An Evaluation of a Course Aimed at Reducing Public Speaking Anxiety among University Students

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Public speaking is a highly important skill for a graduate to achieve, and despite many students reporting high public speaking anxiety, this is rarely addressed in current undergraduate degree courses. The following paper evaluates the effectiveness of a course aimed at reducing students' levels of public speaking anxiety via a relatively simple and resource minimal approach. Twenty-nine students completed 9 sessions aimed to improve public speaking confidence. Across the sessions, students progressed from conducting informal presentations in front of small numbers of students towards formal presentations of academic content in front of increasingly larger audiences. In a latter session, students were also encouraged to reflect on their experience of the course and to note any skills they had developed. Delivery of the public speaking program resulted in significant reductions in scores on two standardized measures of public speaking anxiety, the Audience Anxiousness Scale and the Personal Report of Communication Apprehension. It is suggested that University departments should consider offering courses for students which allow them to practice public speaking.

Public speaking can be a daunting experience for many, and it has been reported that over two thirds of the population experience some level of fear or anxiety related to speaking in public (Furmark et al., 1999). Dwyer and Davidson (2012) found that women are more likely to rate it as their top fear and also that 18% of a student population rate it as more fearful than death. However, being able to speak in public can be especially important for students in preparing for employment (Blume, Baldwin & Ryan, 2013; Johnson & Szczupakiewicz, 1987). It is therefore important for students to be given the opportunity while at a university to gain confidence in public speaking. This is important not only for students, but also for universities since many league tables now incorporate the employability of graduate students as an indicator of success. The current study tested the effectiveness of a simple public speaking course at reducing public speaking anxiety (PSA) among a student cohort. The course was designed to expose students to progressively larger audiences and to deliver increasingly formal presentations, as well to encourage self-reflection. The course was specifically designed for students who experience PSA.

Public Speaking Anxiety

PSA can stem from either general communication apprehension or from general psychological anxiety (Witt & Behnke, 2006). Communication researchers see PSA as a subcomponent of a more general issue with communication in several contexts including group discussions, meetings, dyads, and public speaking (Pribyl, Keaten, Sakamoto, & Koshikawa, 1998). Psychological researchers see PSA as a subcomponent of general anxiety where "anxiety is an aversive, cognitive-affective reaction characterized by autonomic arousal and apprehension regarding impending potentially negative outcomes" (Leary, 1983, p. 67). More specifically, it is seen as a type of social anxiety. Individuals who exhibit high levels of social anxiety tend to hold negative self-perceptions and also perceive others to evaluate them negatively during interactions (Hoffman & Dibartolo, 2000). Leary (1983) distinguishes between two types of social anxiety: interaction anxiety and audience anxiety. The former relates to instances such as talking to others in informal settings, whereas the latter refers to contexts which are more scripted and planned (e.g., a scripted or rehearsed speech). The important difference between these is that at the time of interaction, the individual can withdraw from one easier than the other (e.g., it is easier to withdraw from an informal group discussion with friends than to withdraw from an organized speech). Since audience anxiety or PSA is a subcomponent of social anxiety, people with high PSA will be more likely to feel as though they are being negatively evaluated by their audience and are more likely to be focused on their own performance in a negative way.

The literature on PSA has defined two different types: state and trait PSA (Bodie, 2010; Pribyl et al., 1998). State PSA is when PSA is context specific. For example, a student may feel comfortable making a relatively informal presentation in front of fellow students but might feel highly anxious when presenting a piece of their work to specialists. Trait PSA is seen to be more stable: a person feels anxious when asked to speak in public irrespective of the context. Regardless of the type of PSA, there are many symptoms associated with it. Bodie (2010) outlines the three types of symptoms: physiological, cognitive and behavioral. Physiological symptoms can be bodily sensations such as numbness, increased blood pressure, increased heart rate, and sweaty palms. The cognitive symptoms involve negative

evaluation of one's own performance, self-focused thoughts, and perceived negative judgments from the audience. Finally, behavioral symptoms might reflect less fluency in speech (Choi, Honeycutt and Bodie, 2014) or nervous fidgeting while delivering a presentation. Bodie (2010) suggests that the cognitive and physiological symptoms together predict the greatest variance in PSA. Hence, the majority of research on PSA has focussed on the physiological and cognitive effects of PSA with most intervention studies taking measurements of these symptoms to test for the effectiveness of different programs.

Although there is general agreement on the characteristics of PSA, the origins of trait PSA have often been debated, with some suggesting that it may be due to socialization experiences from the early years in life while others argue it could be biologically based (see Bodie, 2010 for a discussion on this). If the biological explanation is accepted, then this would imply that PSA is not able to be changed through intervention or training (Beatty, McCroskey & Heisel, 1998). However, there are many different types of interventions which have been tested with some found to be effective at reducing levels of PSA. Dwyer (2000) suggests that the success of these interventions reflects an improvement in the management of anxieties related to PSA rather than "curing" people of PSA.

Interventions aimed at reducing PSA can include systematic desensitization, cognitive restructuring, visualisation, and skills training (Dwyer, 2000). Systematic desensitization is often used in clinical settings, and its main aim is to reduce the association between a particular experience (e.g., speaking in public) and the resulting anxiety felt from that experience (Bodie, 2010). It gradually exposes an individual to increasingly anxious situations, and the individual can also be taught relaxation exercises such as deep breathing (Docan-Morgan & Scmidt, 2012). Cognitive restructuring involves an attempt to change the way that an individual thinks about public speaking (Ayres, Hopf, & Peterson, 2000). In interventions that use the visualization approach, an individual high in PSA is asked to visualize himself or herself succeeding in a particular situation such as giving a successful speech (Ayres & Hopf, 1985). Skills training interventions provide training on skills necessary to deliver a good presentation, such as effective delivery skills and being able to organize ideas effectively within a presentation (Docan-Morgan & Scmidt, 2012). Most studies examine the effectiveness of one or more of these types of interventions by comparing to either a control/placebo group or by comparing one type of intervention to another. For example, Hunter, Westwick, and Haleta (2014) found a reduction in PSA after individuals received exposure therapy (a type of systematic desensitization) together with skills training

with females showing the greatest reduction in PSA. The visualization technique has also found to be effective particularly when done in conjunction with another form of intervention, imagined interactions (Choi et al., 2014). Whereas visualization involves the person picturing their success in a given interaction, imagined interactions prepare the person for a particular interaction by indirectly experiencing it (i.e., through imagining the specific interaction; Choi et al.). It is argued that this type of intervention allows a person to address issues with nerves, and to become more self-aware which helps in reducing uncertainty about one's thoughts and feelings towards a specific interaction (Honeycutt, Choi, & DeBerry, 2009). Choi et al. found that this type of intervention together with visualization techniques resulted in fewer silent pauses during a speech (an indicator of nervousness) and an increase in the confidence level of the presenter.

Although there is evidence to support the efficacy of these different types of interventions, Duff, Levine, Beatty, Woolbright, and Park (2007) argue that these significant results are simply a result of demand effects. In their study which examined the effectiveness of systematic desensitisation alone versus a "multiple" intervention (visualization, skills training, and systematic desensitization), they found no lasting effects of either of these interventions in comparison to a placebo group. The authors argue that rather than each of the interventions being successful in their own right, it is more that individuals are reporting to be less anxious as a result of being on any course aimed at reducing PSA levels. This study therefore casts doubt on whether it is necessary to include complex techniques in courses aimed at reducing PSA, especially since some of these techniques may require trained professionals to act as instructors on the course (e.g., Fitch, Schmuldt, & Rudick, 2011) or for current staff to take time out from their usual duties to be trained (e.g., Hunter et al., 2014). This latter point might be particularly relevant in higher education institutions where the workload of staff is already high (University and College Union, 2014). Courses which require a low time commitment from staff might be preferred within higher education.

Offering opportunities to university students to gain confidence in public speaking is important. It is especially important for those who may experience PSA to try to gain skills in managing their anxieties. Through gaining more confidence and acquiring anxiety management skills, students are more likely to gain success and be more open to opportunities once they become graduates and hence potential employees. For example, anxieties relating to performance and communication are thought to contribute to overall interview anxieties (McCarthy & Goffin, 2004) and to be negatively related to the outcome of interviews

(Ayres & Crosby, 1995). Moreover, PSA contributes to overall communication anxiety which has been shown to have a negative relationship with adaptability, multicultural appreciation, and leadership skills (Blume et al., 2013): skills which, in addition to public speaking skills, may be particularly attractive to potential employers. The university is one context where students are often required to speak in front of, or present to, fellow students but where many are faced with anxieties relating to public speaking (Dwyer & Davidson, 2012; Hofmann & Dibartolo, 2000). The university is also a context where it is possible to provide students with opportunities to enhance the skill of speaking in public and thus help in the development of their employability skills. In line with the characteristics of systematic desensitisation, Witt and Behnke (2006) suggest that any course or intervention designed to reduce PSA should begin with activities which are low-anxiety provoking and include high-anxiety provoking activities at the end of the course or intervention. Students who experience PSA may not be given opportunities to gradually build up to formal presentations or to practice this activity away from more confident speakers within their normal studies at University. This latter point is especially relevant since many who experience high levels of PSA may be particularly sensitive to the evaluations and reactions of audiences (Fitch et al., 2011; Leary, 1983). Thus, people high in PSA may prefer to practise public speaking away from more confident speakers who are more self-confident about their own public speaking abilities (Ayres & Heuett, 1997).

Current Study

The current study aims to test the effectiveness of a nine session course aimed at reducing students' PSA levels by providing opportunities for students to practice speaking in front of an audience (i.e., the rest of the course attendees). The students were from the Psychology department of a research-intensive institution in the North of England (UK). Students were in the first year of a three-year Bachelor of Science degree in Psychology, and the course on public speaking was optional for students. They received no payment or course credit for attending the course.

The course was designed so that students and staff did not need to invest a significant amount of time to the course (and potentially take their efforts away from their usual studies/duties) and was also designed to be run by instructors who were not trained in any specific intervention. The course was designed around a simplified version of systematic desensitization and the suggestions of Witt and Behnke (2006), whereby the initial sessions were low-anxiety contexts and the latter sessions, high-anxiety contexts. Specifically, it

provided opportunities to speak in public which ranged from informal talks to small audiences in the initial sessions to more formal talks to larger audiences in the latter sessions.

The course also included an element of self-reflection. Self-reflection is an important part of becoming a self-regulated learner (Zimmerman, 2002) and enables students to reflect on their abilities and on what they have learned, which has been shown to contribute to an increase in self-regulation and therefore enhanced performance (Cazan, 2013). Self-regulated learning has been defined as "actions and processes directed at acquiring information or skill that involve agency, purpose, and instrumentality perceptions by learners" (Zimmerman, 1989, p.329), meaning self-regulated learners are more likely to use strategies such as self-evaluation, record keeping and monitoring, and goal setting and planning. Students who possess the skills and ability to self-regulate their learning effectively tend to perform better academically (Zimmerman & Martinez-Pons, 1990).

Students were encouraged to reflect on their experience of the course and to share with each other the strategies they had learned to cope with PSA. Levels of PSA were measured before the start of the course and again at the end of the course from both course attendees and a sample of students which acted as a control group and thus did not sign up for the course.

Method

Participants

Prior to the first session of the public speaking course, 86 students signed up for the course and completed the questionnaire. Just before the first session, 58 students who did not sign up for the course completed the same questionnaire and acted as a control sample. Fifty-nine students withdrew from the public speaking course at some point over the nine sessions and 38 students of the control sample did not complete the follow up questionnaire at the end of the course. This led to a final sample of 47 students: 27 students who completed the public speaking course (Time 1 [T1] Mean age = 19.18 years, SD=0.96; 92.60% females) and 20 students who formed the control sample (T1 Mean age=19.06 years, SD=0.90; 90.00% females).

Design

The study employed a mixed measures design in which the between subjects IV was grouping (course attendees or control group) and the within subjects IV was the two time points. The DVs were the two measures of PSA.

Table 1
Outline of the Course Content for Each Week of the Course, and the Duration of Each Session

Term	Session	Title of Session	Session Activities	Duration of Session
1	1	Introduction	Outline of the course and tips given on how to prepare for a presentation, students wrote down one thing that made them anxious about speaking in public Students in a group of four and each talked about themselves for 1 minute	1 hour
	2	Informal Talk 1	Students sat in a group of four and delivered a 1-2 minute talk about a topic of their choice	1 hour
	3	Informal Talk 2	Students sat in a group of ten and delivered a 1-2 minute talk about a topic of their choice	1 hour
2	4	Formal Talk 1	Students in a group of four and delivered a PowerPoint presentation on a topic of their choice. Students stood at the front of the group to present	20 minutes
	5	Formal Talk 2	Repeat of session four but to an audience of ten	30 minutes
	6	Formal Talk 3	Students presented a 2 minute PowerPoint on a topic in Psychology (their own choice) to an audience of ten	30 minutes
3	7	Reflection and preparation for group presentations	In groups of five, students were encouraged to reflect on their experience on the course so far and to share with each other what they found difficult about speaking in public and how they had learned to cope with nerves over the duration of the course Students were asked to write down one piece of advice they would give to somebody who feels nervous about presenting (these were returned to the course facilitators) Students worked in groups of five to prepare a 5 minute presentation on an academic article (the articles and Powerpoint slides were provided by the facilitators)	1 hour
	8	Group presentations 1	Students took part in a group presentation in a lecture theatre. The group comprised of 5 students. Students used a microphone and presented to an audience of 15 people	30 minutes
	9	Group presentations 2	Course facilitators presented the fears reported in session 1 and the most common pieces of advice that students completed during session 7 Students presented as in session 8 but to a larger audience of 25 people	1 hour
		Total time for students		6 hours 50 minutes

Procedure

Within the first two weeks of the term (October), all first-year undergraduate Psychology students (N= 226) were offered a place in the public speaking course. Students were advised that this course was optional and not a required part of their degree program. They were also informed that the course was not designed to provide any degree of treatment for anxiety issues but was designed to provide opportunities to practice speaking in public across nine sessions which could potentially reduce PSA levels. After the initial invitation to join the course, students who had signed up for the course completed the questionnaire. The remainder of the cohort who did not sign up for the course were also asked to complete the questionnaire to act as a control group.

Students who had signed up for the course then completed the nine sessions across eight months of the academic year (three sessions in each of the three terms). The course was designed so that students were required to speak in public in an increasingly formal way and to larger audiences as the sessions progressed. To reduce the effect of people becoming familiar with their audience and hence the experience becoming less anxious (Duff et al., 2007), students were not in the same group for each session (i.e., group members were different for each session wherever possible). A detailed explanation of the content of each of the sessions is shown below (Table 1). At the end of the course students who had remained in the course completed the questionnaire again. Those who had acted as a control group at the start of the course were contacted again to ask them to complete the same questionnaire. This enabled us to have data from the control group at the two time points (before and after the course). The data for time 2 (i.e. the "after" data) were collected within a week of the final session of the course.

Measures

Two measures were used to ascertain levels of PSA. Both measures are designed to measure the cognitive element of PSA through self-reports. These were chosen for two reasons. First, we wanted to gauge students' own subjective perceptions of their anxiety (rather than taking objective measures such as heart rate etc.). Second, we were interested in measuring the cognitive element of PSA since it has been reported that cognition is an important predictor of PSA (Bodie, 2010).

Audience Anxiousness Scale or AAS (Leary, 1983). This measure consists of 12 statements (e.g., "I usually get nervous when I speak in front of a group") with two items which are reverse scored ("I enjoy speaking in public," and, "I don't mind speaking in front of a group if I have rehearsed what I am going to

say"). Participants indicated the degree to which they felt these statements were characteristic of them by responding on a 5-point Likert scale ranging from "Not at all like me" (scored as 1) to "Extremely like me" (scored as 5). Reliability analyses showed that this scale was reliable at T1 (α=.94) and at T2 (α=.93).

Personal Report of Communication Apprehension or PRCA-24 (Levine and Mccroskey, 1990). The public speaking subscale from this measure was used with slight re-wording (the wording 'a speech' was replaced with 'an oral presentation'). This scale consists of six items (e.g. "My thoughts become confused and jumbled when I am giving an oral presentation"), three of which are reverse scored (e.g. "I have no fear of giving an oral presentation"). Participants indicated their level of agreement with these statements on a 5-point Likert scale ranging from "Strongly Disagree" (scored as 1) to "Strongly Agree" (scored as 5). Reliability analyses showed that this scale was reliable at T1 (α=.88) and at T2 (α= .85).

Results

A Mann Whitney test was carried out to test for differences between those students who remained on the course and those who withdrew from the course to ensure there were no differences in baseline PSA. The analysis showed no difference between the two groups on the AAS measure (U = 524.50, z = -0.36, p = .716) and on the PRCA-24 measure (U = 528.00, z = -0.32, p = .748). The median scores for each group for each measure are shown below (table 2). This demonstrates that the people who decided to withdraw from the course did not feel significantly more or less anxious about public speaking than the students who remained on the course.

In order to test for differences between the course attendees and the control group at the beginning of the course and at the end of the course, two 2 (time point) x 2 (group: control, course attendees) mixed ANOVAs were carried out with the dependent variables being the AAS and PRCA-24 scores in each respectively. The mean scores for each group and at each time point for the AAS and PRCA-24 are shown below (Figures 1 and 2).

For the AAS, there was a significant main effect of time, $F(1,45)$=10.99, p =.002, r = .45, significant main effect of group, F $(1,45)$ = 11.64, p =.001, r = .46 and significant interaction, $F(1,45)$ = 5.49, p <.001, r = .33. Pairwise comparisons showed that there was a significant difference between the two groups at T1, $F(1,45)$ = 25.15, p<.001, r = .60 but no significant difference at T2, $F(1,45)$ = 0.93, p =.339, r = .14. The scores for the course attendees reduced significantly between T1 and T2, $F(1,45)$ = 29.75, p <.001, r = .64 but remained stable for the control group $F(1,45)$ = 0.10, p =.750, r = .05.

Table 2
Average PSA Scores of Students who Remained in the Course and Those who Withdrew

Group	AAS score Median (IQR)	PRCA-24 score Median (IQR)
Students remaining on the course (n=27)	4.08 (1.50)	4.17 (0.67)
Students who withdrew from the course (n=59)	4.00 (1.33)	4.00 (0.67)

Figure 1
Mean AAS scores for course attendees and the control group pre- and post-course
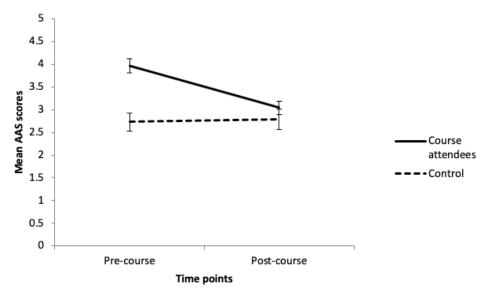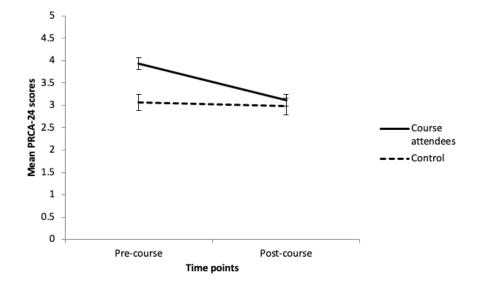

Figure 2
Mean PRCA-24 scores for course attendees and the control group pre- and post-course

For the PRCA-24, there was a significant main effect of time, F (1,45) = 22.96, p <.001, r = .59, significant main effect of group, F (1,45) = 5.74, p =.015, r = .34, and significant interaction, F (1,45) = 15.40, p <.001, r = .51. Pairwise comparisons showed that there was a significant difference between the two groups at T1, F(1,45) = 16.16, p<.001, r = .52 but no significant difference at T2, F(1,45) = 0.31, p =.581, r = .08. The scores for the course attendees reduced significantly between T1 and T2, F(1,45) = 44.63, p <.001, r = .71 but remained stable for the control group F(1,45)=0.33, p =.570, r = .09.

These analyses demonstrate that for both measures of PSA (i.e., the AAS and the PRCA-24), the course attendees scored higher in PSA at the start of the course, but by the end of the course their self-reported PSA levels were comparable to the control group's PSA scores.

To test whether the course attendees' PSA levels remained at this level, a sub-sample of the course attendees (n=12) completed the questionnaire 4 months after T2. This showed that PSA levels did not significantly change between T2 and the follow-up questionnaire (p = .206 for AAS and p =.266 for PRCA-24).

Discussion

The aim of this study was to test the effectiveness of a course aimed at reducing students' PSA. The course significantly reduced the PSA levels of course attendees to a comparable level to that of the control group, as measured by two separate PSA measures. Moreover, in a sub-sample of these course attendees, levels of PSA remained at this lower level four months after the end of the course. This shows support for the suggestion that a relatively simple public speaking course can reduce the PSA levels of students.

Numerous strategies have been developed with the aim of reducing levels of PSA, and these include systematic desensitization, cognitive restructuring, visualization, and skills training (Dwyer, 2000). Many of these approaches require the facilitators to be trained and/or for the course attendees to invest a large amount of time in the course. The course assessed in the current study gave students opportunities to practice public speaking in a graduated way and in a supportive environment with no training required from the facilitators and with little time investment needed. It also allowed students the time to self-reflect on what strategies they had learned and to share these with other course attendees. Testing the efficacy of this study has shown that a simple approach to helping students who may struggle with this important employability skill does not need to involve a complicated, time-consuming course; being able to practice can provide students with the confidence comparable to that of their non-anxious peers to speak in public. Moreover, the investment of time required from both students and staff is kept to a minimum. Courses such as this can easily be integrated into students' current degree program, thus helping them to develop their employability skills.

The element of self-reflection in the course also seemed to work well. During the first seminar, student reports of key concerns about speaking in public were things such as, "I'm afraid I'll get embarrassed," "Everyone is watching you," "My voice wobbles," and "I go really shaky and red." After several sessions and during the self-reflection stage, students reported, "Practise makes everything easier," "It will NEVER be as bad as you think," and, "Everyone else probably feels the same." They had also developed personal methods such as, "Take your time and breathe," and, "Make sure you're well prepared." From these quotes, it can be seen that although students acknowledged their anxieties, they had learned strategies to cope (e.g., practising, breathing, being prepared). In addition, the experience of presenting and then reflecting had helped them put public speaking in perspective (e.g., other people feeling the same). The element of self-reflection is therefore an important part of the course, in allowing students to take stock and record what they have learned, thus leading to a potential change in how they view public speaking. As Mezirow (1997) points out, "Self-reflection can lead to significant personal transformation" (p. 7) and it can help people to reassess their own beliefs and ideas.

One limitation of this research concerns the high degree of attrition. Of the 86 students who signed up for the course, only 27 completed the full program. Therefore, the possibility cannot be discounted that students who did not feel that they were experiencing any benefit from the course would be more likely to discontinue. However, dropout is also likely to occur due to increasing course demands rather than any systematic dropout from students not making progress in the course. As this course was offered to students in the first few weeks of their degree, students are likely to have been highly motivated to sign up for this extracurricular activity, but they may have then discontinued once the demands of the undergraduate degree become apparent. Although the work demands and time commitments in this course were kept to a minimum, future instructors may wish to see if a full course of nine sessions is required. If reductions in public speaking anxiety can be achieved with fewer sessions, this may lead to a higher number of students completing the course and subsequently a reduction in attrition.

A further limitation is that the students who attended the course were self-selected. This might imply that these particular students were more motivated to acquire skills

to manage their PSA and/or were more motivated to become more confident in public speaking (Dwyer, 2000). However, these types of courses can only ever be voluntary: students cannot be forced to take a course, regardless of their PSA levels. This might be a problem for students with very high PSA, particularly since there is some suggestion that PSA predicts behaviors related to withdrawal and avoidance (Pribyl et al., 1998). Hence, students with very high PSA may withdraw from or avoid opportunities aimed at helping them to overcome difficulties with anxiety in relation to public speaking. The fact that the majority of course attendees in the current study were not typical of people with very high PSA scores is reflected in the scores at time point one. The average PSA scores at T1 of course attendees were 3.96 and 3.94 for the AAS and PRCA-24 respectively where a maximum score of 5 is possible on both measures. There was a very small number of attendees who scored 4.70 or higher at T1 on these measures (five attendees on the AAS and two attendees on the PRCA). Further work, therefore, needs to be done to encourage students who experience very high PSA to consider attending courses which could help them manage their anxieties. However, this needs to be done with care. Students who report very high PSA may also have general anxiety issues which require intervention from trained professionals (e.g., clinical psychologists), and so staff should be conscious of their own limitations in helping students overcome their fears of speaking in public.

The current study provides some evidence that a simple course offered to students who experience anxieties relating to public speaking can be effective in reducing these anxieties. Providing students with graduated opportunities to practice this skill, as well as encouraging self-reflection while at the university, could help students develop their employability skills, making them more attractive to potential employers by the end of their degree. Moreover, the present study shows that the course does not need to be complex and does not necessarily require trained staff to run the courses or for existing staff to be trained. This might be particularly attractive to universities when thinking about how best to support their students in preparing them for their futures.

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