Radiography students' preferences regarding assessment and feedback

A. Oh[1], I. Williams[1] & Y. Hodgson[2]

Abstract

Introduction: Assessment and feedback are important aspects of higher education. In allied health degrees, including radiography, the successful completion of assessments demonstrates that a graduate meets accreditation standards for clinical practice. Feedback within a degree program provides critical information to students on their attainment of these skills. Using a framework of discourse, emotion and identity, this study investigated the preferences of radiography students regarding the assessments and feedback they experienced during their degree program at an Australian university.

Method: A survey was administered to all radiography students. Students were asked to rank the assessment tasks and feedback they experienced during their degree program according to what they liked most and learned the most from. Final-year students were asked an additional question about their perceived readiness to meet professional standards.

Results: The survey was completed by 129/264 (48.9%) students. The assessment most liked by students was computer-based image analysis (mean 4.99/6.00) while practical assessment was ranked as the assessment that they learned the most from (mean 4.12/6.00). These types of assessments are strongly related to professional identity. Feedback preferences differed depending on the setting—detailed written comments were most preferred on campus (mean 4.88/6.00) while individual verbal feedback was most preferred in the clinical context (mean 4.54/6.00). Discourse is an important aspect of these types of feedback. Final-year students gave positive ratings of their preparedness to meet professional standards.

Conclusion: Our findings provide a greater understanding of radiography student preferences in assessment and feedback, which can guide future curriculum design. Students valued and preferred assessments that related to professional identity and real-

1 Faculty of Medicine, Nursing and Health Sciences, Department of Medical Imaging and Radiation Sciences, Monash University
2 Faculty of Medicine, Nursing and Health Sciences, School of Biomedical Sciences, Monash University

Correspondence
Associate Professor Yvonne Hodgson
Department of Physiology, Faculty of Medicine, Nursing and Health Sciences
Monash University
Victoria 3800
Australia
Tel: +61 3 9905 59713
Email: Yvonne.hodgson@monash.edu

ISSN 1442-1100

life radiography skills. Students' preferred form of feedback was dependent upon the learning environment.

Keywords: student preferences; assessment; feedback; curriculum development.

Introduction

In allied health education, the successful completion of assessment tasks demonstrates that a graduate possesses the minimum knowledge and skills required to operate as a qualified practitioner (Norcini et al., 2011). During a degree program, assessment guides the learning process and gauges student understanding (Boud & Associates, 2010).

Trends in higher education research have seen a shift towards greater student involvement in curriculum and assessment design (Matthews, 2017). This necessitates that students and academic staff become responsible partners in learning and assessment, where mutual dialogue and interaction optimise the curriculum and learning (Boud & Associates, 2010; Falchikov & Boud, 2007; Herrmann et al., 2015). Studies have shown that many student cohorts express dissatisfaction with current assessment and feedback systems (Duong, Oyama, Smith, Narang, & Spector, 2015; Hall, Hanna, Quinn, 2012). The National Student Survey (NSS), conducted across Australia and the UK, has found that students give low satisfaction ratings for assessments and feedback in their degree programs (HEFCE, 2010; Radloff, 2010). However, the assessments and feedback that students favour may not correlate with those that contribute most to their learning. A study of medical students by Boehler et al. (2006) found that satisfaction ratings were more commonly related to the amount of praise received rather than the learning that had occurred. This highlights the important role that staff discourse and student emotion may play as determinants of student satisfaction with regards to assessment and feedback (Carless, 2006; Higgins, 2000). Carless (2006) suggested that the inclusion of "assessment dialogues" or discourses between students and staff may help mitigate the differences in perceptions of students and staff towards assessment and feedback. Assessments and feedback convey important messages to students about the university and about the student's own ability and confidence in learning. Students' feelings and emotions are, therefore, important considerations in the assessment and feedback landscape.

Studies have examined healthcare student perceptions of different assessment and feedback types (Amin, Kaliyadan, & Al-Muhaidib, 2011). The literature shows that healthcare students have been disappointed with the quality of both assessments and feedback (Hall et al., 2012). There is an inferred link between effective assessment design, quality feedback provision and improved student performance (Herrmann et al., 2015). Established pedagogical frameworks show that assessments that require students to formulate a unique response are associated with higher-order thinking and learning, while those that rely solely on memorisation are associated with superficial learning. Healthcare students have indicated a high preference for tasks that involve authentic assessments and encourage higher-order thinking. These types of assessment have tangible applications in real-life settings and help students develop their professional identity (Deane, Joyce, & Murphy, 2015; Graham, Zubiaurre Bitzer,

ISSN 1442-1100

Mensah, & Anderson, 2014). Radiography student preferences for assessment, feedback and learning tasks have not been widely studied. In this study, we use the modified framework of Higgins (2000) on "rethinking assessment feedback", employing the notions of discourse, emotion and identity, to explore radiography student preferences for assessment and feedback in the academic and clinical curriculum.

Aims

The aim of this study was to apply a three-factor framework of discourse, emotion and identity (Higgins, 2000) to the following research questions about the assessment and feedback preferences of radiography students:

1. What are radiography students' preferences (liking) for the types of assessment and feedback they experience in their degree program?
2. What assessments and feedback do radiography students value most for learning?
3. Do final-year radiography students feel that the assessment and feedback practices of their degree program have prepared them adequately for their professional career?

Methods

Research design

In this study, quantitative data were collected from an online survey (Appendix 1) delivered via SurveyMonkey. A weblink to the survey was emailed to all students enrolled in the Bachelor of Radiography and Medical Imaging degree program. Participation was voluntary, and responses were collected anonymously. This study was approved by the Monash University Human Research Ethics Committee (Approval number 200900/269.00.C5/2009).

The survey was developed based on key themes identified in a review of the literature and consisted of four main sections. The general structure of the survey was adapted from the validated study of Ferguson (2011), and the feedback options were directly influenced by the same study. In the first section (A), assessments in the degree were collated and categorised into broad groups. Students were asked to rank these in order of personal liking (A1) and learning from (A2). Students were then asked to give reasons for their ranking of the assessments for liking and learning from (B1–B2). In the following section of the survey, students were asked to rank feedback they experienced during the degree program (C) in terms of personal liking and learning from, and to then indicate the reasons for their highest and lowest ranking of these types of feedback (D). An additional question was included for final-year students, which asked them to rate their level of preparedness in five skill areas required to meet the standards of practice set by the Medical Radiation Practitioner's Board of Australia (2013). The survey was piloted for clarity, rigor and face validity by a group of six senior faculty staff. Following this process, the wording of one question was modified to remove ambiguity.

ISSN 1442-1100

Data analysis

Microsoft Excel and the open-source software GNU PSPP (https://www.gnu.org/software/pspp/) were used for the statistical analysis of the survey data. A Wilcoxon signed-rank test with a Bonferroni correction was used to determine differences between student liking and learning from, and a Friedman test was used to analyse the differences between reasons for ranking item types. Following this, the Wilcoxon signed-rank test was used to perform ad hoc analysis of statistical significance. The significant value was set at $p < 0.01$.

Results

The survey response rate was 52.3% (n = 138/264). Of the responses collected, 31.8% were from first-year students, 24.0% from second-year students, 24.8% from third-year students and 19.4% from fourth-year students. Eleven responses were found to be incomplete and were discarded from analysis.

Ranking of assessments

Assessment tasks experienced over the whole degree program were categorised into six groups. Student average ranking preferences for each assessment are shown in Table 1. The most-liked assessment type was computer-based image analysis (CBIA) (mean 4.99/6.00), with 76.0% of students listing it as their first or second preference. Oral presentations (OP) (mean 2.17/6.00) were ranked lowest, with 63.57% of students rating it as their least- or second-least-favoured assessment type. When students were asked to rank the same assessments in order of perceived learning, OP was also the lowest-ranked assessment (mean 2.10/6.00) while practical skills assessment (PSA) on campus (mean 4.12/6.00) was ranked highest. Statistically significant differences between student liking and learning (Figure 1) were noted for written assignments (WA) ($Z = -3.00$, $p < 0.003$), CBIA ($Z = -6.64$, $p < 0.0001$) and case studies (CS) ($Z = -3.15$, $p < 0.002$). Students ranked WA and CS higher for learning than for liking. In contrast, students gave CBIA a higher ranking for liking than learning from.

Table 1
*Mean-Ranked Scores for Each Assessment Type in Terms of Student Liking and Learning**

	Liking		Learning		
	Mean	SEM	Mean	SEM	*p*
Written exams	3.53	0.15	3.42	0.16	0.555
Written assignments	3.40	0.14	3.90	0.14	0.003
Computer-based image analysis	4.99	0.11	3.78	0.13	0.001
Practical skills assessment on campus	3.88	0.14	4.12	0.14	0.134
Case studies	2.95	0.13	3.46	0.16	0.002
Oral presentation	2.17	0.12	2.10	0.13	0.661

* The Wilcoxon signed-rank test was used to test for differences between liking and learning scores.

ISSN 1442-1100

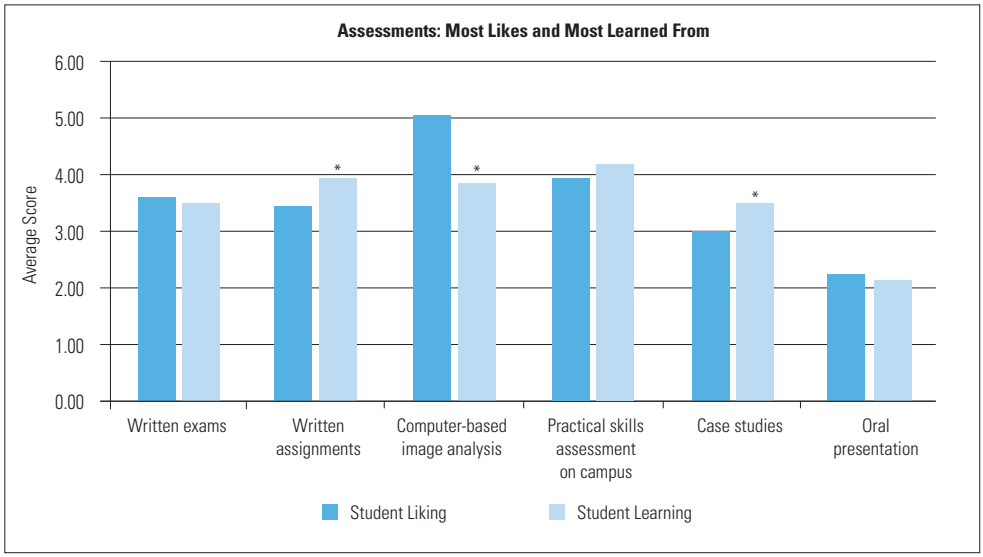

Figure 1. Average ranked score of most-liked assessments versus assessments most learned from.

* denotes $p < 0.005$

Reasons for assessment rankings

The reasons students gave to justify their highest- and lowest-ranked assessments are shown in Figures 2 and 3, respectively. The most commonly cited reason for a high ranking was "learned a lot" (Figure 2), while the most commonly cited reason for a low ranking was "learned little or nothing" (Figure 3).

Feedback in the academic environment

Student preferences for liking of academic feedback (on-campus study) and average ranking scores are outlined in Table 2. Detailed comments (DC) were favoured most (mean 4.88/6.00), with 69.0% of students ranking it first or second. Group verbal feedback (GVF) was least favoured (mean 2.00/6.00), ranked lowest or second lowest by 64.3% of students. When students ranked the types of academic feedback for learning, DC was ranked highest (mean 5.23/6.00) and a numeric mark (NM) was ranked lowest (mean 2.12/6.00).

Figure 4 contrasts the liking and learning scores of academic feedback types. The Wilcoxon signed-rank test showed statistically significant differences between student liking and learning for all academic feedback types except brief comments (BC). Students liked numeric mark (NM) and rubric marking (RM) more than they believed they learned from these (NM, Z = -5.79, p = 0.0001, two-tailed; RM, Z = -2.43, p = 0.015, two-tailed). However, students believed they learned more from DC, GVF and individual verbal feedback (IVF) than they liked these (DC, Z = -3.87, p = 0.0001, two-tailed; GV, Z = -3.60, p = 0.0001, two-tailed; IVF, Z = -3.41, p = 0.001, two-tailed).

ISSN 1442-1100

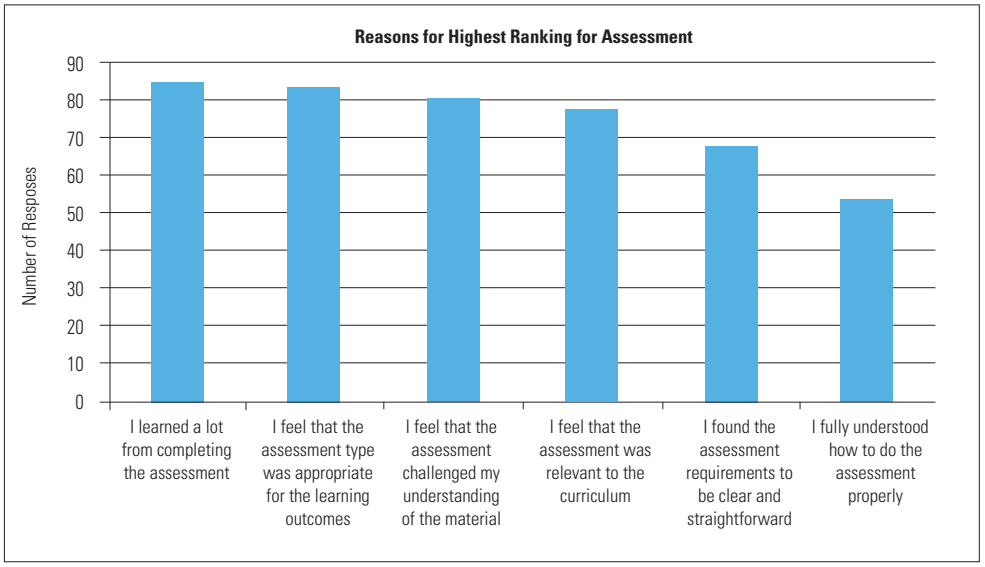

Figure 2. Distribution of responses when students were asked the reason for their highest-ranked assessment.

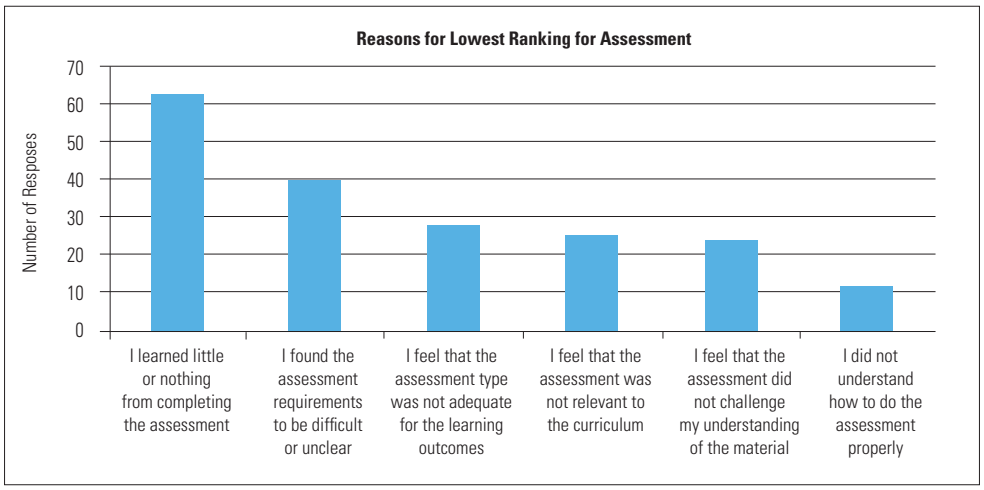

Figure 3. Distribution of responses when students were asked the reason for their lowest-ranked assessment.

ISSN 1442-1100

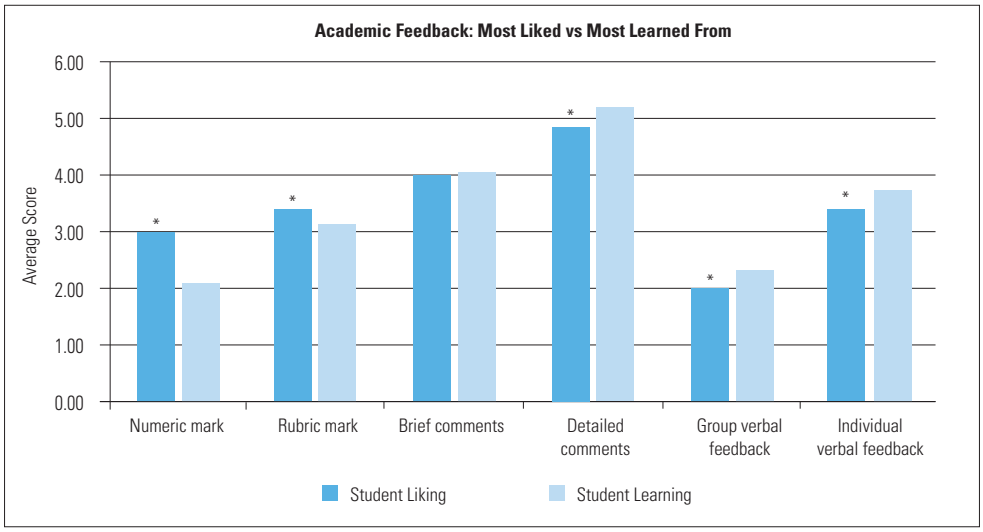

Figure 4. Average ranked score of the most-liked feedback versus feedback that students most learned from, in the academic environment.

* denotes $p < 0.005$

Table 2
*Mean-Ranked Scores for Each Academic Feedback Type in Terms of Student Liking and Learning**

	Liking		Learning		
	Mean	SEM	Mean	SEM	*p*
Numeric mark	3.03	0.15	2.12	0.12	0.001
Rubric mark	3.43	0.12	3.17	0.11	0.015
Brief comments	4.01	0.11	4.11	0.10	0.409
Detailed comments	4.88	0.12	5.23	0.09	0.001
Group verbal feedback	2.00	0.11	2.35	0.12	0.001
Individual verbal feedback	3.45	0.18	3.78	0.19	0.001

* The Wilcoxon signed-rank test was used to test for differences between liking and learning scores.

Feedback in the clinical environment

Table 3 shows student preference for feedback types offered on clinical placements. Individual verbal feedback (mean 4.54/6.00) was ranked highest for liking and the favourite- or second-favourite feedback type by 67.4% of students. IVF was the feedback type ranked highest for learning from (mean 4.57/6.00). Sixty-nine percent of students ranked IVF as first- or second-most learned from. GVF was ranked lowest by students in both categories, with a statistically significant difference between student liking and student learning from this feedback type ($Z = -2.17$, $p < 0.030$, two-tailed) (Table 3 and Figure 5).

ISSN 1442-1100

Table 3
*Mean-Ranked Scores for Each Clinical Feedback Type in Terms of Both Student Liking and Learning**

	Liking		Learning		
	Mean	SEM	Mean	SEM	*p*
Numeric mark	3.69	0.14	3.70	0.14	0.790
Rubric mark	2.47	0.11	2.32	0.10	0.092
Brief comments	3.92	0.11	3.85	0.10	0.289
Detailed comments	4.33	0.11	4.37	0.11	0.796
Group verbal feedback	1.60	0.11	1.78	0.13	0.030
Individual verbal feedback	4.54	0.18	4.57	0.18	0.492

* The Wilcoxon signed-rank test was used to test for differences between liking and learning scores.

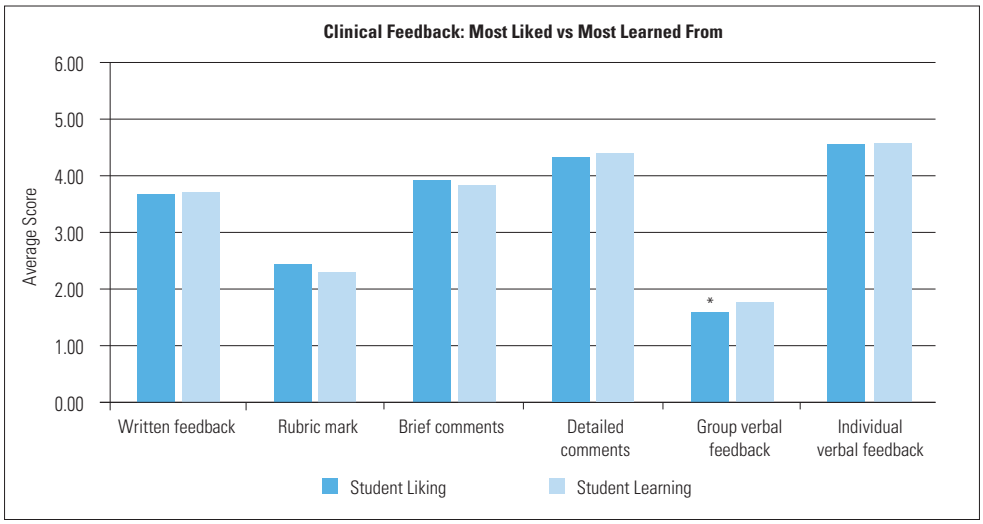

Figure 5. Average ranked score of the most liked feedback versus feedback that students most learned from, on clinical placements.

* denotes $p < 0.005$

Reasons for feedback rankings overall

The reasons students selected to justify their highest- and lowest-ranked overall feedback types are shown in Figures 6 and 7. The most commonly selected reason for giving a low ranking was "not enough feedback" (Figure 6), while "sufficient feedback" was the top reason for a high ranking (Figure 7). There were statistically significant differences between the reasons students gave for low ranking of feedback types (Table 4, χ^2 (2) = 65.60, $p < 0.0001$, two-tailed). Statistically, more students selected "not enough feedback" over all other types. There was also a statistically significant difference between

ISSN 1442-1100

"not relevant" and "arrived too late", with more students choosing the latter option (Z = -2.89, p < 0.004, two-tailed).

When students were asked to justify their high ranking of feedback types, there were statistically significant differences between the reasons they gave (Table 5, χ^2 (2) = 42.44, p < 0.0001, two-tailed). A statistically larger number of students selected "sufficient quantity" over "justified the mark" (Z = -4.91, p < 0.0001, two-tailed) and "arrived in time" (Z = -4.18, p < 0.0001, two-tailed).

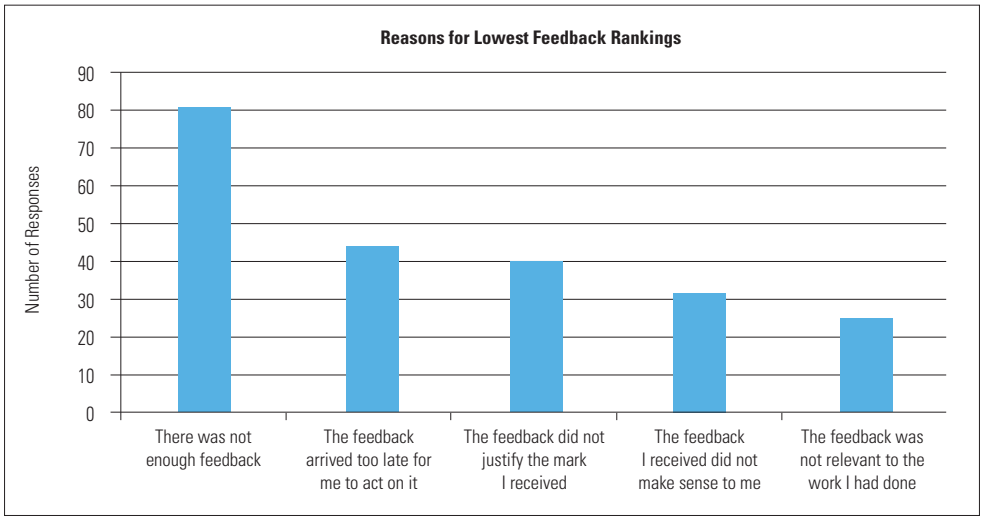

Figure 6. Distribution of responses when students were asked the reason for their lowest ranked feedback.

Table 4
Z-values from Wilcoxon Testing Between Reasons for Lowest Ranking of Feedback Types

A_H	–	–	–	–	–
B_H	-5.01*	–	–	–	–
C_H	-6.42*	-2.19	–	–	–
D_H	-5.90*	-1.18	-1.02	–	–
E_H	-4.37*	-0.69	-2.89*	-1.75	–
	A_H	**B_H**	**C_H**	**D_H**	**E_H**

A = There was not enough feedback.
B = The feedback did not justify the mark I received.
C = The feedback was not relevant to the work I had done.
D = The feedback I received did not make sense to me.
E = The feedback arrived too late for me to act on it.
* denotes p < 0.005

ISSN 1442-1100

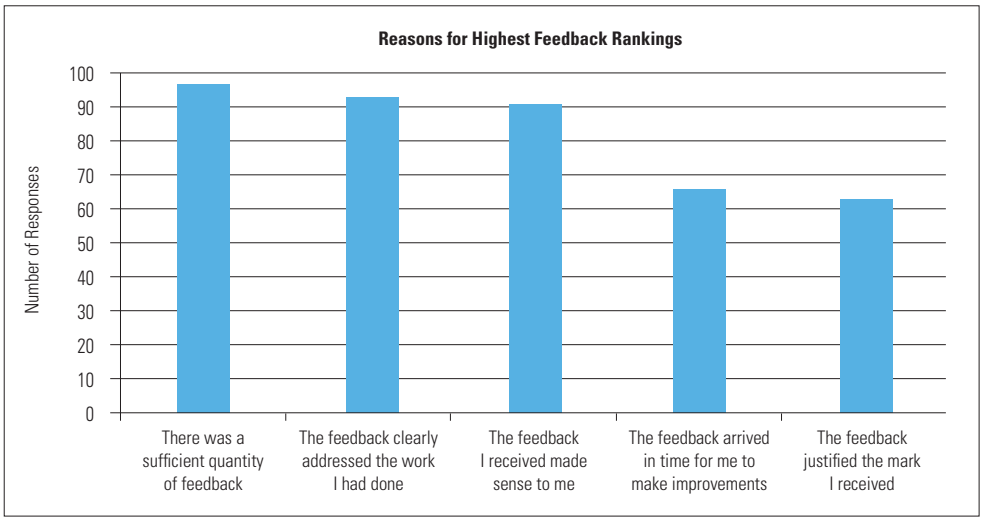

Figure 7. Distribution of responses when students were asked the reason for their highest ranked feedback.

Table 5
Z-Values From Wilcoxon Testing Between Reasons for Highest Ranking of Feedback Types

A_H	–	–	–	–	–
B_H	-4.91*	–	–	–	–
C_H	-0.69	-4.01*	––	–	
D_H	-0.97	-3.96*	-0.29	–	–
E_H	-4.18*	-0.38	-3.86*	-3.43*	–
	A_H	**B_H**	**C_H**	**D_H**	**E_H**

A = There was a sufficient quantity of feedback.
B = The feedback justified the mark I received.
C = The feedback clearly addressed the work I had done.
D = The feedback I received made sense to me.
E = The feedback arrived in time for me to act on it.
* denotes $p < 0.005$

ISSN 1442-1100

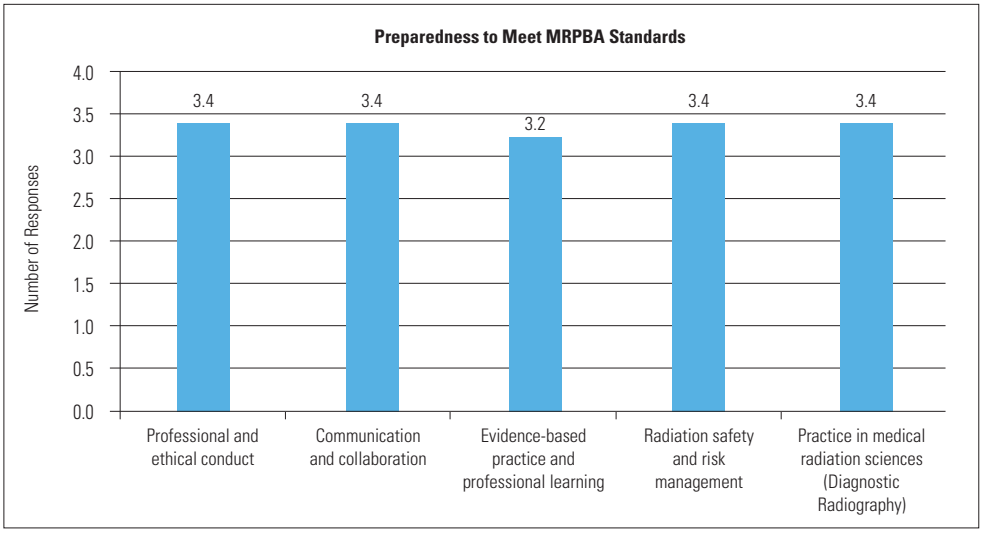

Figure 8. Distribution of final-year student average responses with regard to preparedness to meet the MRBPA standards for radiography practice (1 = not at all prepared; 4 = very prepared).

Discussion

This study evaluated student preferences for the types of assessment and feedback experienced over a whole degree program in radiography and medical imaging through a three-factor framework of discourse, emotion and identity (Higgins, 2000). Overall, students favoured computer-based image analysis over other types of assessment. However, when asked to rank the assessments in order of most learning, students gave a higher ranking to practical skills assessments. Both of these assessments are strongly and directly related to a sense of professional identity. Student preferences for feedback differed according to whether the work was undertaken on campus or on clinical placement. In the clinical environment, students preferred individual verbal feedback, indicating the high value they place on discourse between student and assessor. The reasons cited for preferring different types of feedback showed a commonality. Students preferred feedback that most supported their learning. This finding supports recent research that highlights the importance of dialogue for effective feedback (Carless, 2006).

Assessments

There were substantial differences in student preferences between assessment types. Computer-based image analysis was the assessment type most liked by radiography students. This assessment involves the online presentation of anonymised radiographs in a quiz format where students are asked to identify anatomical structures and to comment on the presence of abnormalities. Image interpretation skills are essential competencies for radiographers in the workplace. It appears that the students in our study recognise this and preferred assessments that showed a clear practicality and were linked to the

ISSN 1442-1100

development and improvement of radiographic skills. Radiography students preferred assessments that build their sense of professional identity. This observation highlights the importance of student professional identity in the design of assessment tasks.

While students gave computer-based image analysis the highest ranking for liking, it was not the highest-ranking assessment in terms of learning. Students ranked practical skills assessments on campus as the assessment type they learned the most from. This includes tests that assess radiographic competency, for example, the manual operation of imaging machines and other tests such as objective structured clinical examinations (OSCE). Students indicated that the reasons for giving high rankings to these assessments was, firstly, because they felt they had learned significantly from the assessments and, secondly, that the assessments were appropriate for the learning outcomes. These findings are in keeping with existing research that suggests that healthcare students prefer assessments that have practical applications in real-life settings, as they feel it better prepares them for the workforce (Deane et al., 2015). The positive rating for these types of assessments for learning is also supported by Jawaid, Masood and Jaheel (2014), who reported that students value the OSCE, in particular, as a test of clinical competence.

Despite being a common feature of healthcare curricula, written assignments and written exams received middle rankings by students for liking. The traditional model of learning semesters culminating in final exams that comprise a large percentage of the overall mark remains the norm in health education (Hagemeier & Mason, 2011). Written exams received a lower ranking for learning, while written assignments received a higher ranking for learning. Studies have found that students favour written assignments because of the flexibility that is involved in undertaking the assessment and because the activity leads them to search for additional resources and learning materials, which furthers their knowledge and understanding of the topic (Amin et al., 2011). Written assignments, once marked, are often handed back to students with written feedback. Research has shown that students rely on written feedback for further learning, self-improvement (Giles, Gilbert, & McNeill, 2014) and rectifying conceptual mistakes (Hall et al., 2012). The provision of feedback on written assignments and the lack of feedback on exams is one factor that may explain the reason why students gave a higher ranking to written assignments for learning. This observation supports the value of discourse between student and staff for student learning.

Oral presentations were the least-preferred assessment type, both in terms of student liking and perceived learning benefit. Previous studies have found that a high level of student anxiety is associated with oral presentations (Schmidt et al., 2014). Anxiety is a negative emotion and illustrates how emotions can play a role in the preferences of students regarding assessments. A study by Duong et al. (2015) found that an overemphasis on the marking criteria was detrimental to this assessment type for learning. Oral presentations, however, have been shown to play an important role in developing clinical reasoning and decision-making skills (Melvin & Cavalcanti, 2016). Given this fact, attention should be directed towards improving student comfort so that the full potentialities of using oral presentations can be achieved.

ISSN 1442-1100

The most common reasons students gave for ranking assessment types either high or low were both related to the amount of learning that had occurred. Students gave the second-lowest ranking of assessment type to case studies, but they felt that they had learnt more from this assessment than they liked it. The traditional case study has been shown to be extremely helpful towards cultivating clinical competency and confidence in making professional judgements (McInerney & Baird, 2016).

It is clear that student perceptions of the relevancy of an assessment task plays an important role in their preferences. Students in this study were more likely to favour assessments that they perceived to be relevant to the curriculum and related to their identity as a radiographer. They were also more likely to rank an assessment task highly if it was apparent that it was appropriate for the learning outcomes. Greater emphasis should be placed on the contextualisation and integration of assessments, such that their learning outcomes are clearly demonstrated and linked to the overarching curricular goals and professional identity.

Feedback

The main purpose of feedback is to provide a student with insight into their performance (Dawson et al., 2018). Good feedback drives self-reflection and provides direction for student growth and development. This is critical in the clinical setting, where student healthcare professionals spend a significant portion of their time in training (Bates, Konkin, Suddards, Dobson, & Pratt, 2013). Research shows that students value good feedback highly and view it as an important developmental and learning tool (Boud & Associates, 2010; Ferguson, 2011). On campus, several written and verbal feedback delivery methods are used. On clinical rotations, assessor feedback is provided either verbally or through an online platform (Pebblepad). With the exception of academic feedback by means of a numeric mark, group verbal feedback was ranked as the least preferred type of feedback in the clinical and on-campus environments, both in terms of liking and learning. These types of feedback do not provide a personal discourse between student and staff. This rating supports the role of discourse in effective feedback.

Rubric checklist marking was rated as the second lowest feedback preference. Rubrics are convenient for large classes, as they save marking time and provide consistency in the marking process; however, the generalised nature of rubrics often necessitates language that is vague and difficult for students to understand (Reddy & Andrade, 2010). The existing literature highlights the need for students to receive personalised positive written comments on their work, including suggestions for improvement (Giles et al., 2014). Rubrics on their own do not offer personalised discourse the same way as written comments. However, the use of rubrics has been encouraged by many universities, which illustrates the tension that exists between students and staff and raises concern given the fact that the radiography students in this study gave this form of feedback a low rating for liking and learning from.

Individual verbal feedback was ranked as the most preferred and most learned from type of feedback. Student desire for personal verbal feedback processes is reflected in earlier research, which found that students had a high preference for one assessor who observed

ISSN 1442-1100

them over a long period, thus being able to accurately attest to their development. The preference for verbal feedback is understandable given the busy and often chaotic work environment, where the demands of patient care can clash with formal feedback delivery methods (Duong et al., 2015). Radiography education in practice follows a more flexible system than the preceptorship model used in nursing or physiotherapy, which means that students have the opportunity to avoid or seek out feedback from certain radiographers. The danger with this flexibility is that biased feedback may result if the student consistently seeks advice from a radiographer they are on very good terms with. Fowler and Wilford (2016) found that radiography students often have distinct assessor preferences, placing greater value on the feedback given by some select supervisors and lesser importance on feedback given by others. An important consideration for feedback in clinical placement is Fowler and Wilford's (2016) finding that 68.9% of students in their study said some supervising radiographers were too busy to complete the student feedback forms.

Group verbal feedback was least preferred in all categories except academic student learning, where it was rated second-least effective, after numeric marking. This poor opinion may be due to students gaining feedback that was conflated with other students' work and non-specific to their own individual performance. These results are in keeping with the literature, which suggests that students highly value specificity in feedback (Fowler & Wilford, 2016), and with our finding that discourse is an important factor in feedback preferences.

In our study, students have clearly indicated that the quantity of feedback is the most important reason for preferring one type of feedback over another. This is in keeping with findings elsewhere that found that most students will choose to receive the maximum amount of feedback possible when given the choice (Giles et al., 2014). Students were critical of feedback that was unclear about improvements that could be made. Students generally expressed a dislike for percentages and rubrics, instead preferring qualitative feedback.

Study limitations

One limitation of this study is that it was a single-site study. Another limitation was the students' ability to recall assessment and feedback experiences and the response rate, which represented just over half of the student population. The response rate was partly due to a significant number of students undertaking professional clinical placements and not checking their university emails regularly. The study addressed the major assessment types but could not address all types of assessments experienced by the student cohort, representing a further limitation. While the research aims had scope for some overlap with clinical feedback, clinical assessments were not studied as they vary widely with placement location, patient presentation, the tutor–student relationship and other complexities (Fowler & Wilford, 2016), which place it beyond the scope of this paper. In addition, this paper did not investigate whether student preferences varied between summative and formative feedback types. A qualitative approach, using interviews, would provide a deeper understanding of student preferences of assessment and feedback practices where the three themes of discourse, emotion and identity could be explored further.

ISSN 1442-1100

Conclusion

Students in this study demonstrated a preference for assessment practices that related to professional identity. Students had complex assessment preferences that were influenced by the quantity and quality of feedback provided, the perceived learning benefits and the relevancy to the curriculum and their identity as future radiographers.

Feedback preferences that were valued most by students, particularly in the clinical setting, were those involving a discourse between students and supervisor. Written feedback was most preferred by students while on-campus. In the clinical setting, individual verbal feedback was the highest-ranking feedback format, indicating the importance of discourse between student and supervisor. The busy and unstructured workplace dynamic can make it difficult for supervisors to provide detailed personal feedback. Students were critical of assessments that offered little or no feedback after completion, such as exams and oral presentations. Traditionally, higher education institutions withhold exam scripts from students and do not provide exam feedback, other than marks. Faculty may have to reconsider this practice in light of emerging student feedback preferences. Qualitative research on assessment and feedback preferences of students would contribute to better assessment and feedback practices in radiography education.

References

Amin, T. T., Kaliyadan, F., & Al-Muhaidib, N. S. (2011). Medical students' assessment preferences at King Faisal University, Saudi Arabia. *Advances in Medical Education and Practice*, *2*, 95–103. doi:10.2147/AMEP.S12950

Bates, J., Konkin, J., Suddards, C., Dobson, S., & Pratt, D. (2013). Student perceptions of assessment and feedback in longitudinal integrated clerkships. *Medical Education*, *47*(4), 362–374.

Boehler, M. L., Rogers, D. A., Schwind, C. J., Mayforth, R., Quin, J., Williams, R. G., & Dunnington, G. (2006). An investigation of medical student reactions to feedback: A randomised controlled trial. *Medical Education*, *40*(8), 746–749. doi:10.1111/j.1365-2929.2006.02503.x

Boud, D. and Associates. (2010). *Assessment 2020: Seven propositions for assessment reform in higher education*. Sydney, Australia: Australian Learning and Teaching Council.

Carless, D. (2006). Differing perceptions in the feedback process. *Studies in Higher Education*, *31*(2), 219–233.

Dawson, P., Henderson, M., Mahoney, P., Phillips, M., Ryan, T., Boud, D., & Molloy, E. (2018). What makes for effective feedback: Staff and student perspectives. *Assessment & Evaluation in Higher Education*. Advance online publication. doi:10.1080/02602938.2018.1467877

Deane, R. P., Joyce, P., & Murphy, D. J. (2015). Team Objective Structured Bedside Assessment (TOSBA) as formative assessment in undergraduate obstetrics and gynaecology: A cohort study. *BMC Medical Education*, *15*(1), 172. doi:10.1186/s12909-015-0456-5

ISSN 1442-1100

Duong, D. K., Oyama, L. C., Smith, J. L., Narang, A. T., & Spector, J. (2015). Medical student perceptions on the instruction of the emergency medicine oral case presentation. *Journal of Emergency Medicine*, *48*(3), 337–343. doi:10.1016/j.jemermed.2014.09.035

Falchikov, N., & Boud, D. (2007). Assessment and emotion: The impact of being assessed (pp. 144–158). In Boud, D. & Falchikov, N. (Eds.), *Rethinking assessment in higher education: Learning for the longer term*. London, England: Taylor & Francis. doi:10.4324/9780203964309.

Ferguson, P. (2011). Student perceptions of quality feedback in teacher education. *Assessment & Evaluation in Higher Education*, *36*(1), 51–62. doi:10.1080/02602930903197883

Fowler, P., & Wilford, B. (2016). Formative feedback in the clinical practice setting: What are the perceptions of student radiographers? *Radiography*, *22*(1), e16–e24. doi:10.1016/j.radi.2015.03.005

Giles, T. M., Gilbert, S., & McNeill, L. (2014). Nursing students' perceptions regarding the amount and type of written feedback required to enhance their learning. *Journal of Nursing Education*, *53*(1), 23–30. doi:10.3928/01484834-20131209-02

Graham, R., Zubiaurre Bitzer, L. A., Mensah, F. M., & Anderson, O. R. (2014). Dental student perceptions of the educational value of a comprehensive, multidisciplinary OSCE. *Journal of Dental Education*, *78*(5), 694–702.

Hagemeier, N. E., & Mason, H. L. (2011). Student pharmacists' perceptions of testing and study strategies. *American Journal of Pharmaceutical Education*, *75*(2), 35. doi:10.5688/ajpe75235

Hall, M., Hanna, L.-A., & Quinn, S. (2012). Pharmacy students' views of faculty feedback on academic performance. *American Journal of Pharmaceutical Education*, *76*(1), 5. doi:10.5688/ajpe7615

Higher Education Funding Council for England (HEFCE). (2010). *National student survey: Findings and trends 2006 to 2009*. Retrieved from http://www.hefce.ac.uk/pubs/hefce/2010/10_18/

Herrmann, F. E., Lenski, M., Steffen, J., Kailuweit, M., Nikolaus, M., Koteeswaran, R., & Dittmer, S. (2015). A survey study on student preferences regarding pathology teaching in Germany: A call for curricular modernization. *BMC Medical Education*, *15*(1), 94. doi:10.1186/s12909-015-0381-7

Higgins, R. (2000, September). *"Be more critical!": Rethinking assessment feedback*. Paper presented at the British Educational Research Association Annual Conference, Cardiff, Wales. Retrieved from http://www.leeds.ac.uk/educol/documents/00001548.htm

Jawaid, M., Masood, Z., & Jaheel, F. (2014). Students' perception of surgical objective structured clinical examination (OSCE) at Dow University of Health Sciences. *Journal of Postgraduate Medical Institute*, *28*(1), 19–23.

ISSN 1442-1100

Matthews, K. (2017). Five propositions for genuine students as partners pactice. *International Journal for Students as Partners*, *1*(2), 1–9.

McInerney, J., & Baird, M. (2016). Developing critical practitioners: A review of teaching methods in the Bachelor of Radiography and Medical Imaging. *Radiography*, *22*(1), e40–e53.

Medical Radiation Practice Board of Australia (MRPBA). (2013). *Accreditation*. Retrieved from https://www.medicalradiationpracticeboard.gov.au/accreditation.aspx

Melvin, L., & Cavalcanti, R. B. (2016). The oral case presentation: A key tool for assessment and teaching in competency-based medical education. *JAMA*, *316*(21), 2187–2188.

Norcini, J., Anderson, B., Bollela, V., Burch, V., Costa, M. J., Duvivier, R., & Perrott, V. (2011). Criteria for good assessment: Consensus statement and recommendations from the Ottawa 2010 Conference. *Medical Teacher*, *33*(3), 206–214.

Radloff, A. (2010). *Doing more for learning: Enhancing engagement and outcomes. Australasian student engagement report*. Camberwell, Victoria: Australian Council for Education Research.

Reddy, Y. M., & Andrade, H. (2010). A review of rubric use in higher education. *Assessment & Evaluation in Higher Education*, *35*(4), 435–448.

Schmidt, M., Freund, Y., Alves, M., Monsel, A., Labbe, V., Darnal, E., . . . Duguet, A. (2014). Video-based feedback of oral clinical presentations reduces the anxiety of ICU medical students: A multicentre, prospective, randomized study. *BMC Medical Education*, *14*, 103. doi:10.1186/1472-6920-14-103

ISSN 1442-1100