SAINT LOUIS UNIVERSITY.

Program-Level Assessment: Annual Report

Program: Graduate Endodontics	Department: Graduate Endodontics
Degree or Certificate Level: Master of Science and Certificate in Specialty Endodontics	College/School: Center for Advanced Dental Education
Date (Month/Year): November 2023	Primary Assessment Contact: S. Craig Rhodes, DMD, MSD.

In what year was the data upon which this report is based collected? 2021-22

In what year was the program's assessment plan most recently reviewed/updated? 2022

1. Student Learning Outcomes

Which of the program's student learning outcomes were assessed in this annual assessment cycle?

Assessment of student performance regarding being competent in all aspects, practical and didactic, of clinical endodontics.

Readiness and preparation for achieving the American Board of Endodontics certification.

Completion of an original master's degree-level research project resulting in a written thesis and defense.

2. Assessment Methods: Artifacts of Student Learning

Which artifacts of student learning were used to determine if students achieved the outcome(s)? Please identify the course(s) in which these artifacts were collected. Clarify if any such courses were offered a) online, b) at the Madrid campus, or c) at any other off-campus location.

Grades and feedback from faculty members for all residents in courses that are used to assess this learning objective. Feedback from the Graduate Endodontics Advisory Committee and clinical faculty. Courses: ENDG 5000-01; 5410-01; 5600-01; 5910-01; 5700; 5050-01; 5200-01; 5450-01; 5610-01; 5910-01; 5120-01; 5510-01; 5210-01; 5620-01; 5630-01; 5240-01; 5650-01; 5660-01. CAD: 5010-01; 5110-01, 5220-01; 5070-01; 5160-01; 5170-01; 5050-01; 5030-02; 5-60-01; 5100-01; 5190-01; BBS5100-01.

The residents are required to undergo 4 formative and 3 summative assessments of their clinical performance during the two year endodontics residency program.

Grades and feedback from faculty members for all residents in a course related to resident preparation for the American Board of Endodontics board certification examination process. Feedback from the Graduate Endodontics Advisory Committee. Course: ENDG5220-01.

Feedback from the Thesis Committees for all three graduating residents after they completed a written thesis and underwent an oral examination for their thesis defense. Courses: ENDG5950-01; 5990-01/02

3. Assessment Methods: Evaluation Process

What process was used to evaluate the artifacts of student learning, and by whom? Please identify the tools(s) (e.g., a rubric) used in the process and include them in/with this report.

Assessment feedback to the residents occurs during discussions with the Program Director, the Course Directors, Program Didactic and Clinical Faculty and Graduate Thesis Committee members. Feedback also occurs following the results of the American Board of Endodontics examination.

Resident Clinical Proficiency Assessment Schedule

Year	Semester	Assessment Type/Category
PGY1	Fall	Formative non-surgical (NS) RCT
	Fall	Formative non-surgical (NS) RCT Re-treatment
	Fall or Spring	Formative Post Removal
	Spring	Summative non-surgical (NS) RCT
	Spring	Summative non-surgical (NS) RCT Re-treatment
PGY2	Fall	Formative Microsurgery
	Fall	Summative non-surgical (NS) RCT
	Fall	Summative non-surgical (NS) RCT Re-treatment
	Fall or Spring	Formative Post Removal
	Spring	Summative Microsurgery
	Spring	Summative non-surgical (NS) RCT
	Spring	Summative non-surgical (NS) RCT Re-treatment

Formative NSRCT = 1 evaluation per resident (Fall PG1)
Summative NSRCT = 3 evaluations per resident (Spring PG1, Fall/Spring PG2)
Formative NS Retreatment = 1 evaluation per resident (Fall PG1)
Summative NS Retreatment = 3 evaluations per resident (Spring PG1, Fall/Spring PG2)
Formative Microsurgery = 1 evaluation per resident (Fall PG2)
Summative Microsurgery = 1 evaluation per resident (Spring PG2)
Formative Post Removal = 2 evaluations per resident (one per each PG year)
NS= non-surgical
RCT = root canal treatment

Overall resident performance is formally assessed and critiqued twice per year by the SLU Graduate Endodontics Advisory Committee. A component of this process also requires the resident perform a self-critique of their progress.

4. Data/Results

What were the results of the assessment of the learning outcome(s)? Please be specific. Does achievement differ by teaching modality (e.g., online vs. face-to-face) or on-ground location (e.g., STL campus, Madrid campus, other off-campus site)?

All residents received satisfactory grades in courses that are used to assess the didactic and clinical learning objectives, based on their participation and topic presentations. All faculty members on the Graduate Endodontics Advisory Committee agreed that the three graduating residents were competent in all aspects of clinical endodontics after having successfully completed their formative and summative assessments.

All graduating residents completed a master's level-research project, composed an original written thesis, and successfully passed an oral examination thesis defense from the Endodontics Graduate Thesis Committee.

The three most recent graduates have completed and passed the Part I examination from the American Board of Endodontics. A recent graduate from 2020 has also successfully completed parts I and II. Many previous residents have indicated they will be taking Parts II and III in the next years to eventually become Diplomates of the American Board of Endodontics.

5. Findings: Interpretations & Conclusions

What have you learned from these results? What does the data tell you?

The clinical and didactic performance of the residents at CADE has been satisfactory and residents feel confident and prepared to enter clinical practice as specialist endodontists.

6. Closing the Loop: Dissemination and Use of Current Assessment Findings

A. When and how did your program faculty share and discuss these results and findings from this cycle of assessment?

Assessment results were reviewed by the Graduate Endodontics Advisory Committee which is made up of 3 faculty members. In addition, the Program Director meets with clinical and didactic faculty periodically and as needed to discuss individual residents performance, assessment, and progress throughout the year.

B. How specifically have you decided to use these findings to improve teaching and learning in your program? For example, perhaps you've initiated one or more of the following:

Changes to the Curriculum or Pedagogies

- Course content. Scheduled seminars conducted by various faculty to cover selected topics based on previous feedback.
- Teaching techniques. Implemented live participation on cadaver specimens for instruction in surgical techniques.
- Improvements in technology. Addition of the CS9600 CBCT machine as an aid in diagnosis, treatment planning and treatment.
- Added lunchtime seminars covering the following additional topics were presented: peer review instruction (how to be an effective peer reviewer for a scientific journal); how to read a published scientific paper; the history of endodontics; revised ADA/AAE antibiotic and analgesic prescribing guidelines.
- Course sequence. Implemented remote learning/virtual meetings during the pandemic and made associated clinic modifications.
- Changes in frequency or scheduling of course offerings. Modified the Schedule for multidisciplinary seminars to allow for more interactive presentations for residents of the multiple specialties. (Endo, Pedo, Ortho)
- Facilitated instruction from the SLU Medical librarian for EndNote, and literatures searches using available medical library databases, to aid in thesis preparation.

Please describe the actions you are taking as a result of these findings.

Modified the content of some of the didactic courses like Endodontic Literature reviews to reflect changes in techniques and technology. Incorporated selected contemporary topics, such as the use of adjunctive irrigation methodologies, calcium silicate bioceramic materials, vital pulp therapy, antibiotic and opioid prescribing stewardship.

If no changes are being made, please explain why.

N/A

7. Closing the Loop: Review of Previous Assessment Findings and Changes

A. What is at least one change your program has implemented in recent years as a result of assessment data?

Restructured the Classic Literature Course

B. How has this change/have these changes been assessed?

The assessment is through resident and faculty feedback regarding the enhancement of the overall resident case difficulty and diversity treatment spectrum.

C. What were the findings of the assessment?

The feedback from residents and faculty is that the changes have been beneficial and positive.

D. How do you plan to (continue to) use this information moving forward?

The assessment results will continue to be reviewed and either corrective action or suggestions for program improvement will be discussed and made by the Graduate Endodontics Advisory Committee, and the proposed changes will be implemented based on a strategy plan.

IMPORTANT: Please submit any assessment tools and/or revised/updated assessment plans along with this report.