

The introduction of a Peer Assisted Learning Scheme into the Forensic Science Classroom

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Abstract

It is evident in teaching the law modules on a BSc in Forensic Science programme that many science students, while talented at scientific reasoning and numeracy, are more challenged in developing the same level of skill in their language and literacy.

To try to address this and avoid these students being disadvantaged in their academic performance and subsequent employability, a peer assisted learning scheme was piloted, as a part of a teaching fellowship sabbatical.

The scheme introduced level 6 journalism students into the level 5 forensic science classroom to mentor the forensic science students in student co-created writing workshops. The delivery of the workshops took place within an existing core module, that of Research Methods and was linked with a new assessment. This was supported by talks from potential employers, alongside sessions from the university's in-house employability team.

The aim of these was to highlight the need for the development of good communication skills in achieving success in the graduate recruitment process (and so promote student engagement)

The efficacy of the scheme has been measured to date, by student evaluation questionnaires. In due course, it will be able to be measured by level 6 module performance, degree classifications and graduate outcomes. Early feedback suggests some positive trends.

Key words: Employability, science, writing, cross-discipline, peer mentoring

1. Introduction

The graduate employment market continues to be challenging. A recent report from Bloomberg UK states that "Graduates preparing to leave Britain's universities are facing the toughest job market in years, with fewer spots available and wages for these posts lagging a jump in the cost of living" [1] demonstrating that this is unlikely to change for some time.

Across the globe, employers rate good communication skills as highly as professional skills, as shown in the work of Gray, Emerson and Mackay [2] who add that "One hundred percent of responding science employers agreed that good communication skills were in the top five qualities they sought in new hires."

Despite this, the same study reports that (New Zealand) employers do not often find science graduates demonstrating the desired level of those skills.

It has been evident in teaching forensic science undergraduates that the students do find writing well much more challenging than completing numerical or scientific exercises.

The primary aim of this pilot scheme was to enhance these skills to enable the students to develop greater confidence in their work, enjoyment in their studies, achieve greater success in their assessments and degree classifications, and most importantly, to have greater employment opportunities available to them, as the writing skills acquisition would lead to a better performance on the initial recruitment assessments (often as online literacy and numeracy tests) of any prospective employer.

The benefits of peer assisted learning schemes have been known for some time and that “.... in the specific area of writing skills, successful students are better equipped and better placed than lecturers to pass on these skills to novice students in a peer-facilitated environment....” [3]

Accordingly, it was decided to pilot a peer assisted learning scheme using journalism student mentors to enhance the writing skills of undergraduate forensic science students to better equip them for future employability.

Level 5 undergraduate forensic students were chosen for the pilot to ensure that there would be enough time for the students to benefit from the writing activities as the timetable for graduate recruitment usually commences in the autumn of the final year of undergraduate study (level 6).

Journalism students were chosen as mentors due to their propensity to write well. The nature of their studies means that the students are very familiar with writing to a strict word count in writing copy, writing with structure and adept at writing for different audiences. Given the nature of the role of the forensic scientist, in reporting scientific findings (including to a non-scientific audience in the form of a jury in the Crown Courts of England and Wales), these were compelling characteristics as a choice for student mentorship.

Additionally, the journalism students are media savvy which was helpful for the construction of LinkedIn profiles and CVs in the final workshop.

2. Method

2.1 Phase One: Determining interest in the pilot

This part of the pilot study involved the level 5 students receiving a written survey to assess their potential engagement. 42 responded.

The students were asked in this initial survey to rate their likelihood of attending a writing workshop, giving a score of between 1-10 where 10 represented the greatest likelihood and 1, the least.

The responses were that twenty of the forty-two students replied in the affirmative, awarding a 9 or a 10 to the question that they would be likely to attend a writing workshop with only four students giving a score which was below 5.

Having determined that there was a good level of interest in the pilot, the next stage was to identify more clearly the specific support required.

2.2 Phase Two: Specifying workshop content

Students received lectures on spelling, grammar, and punctuation and asked where they felt they needed the most support.

72% felt they needed the most help with structuring their work while subsequent discussions and additional responses also demonstrated that the students felt that they needed support with -

1. Writing succinctly (including writing to a word limit)
2. Writing with structure and clarity
3. Writing for different audiences (particularly important for forensic science students who need to convey an understanding of scientific terms and concepts to the lay persons of the jury in the Crown Courts of England and Wales) and
4. Writing to a brief.

Four writing workshops were designed under these headings, and all set within the context of forensic science so students could see the relevance to their chosen subject.

2.3 Embedded delivery

Workshops were embedded into an existing core module of the undergraduate programme, (Research Methods), and linked to a new assessment to further encourage participation from the students. The new assessment included a reflective statement so giving the students, enhanced confidence and understanding of the relevance of the skills they had acquired for their future employment.

2.4 Two Additional Components of the Pilot

Student engagement in the workshops was supported by talks from employers, postgraduate course directors and from the university's in-house employability team to help the students learn how to showcase their strengths, adopt the mindset of being a professional forensic scientist and raise the students' awareness of the employers' desire to observe good communication skills in their recruits.

Students rated these sessions for enjoyment and value of between 40% for the employer from industry and 100% for the talk from the London Metropolitan Police Officers.

2.5 Phase Three: The Structure and Content of the Four Writing Workshops

All the workshops began with a short lecture from a journalism lecturer, introducing the students to the skill which was the focus for the given session followed by the small group writing activities. The student groups were composed of approximately six level 5 forensic science students and one level 6 journalism student mentor, and each session was timetabled for 2/3 hours.

Students were asked to complete a paper questionnaire to evaluate their experience of the workshop.

3. Results and Discussion

Responses from the Student Evaluation Questionnaires are presented in Figure 1.

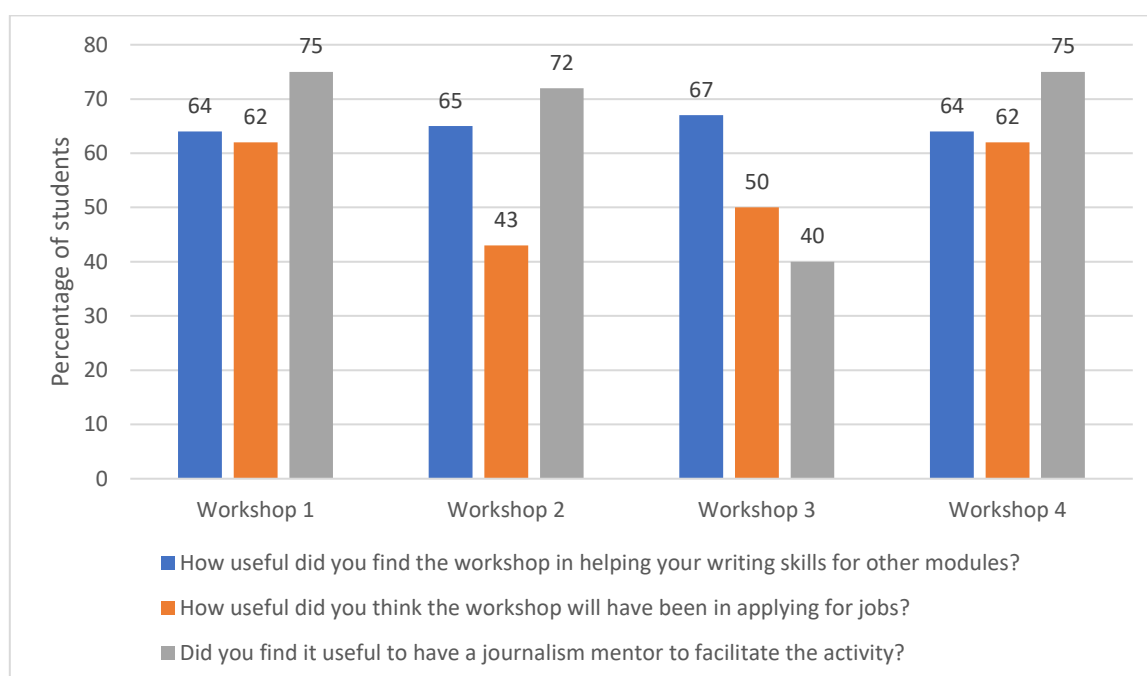


Figure 1. Percentage of student respondents giving 4 or 5 in answer to the questions shown (where 5 shows the strongest agreement), exact percentages being shown above each column.

A fourth question was then posed to the students, being “Did you enjoy the workshop?” and the lowest response agreeing with this was 93% for the first workshop and for one workshop, over 100% of participants agreed.

Students also provided qualitative comments which reflected their experience of the workshops. These included:

“I feel I gained useful skills in writing to a short word count.”

“Yes, they knew exactly how to minimise waffling when writing, keeping it concise and to the point.”

“E helped engage students that would normally observe. He offered suggestions and encouraged the exchange of ideas.”

“I think we should always have an example session pre-exam or pre-coursework. Like this.”

One of the participants wrote the following:

“I wanted to say that your career talks and (writing) workshops have helped massively. I went into this course adamant that I wanted to have a career in forensics but I couldn't find an area of forensics that I knew I would enjoy. I also thought that policing was definitely not for me. However, we had the Met Police come in for the outreach event and it completely changed my mind. I felt like I had finally found the career I wanted to do!... So thank you for putting these lectures on, they have really helped massively!” (March 2022)

This student was subsequently offered a job in digital forensics and has acknowledged the instrumental role that the workshops had in helping her achieve this.

The results of these workshops have shown that peer assisted learning with mentorship from students of another discipline can enhance students' confidence and enjoyment in their studies and positively impact on their motivation to learn and consequently, their employability. However, there were some challenges in delivering the workshops.

The first challenge was that of the timetabling of the sessions and co-ordinating with colleagues across the two different subject areas. The second challenge was reassuring both student cohorts about their respective strengths and weaknesses. A third challenge was presented by Covid 19 due to the sessions taking place face to face and participants and employers, having to self-isolate on occasion due to mandatory restrictions. This necessitated a high degree of adaptability particularly given that these absences were often at very short notice.

3.1 Future Directions

Once the cohort has graduated, performance and employment data will be analysed to determine the level of statistical support for this pedagogical innovation.

In the meantime, it is intended that the writing workshops, along with the new assessment will continue to be retained within the Research Methods module and will be adopted into a level S module of a foundation year of a suite of science undergraduate programmes from September 2023.

A final consideration is that the pilot could be flipped in the future with the forensic science students mentoring the journalism students in activities which enhance their numeracy and scientific skills.

References

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