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ADEA | THE VOICE OF DENTAL EDUCATION | WILEY

Online learning: Collaboration for a formative peer review program

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1 | PROBLEM

The COVID-19 pandemic required faculty to quickly switch to online teaching. This required new technical skills and teaching strategies. Faculty wanted to know if they were being effective. Thus, a team of faculty and education experts collaborated to develop a program for peer review of online courses.[1] A formative evaluation process, which focuses on the improvement of teaching, was used as the framework for their work.[2]

2 | SOLUTION

The Peer Review of Online Teaching (PROT) team developed the PROT program by adapting a model discovered following a literature search of peer review programs. A Peer Review Guide for Online Courses at Penn State,[3] based on Seven Principles of Good Practice in Undergraduate Education[4] (Figure 1), was adapted using a formative evaluation approach to continuously refine the instrument and process. The PROT program has two goals: provide formative feedback to faculty for setting goals for continuous improvement and provide documentation supporting faculty annual reviews and promotion portfolios.

The Penn State peer review process and instrument were modified to meet the needs of dental education:

1. Pre-review: Process is presented to the faculty member.
2. Self-assessment: Faculty member uses the checklist to assess their course.
3. Observation: Peer reviewers examine the course.
4. Postreview: Reviewers and faculty member meet to discuss strengths and goals.
5. Adapted peer review instrument: https://docs.google.com/document/d/1VaTAK3knW_A4zrZLjtJdMyYRV4CvBfU0_tAA2hnYvjo/edit?usp = sharing

The next step applied formative evaluation to iteratively improve the instrument and process. Four senior dental educators and five department chairs (not part of the PROT team) reviewed the instrument and process. The PROT team conducted pilot reviews of two courses. Minor refinements were made after reviews and pilots. See Figure 2 for the process used to develop the PROT program.

3 | RESULTS

Formative evaluation led the team to conclusions including:

1. Focus on improvement versus assessment: The review process identifies strengths and considerations for

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Seven Principles of Good Practice in Undergraduate Education

1. Encourages contact between students and faculty;
2. Develops reciprocity and cooperation among students;
3. Encourages active learning;
4. Gives prompt feedback;
5. Emphasizes time on task;
6. Communicates high expectations; and
7. Respects diverse talents and ways of learning.

FIGURE 1 Chickering and Gamson seven principles for good practice in undergraduate education

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Team Formation
  • Selection of experts
    and experienced
    faculty in online
    learning

  Research
    • Literature review of
      best practices in
      the assessment of
      online teaching

    Instrument Development
      • Modification of validated
        instruments to suit the
        needs of dental education
        with input from outside
        experts

      Department Chairs
        • Concept and instrument
          presented to department
          chairs for buy-in.

        Pilot
          • Piloted by committee
            members with
            volunteer faculty

          Growth of Peer Review Community
            • Faculty who volunteered
              to be reviewed in turn
              calibrated as peer
              reviewers.
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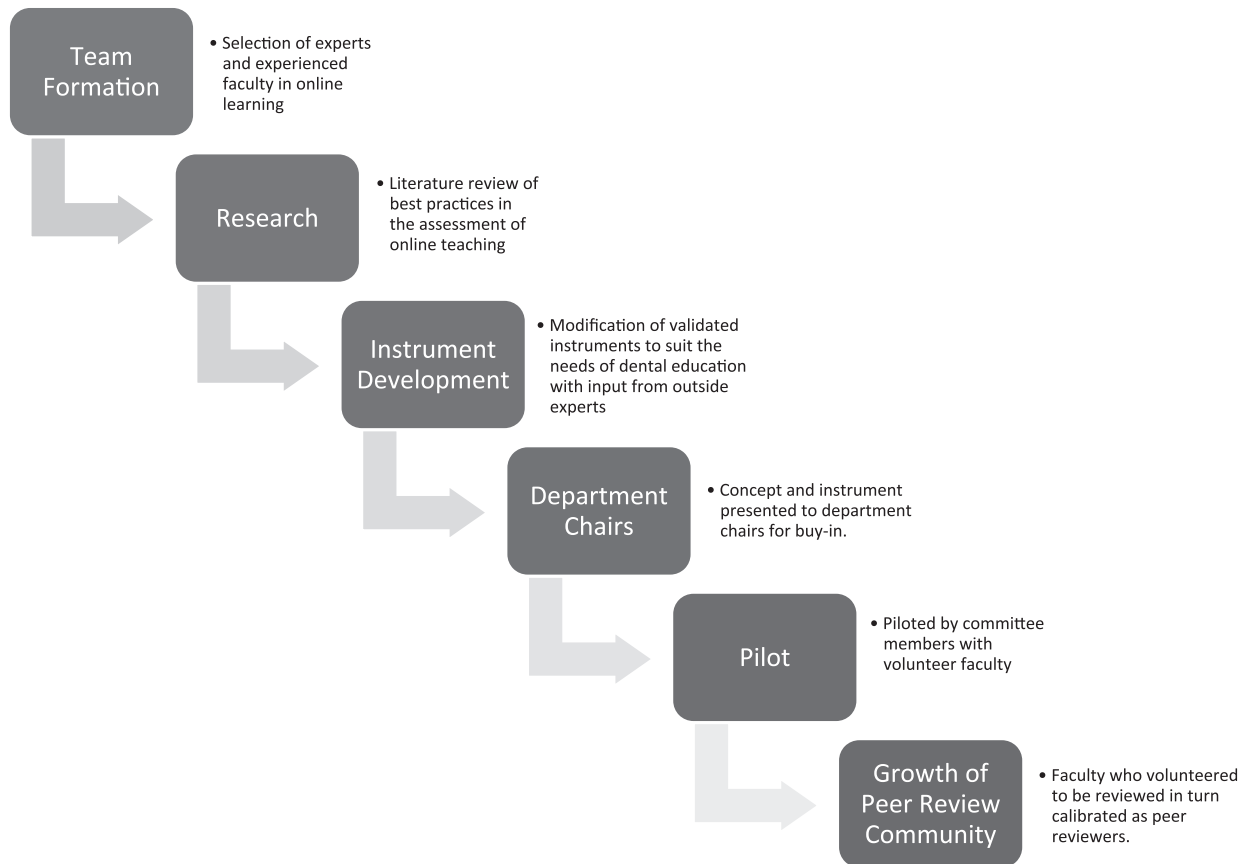
FIGURE 2 PROT program development process

improvement, not direct assessment of teaching effectiveness.

2. Importance of experts: Faculty reviewees reported benefit from being paired with more experienced faculty.

3. The process takes some time: Faculty reviewees commented that, even though a time investment, the process would actually save time because the course is better organized, resulting in fewer student questions.

Recognizing that the PROT program will continuously evolve and improve, attention has focused on building a culture of continuous improvement. Early reviews by department chairs have encouraged faculty to seek peer review. Chairs also suggested the program be reciprocating, where faculty who have undergone the peer review process should then become peer reviewers.

4 | LESSONS LEARNED

Four additional peer reviews are underway. Lessons learned to guide the growth of the PROT program include the following points:

1. Sustained culture change takes time.

2. Focus on continuous improvement; positive tone and approach.

3. Reviews should target only essential elements of the course.

4. Provide recognition of faculty peer reviewers.

Faculty feedback indicates that the peer review program should be extended from the current focus on remote learning to classroom, preclinical, and clinical courses in the post-COVID future. The formative evaluation approach was helpful in growing the program and building widespread support over time.

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