

Developing professional identity in biomedical science: Face-to-face marking of an assignment as a “space of influence”

In preparing university students for a complex and unknown future, the introduction of variety in learning spaces is deemed important, including diversity in assessment strategies (Cherry, 2005). In an Honours level bioscience module we shifted from summative assessments at the end of the module to a variety of assessments throughout. In one of these, students were offered the option of being present with the lecturer when their work was marked, and receiving immediate verbal feedback (“face-to-face marking”). This approach was inspired by a Times Higher Education report (2013) and participating students and staff expressed positive views of the experience (Chalmers & Mowat, 2015). There may be misalignment between student expectations of feedback and what is provided by teachers (Orsmond & Merry, 2011) and so, in evaluating our initiative we also explored student views of feedback.

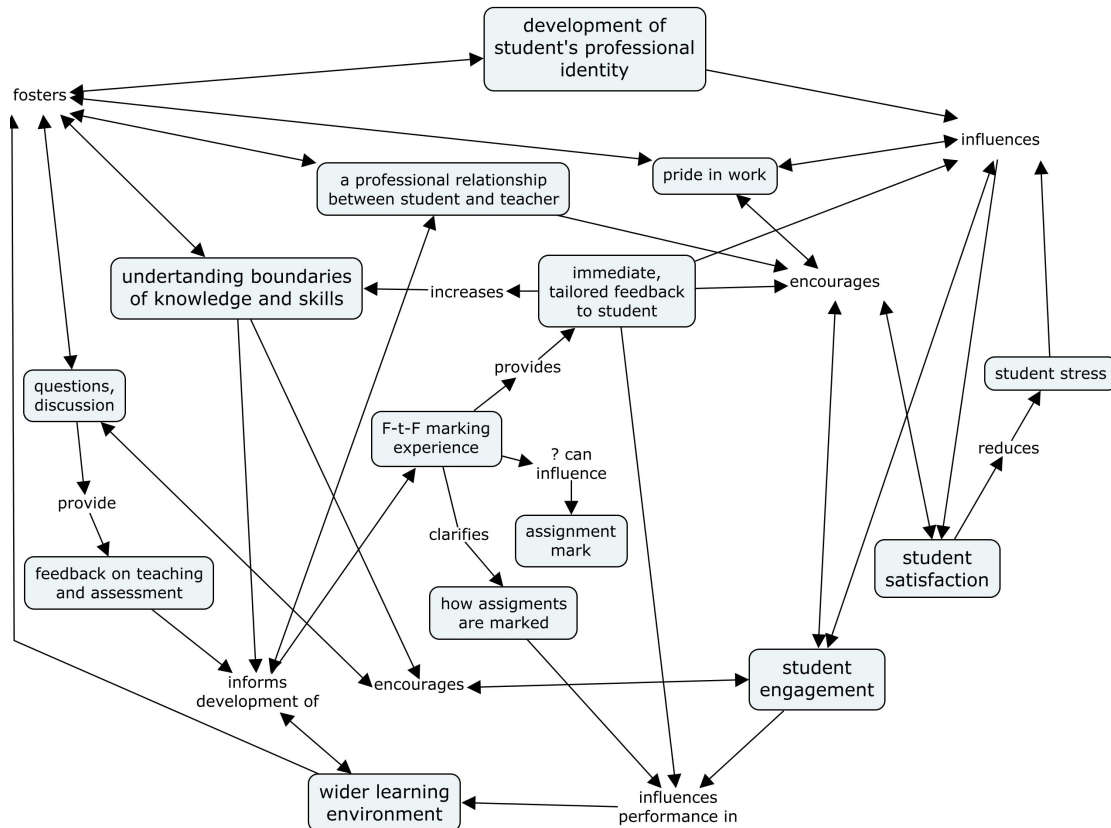
Face-to-face marking: development in partnership with students

In the summative assignment students were asked to summarise and critically review an original research article, highlighting an area that was of particular interest to them. In the first year of offering face-to-face marking, students were informed that this was a new initiative, and there was a discussion about the approach in the classroom. Students were asked to provide written responses, anonymously, to the questions “How will you (the student) know whether this has been a worthwhile exercise for you?” and “How will I (the lecturer) know whether this has been a worthwhile exercise to be offered again next year?”. The expectations of the students were used to develop evaluation tools in order to gather feedback and ideas from participants immediately after the face-to-face marking experience, and from participants and non-participants later in the module. Some of the evaluation questions were quantitative (6-point Likert scale) and some qualitative. Three cohorts of students between 2013 and 2015 have been offered the opportunity to be present while their assignment was marked. Of a total of 168 students, 88 (52%) participated, of whom 98% had never previously experienced face-to-face marking. Two students in an Erasmus exchange programme reported having a similar experience in their home country. Student feedback was used to modify the structure of the assessment; for example, rather than the student being present the entire time, in the third year the lecturer first read through the assignment in order to appreciate the scope of what the student had written.

All participants completed the first evaluation immediately after the marking experience and all recommended face-to-face marking as a worthwhile activity. The second evaluation took place at least 3 weeks later and was completed by 48% of participants and 42% of non-participants.

Emerging themes: developing professional identity

Those who had not experienced face-to-face marking were more likely to prefer anonymous feedback: 48%, compared to 22% of participants agreed with the statement “I prefer anonymous to face-to-face feedback” (Chi-square 5.336, df 1, P=0.0209). Responses across the other questions were similar between the two groups and, along with qualitative data, were used to construct a concept map that summarises the emerging themes:



Student comments indicated that the feedback would help in their future careers: “it is worthwhile because you can learn how to write scientific articles” and “it also provides an opportunity to identify areas of improvement which can be applied in employment, post-graduation.” Many of the students referred to the tailored nature of the feedback in their written comments: “it allows student and teacher to interact”, there are “personal conversations and feedback”, “you can ask questions” and “feedback received is much more constructive (than written feedback)”. The teacher also reflected on the collegial nature of the discussions. Some of the student comments more specifically highlighted the impact of the experience on their professional development: “it makes you improve as a scientist”. The students in the first cohort, while developing the evaluation tool, had suggested that this might be an important outcome “creating a professional relationship between student and teacher”. This may have influenced the view of most of the students (62%) that face-to-face marking is most beneficial for students later in their studies. However, 80% agreed that face-to-face marking should be available in first year of university, “so they know what is expected from them at an earlier stage”.

Discussion: learning to be a biomedical scientist

In education there has been a shift to encompass situated perspectives (Barab & Duffy, 1998; Hodkinson, Biesta & James, 2008) and from use of an “acquisition” to a “participation” metaphor for learning (Sfard, 1998). The ability to critically read the literature, place it in a wider context and explaining and negotiating its meaning with other scientists and the wider public are essential skills for a biomedical scientist. Having recognised that learner approaches in the biomedicine learning environment were tending to focus on acquiring knowledge and concepts, we introduced an assessment approach that encourages feedback and reflection on the skills of critical reading and writing. In doing so we encouraged the students as legitimate peripheral participants in a community of practice (Lave & Wenger, 1991). That is, the assessment was a learning opportunity that supported *being* in the community of biomedical scientists.

Turning an assignment into an opportunity to have a conversation with the student encouraged a more reflective, approach to science writing. It also provided the social space in which discussions of professional development could emerge. The concept of identity is central in professional development and is formed “*through negotiations between personal and socially derived imperatives*” (Nyström, 2009, p.1). Identity transformation can be conceptualized as an intercontextual process involving the context of meaning construction by individual learners and the relational or situated context of a professional community (de Weerd et al., 2006). Barrow (2006) argues that assessment incites students to develop, consider and disclose to the lecturer, links between their intellect and character, which allows the lecturer “*the potential to lead students to construct themselves in a manner appropriate for a complex contemporary State*” (Barrow, 2006, p.1). Green (2005) explores the notion of “spaces of influence” which occur when an “influential other” engages in active listening with learners. We suggest that this assessment strategy, in addition to evaluating the student’s “doing” according to the norms of the discipline, can be used as a space of influence to encourage the student’s “being” in the discipline.

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