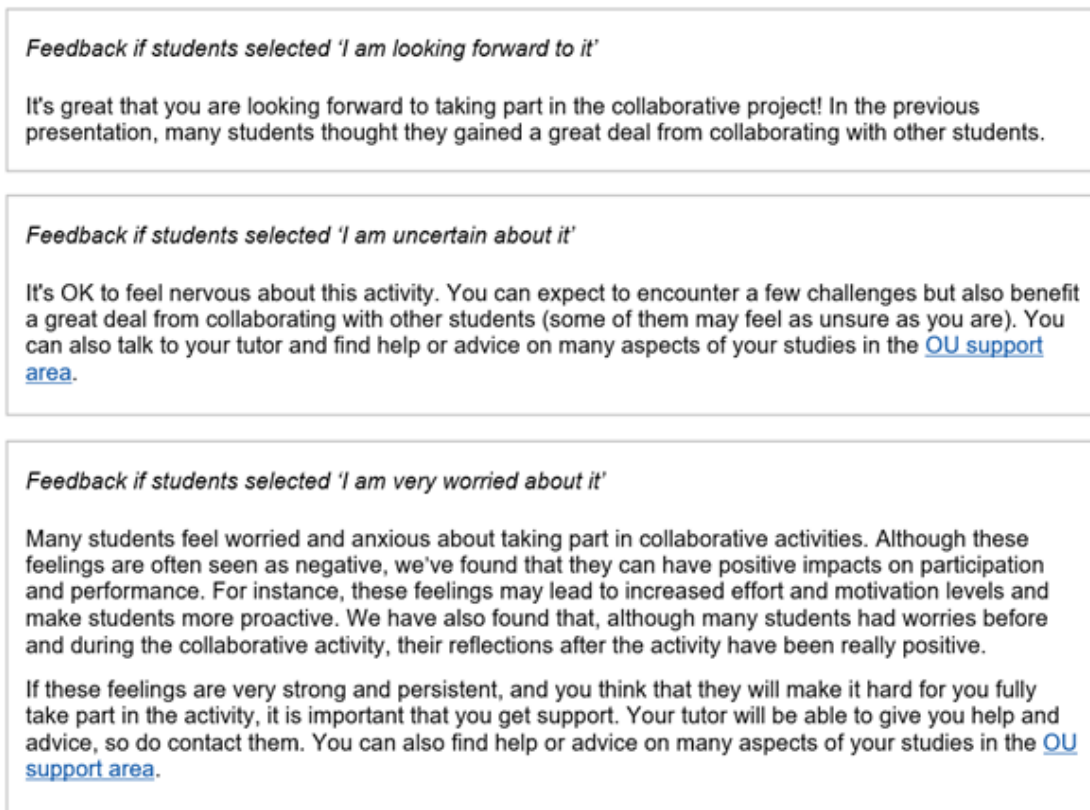
Figure 2. Example feedback provided to students after indicating how they were feeling before the group project (questionnaire 1).

The remaining questionnaires (2-5) are primarily based on the SEST, although statements have been slightly adapted to reflect the specific learning context. Examples of the statements and responses included in these questionnaires are shown in Figure 3. These questionnaires prompt students to indicate an emotion they are currently experiencing in relation to the group project. Other questions ask about the cause and intensity of the emotion; goals and strategies for regulating the emotion; the student's perception of the overall group atmosphere; and their level of satisfaction with how things are going in the project. For these questionnaires, students receive tailored feedback after indicating their level of satisfaction with the group project.

In the final questionnaire (number 5), statements relate to emotion regulation goals and strategies are not included, and several statements and responses have been changed to past tense, as this questionnaire is undertaken after the group project has been completed. This questionnaire also asks students to respond to four Likert-type questions about whether the questionnaires have helped them become more aware of their emotions and have supported emotion regulation when undertaking the group project. For instance, students are asked: '*Did filling out the questionnaires help you regulate, or manage, your feelings in relation to the group project?*'.

Group project: How are things going?

Now that the first week of the group project is complete, please take a few minutes to tell us how you are feeling about the activity?

Your answers will not be shared will other students.

When I think about how things are going with the group project, I mainly feel...

I feel this way because...

This feeling is...

And I think it is...

I would like to...

I think this can be accomplished by...
(select all that apply)

The overall atmosphere in the group is...

Overall, I am...

Emotion
Excited
Anxious
Calm
Angry
Confident
Bored
Curious
Confused
Happy
Disappointed
Proud
Embarrassed
Relieved
Frustrated
Hopeful
Overwhelmed
Other

Cause of emotion
Open text box

Intensity of emotion
Very strong
Strong
Moderate
Weak
Very weak

Evaluation of emotion
Good that I feel this way
Bad that I feel this way
Neither good nor bad that I feel this way

Emotion regulation goal
Increase this feeling
Decrease this feeling
Maintain this feeling
Do nothing about this feeling

Emotion regulation strategies
Talking to others in the group
Focusing on the task
Supporting and encouraging others in the group
Talking to my tutor
Creating a good plan
Thinking positively
Making sure that I don't become complacent
Changing the plan or approach
Carrying on as I am doing
Taking time to relax
Talking to my family and/or friends
Changing my thoughts or beliefs
Other (Please specify)

Group atmosphere
Positive
Negative
Neutral

Overall satisfaction
Very satisfied with how things are going
Moderately satisfied with how things are going
Not very satisfied with how things are going
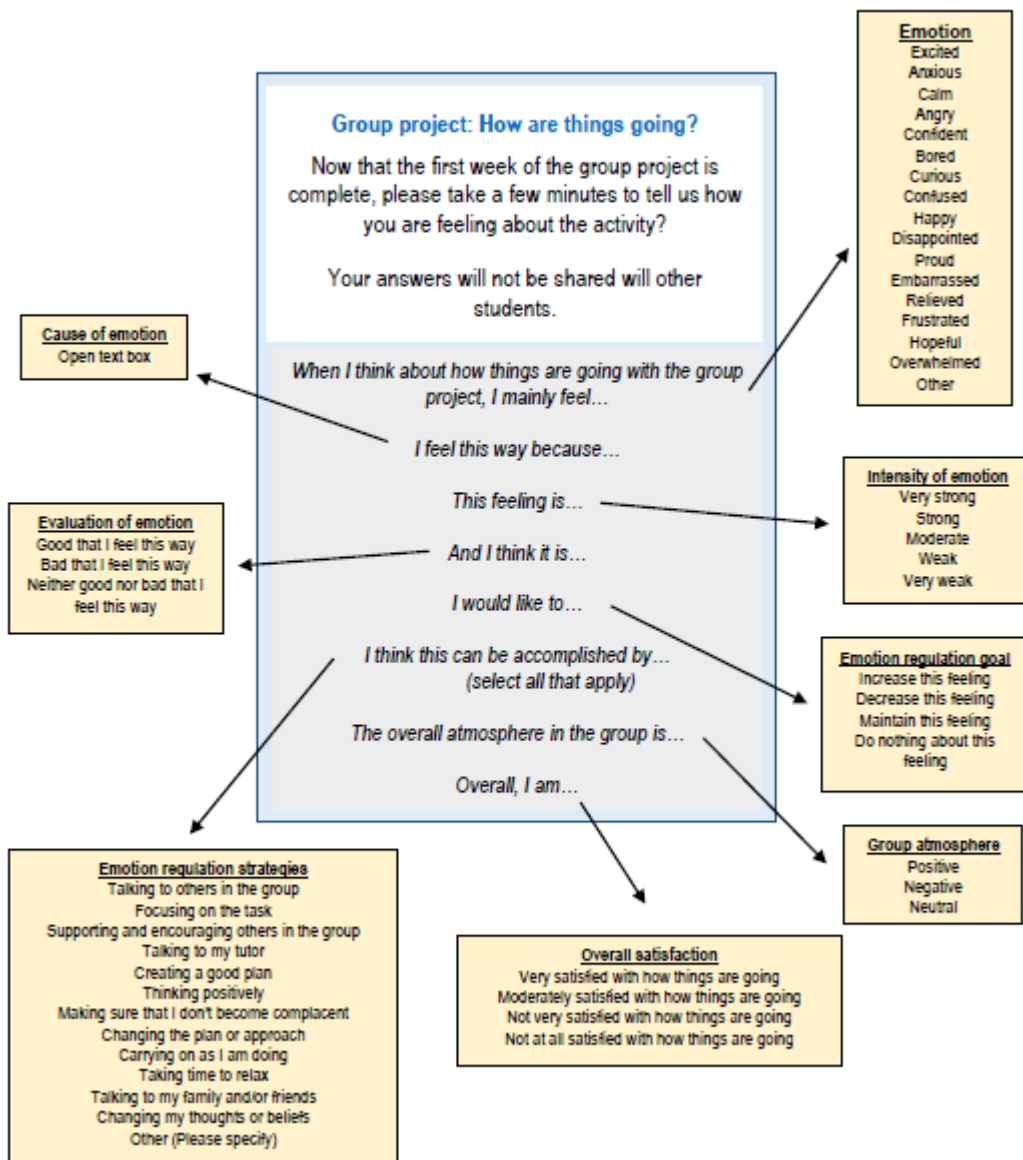Not at all satisfied with how things are going

Figure 3. An example of the statements and responses included in questionnaires during the group project (questionnaires 2,3, and 4).

The questionnaires have now been embedded in the VLE pages of the module for three academic years. During this time, students' responses have highlighted that anxiety and frustration are by far the most reported emotions. Other commonly reported emotions include feeling confident, relieved, and hopeful. In relation to strategies students planned to use to regulate their emotions, talking to others in the group and focusing on the task were the most frequently selected. Other strategies that have been frequently reported include thinking positively and supporting and encouraging other group members.

Responses to questions in the final questionnaire also emphasised the usefulness of the questionnaires in supporting emotion awareness and regulation. When asked whether the questionnaires made students more aware of their emotions in relation to the group project, nearly half the respondents reported that they did (48.5% of the 379 respondents over the three years). When asked if questionnaires supported the regulation of emotions during the project, nearly a third of respondents (31.9%) reported that they did. Slightly over half of the

respondents (54.6%) indicated that they have used strategies selected in the questionnaires to regulate their emotions. Furthermore, nearly half of the respondents (43.0%) indicated that the strategies listed in the questionnaires have prompted new ideas for how they could regulate their emotions during the group project.

Conclusions

The purpose of this paper was to describe an approach used to support students' emotion awareness and regulation during an online group project at the UKOU. The findings are encouraging, as they highlight the usefulness of the questionnaires in supporting emotion awareness and regulation in a naturalistic online group learning setting. This is important as research has shown that students who can sufficiently understand and manage their emotions will perform better academically (MacCann et al., 2020). Furthermore, being able to effectively regulate emotions has also been found to be associated with positive mental health and wellbeing (Zeidner et al., 2012).

The questionnaires described in this paper offer a practical and simple approach for supporting students' emotion awareness and regulation when learning collaboratively online: one which could easily be adopted by other educational institutions. Although the questionnaires have been specifically used for a group project in this context, the use of such questionnaires could be adapted to suit other learning situations, or could be used to support students' emotion awareness and regulation throughout their learning journey.

One of the key benefits of using the embedded VLE questionnaires is that students' responses are instantly available to module teams, providing real-time insight into students' feelings. This information can be used by educators to take quick action and apply interventions that can further support students. Future research is needed to explore how useful module teams find this information and what types of actions and interventions are used to support students, based on this information. For instance, educators may share certain anonymous data (e.g., of the types of emotions being experienced) with all students on the module to increase students' awareness of how other students are feeling about the project. Previous research (Hilliard et al., 2020) suggests that this may help reduce unpleasant feelings (such as anxiety, worry, and apprehension) in some students when learning collaboratively online, particularly in the early stages of the activities.

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