

Quick Response (QR) Codes to Facilitate Formative Feedback

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Introduction

- High quality feedback promotes lifelong learning and inspires goal setting for medical students' knowledge and skills¹
- Previous studies have found that integration of QR codes for healthcare training support have increased the total amount and quality of feedback²
- Previously at WFSM, students received verbal feedback from their coaches and peers during each Clinical Skills course (CS) class session
- Documentation and compilation of feedback via QR codes could promote student self-reflection and growth over time

Study Question

Does documented feedback facilitated by QR codes lead to a perceived increase in the amount of, quality of, and learner reflection on verbal feedback provided to students in the CS course?

Methods

- 312 students and 38 faculty participated in the CS course (26, 3.5 hour class sessions) from July 2020 to April 2021
- Individual students received unique QR codes on the first day of class; instructions for use were provided
- Each QR code corresponded to a feedback form pre-populated with the student and observer's names
- A survey was distributed to all participating students and faculty at the end of the academic year
- Faculty with highest rates of QR code usage were contacted individually for additional insight

Results

- Majority of students and faculty utilized feedback "rarely" and felt the QR code feedback system made no change in the quality of feedback (Table 1)
- More faculty felt QR codes improved the quality of their feedback (33% to student 9%)

Survey Item	Students	Faculty
How often did you receive/give feedback via your QR codes?		
Never	44%	24%
Rarely (1-3 x semester)	47%	47%
Sometimes (4-6 x semester)	9%	29%
In terms of the quality of feedback, how does the QR code-supplemented feedback system compare to the traditional feedback model (i.e. verbal feedback only)?		
Improvement	9%	33%
No change	72%	53%
Harm	19%	13%
Overall satisfaction with the QR code-supplemented feedback system? (1 = very dissatisfied; 10 = extremely satisfied)	3.3	4.0

Table 1. Student and faculty response feedback.

Representative Quotes

- "[QR codes] need to be utilized more regularly in conjunction with face-to-face feedback" (student).
- "[The QR code feedback system] takes us away from the face-to-face interactions with the students because we're typing on our phones" (faculty).

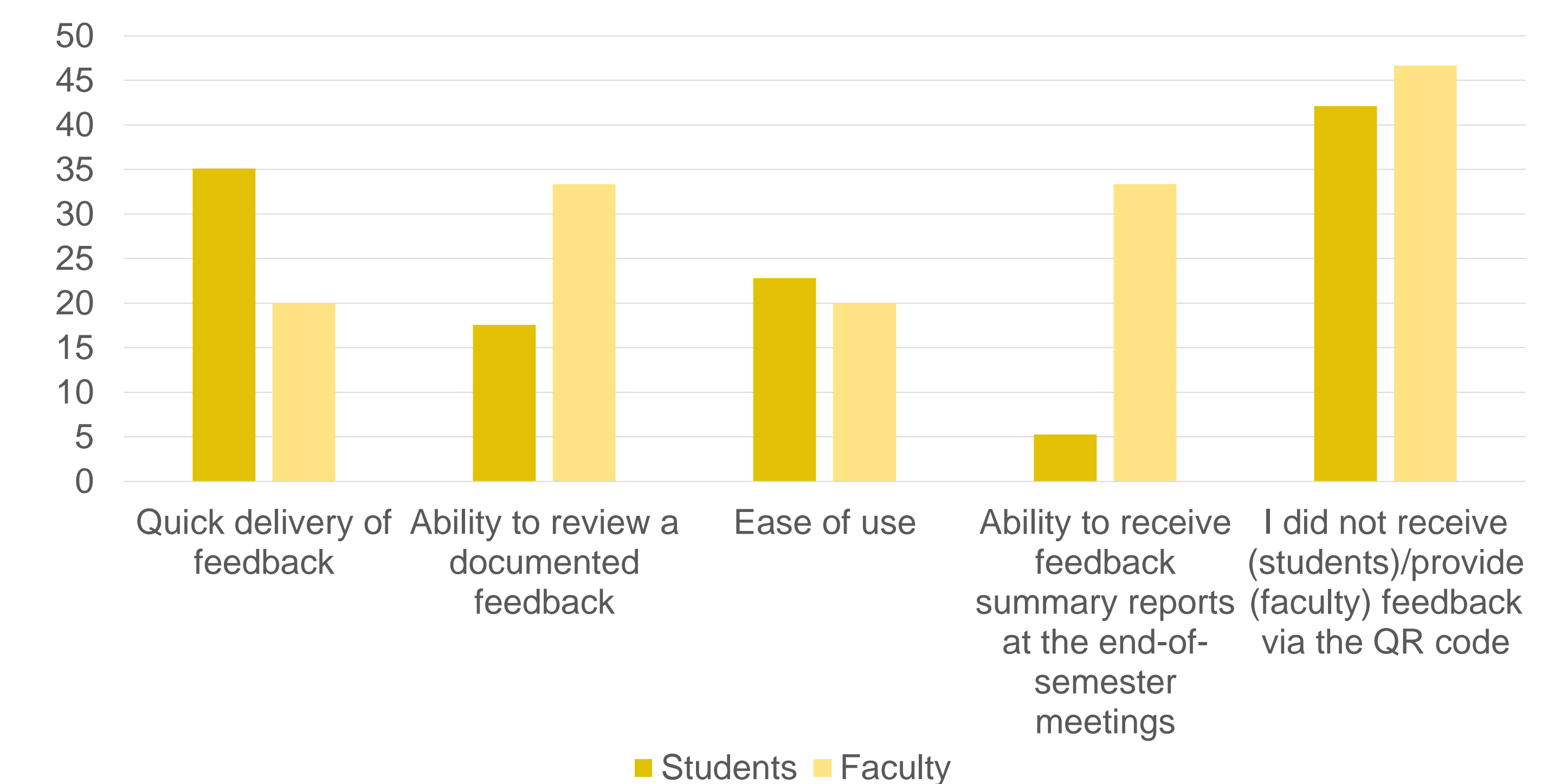


Figure 1. Student and faculty response rates on the most valuable components of QR code system.

Conclusions

- While QR code-based feedback has the potential to provide tangible feedback to students, primary challenges in implementation include workflow feasibility and faculty perception on its efficacy
- Potential solutions include streamlining of the feedback form and expanding education on best practices for QR code use
- A limitation of this study was the low survey response rate at 18% (57/312) for students and 39% (15/38) for faculty. This could be due to timing of the survey (end of year), survey burnout given number of surveys received, and limited respondent interest in the survey topic.

References

- 1 Gupta K, Badyal D, Mahajan R, Singla G, Goyal R, Kaur H, Singla B, Ahi RS. Introduction of Structured Feedback to Medical Undergraduate Students in the First Professional. Int J Appl Basic Med Res. 2021 Jan-Mar;11(1):21-26. doi: 10.4103/ijabmr.IJABMR_138_20. Epub 2021 Jan 26. PMID: 33842291; PMCID: PMC8025954.
- 2 Kellin Reynolds, MD; Danny Barnhill, MD; Jamie Sias, MD; Amy Young, MD; Florencia Greer Polite, MD. J Grad Med Educ (2014) 6 (4): 738–741.