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## HOW WE...

# The Student Curriculum Review Team: How we catalyze curricular changes through a student-centered approach

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## Abstract

Student feedback is a valuable asset in curriculum evaluation and improvement, but many institutions have faced challenges implementing it in a meaningful way. In this article, we report the rationale, process and impact of the Student Curriculum Review Team (SCRT), a student-led and faculty-supported organization at the Johns Hopkins University School of Medicine. SCRT's evaluation of each pre-clinical course is composed of a comprehensive three-step process: a review of course evaluation data, a Town Hall Meeting and online survey to generate and assess potential solutions, and a thoughtful discussion with course directors. Over the past two years, SCRT has demonstrated the strength of its approach by playing a substantial role in improving medical education, as reported by students and faculty. Furthermore, SCRT's uniquely student-centered, collaborative model has strengthened relationships between students and faculty and is one that could be readily adapted to other medical schools or academic institutions.

## Introduction

Calls for reform in medical education are nothing new. Nor, in fact, is the impetus behind them: a review of such reports from 1910 to 1993 revealed a strikingly consistent set of stated objectives, including tackling the growing body of medical knowledge, better serving the public interest and fostering lifelong learning skills, all of which seem familiar today (Christakis 1995). As the medical field continues to expand and technology evolves, new methods for evaluating medical school curricula and teaching methods are needed.

Medical school students and administrators have recognized the importance of student input to efforts to evaluate and make improvements to pre-clinical curricula (Kogan & Shea 2007). Accordingly, the Liaison Committee on Medical Education mandates that all medical schools have an internal review process that involves student feedback. While course evaluation questionnaires often fulfill this requirement (Abrahams & Friedman 1996), they alone may fail to gather specific feedback that can be translated effectively into actionable plans (Amrein-Beardsley & Haladyna 2011).

Medical schools have noticed the shortcomings of these traditional methods and modified them with supplemental approaches to solicit greater student input. For example, at Wayne State University, focus groups have been added to the school's curricular evaluation process. The school invites 50 randomly selected students from a class of approximately 300 to participate in a focus group moderated by student

## Practice points

- As consumers of education, students have the right and responsibility to be involved in curricular reform and communicate their ideas freely.
- The Student Curriculum Review Team (SCRT) utilizes a three-step student-driven approach to identify strengths, areas for improvement and specific solutions throughout the pre-clinical curriculum.
- Unlike other medical education evaluation systems, the SCRT process includes a collaborative dialogue between course directors and students who represent the entire class's collective opinions.
- Since its inception, course directors have recognized the strengths of the SCRT process and have consequently implemented meaningful changes based on the team's recommendations.

representatives, who then produce a formal report that is presented to course directors (Wilson et al. 2013). At the University of Sydney, problem-based learning groups appoint student representatives to attend faculty-moderated focus groups; a report summarizing issues raised and faculty responses is then published internally and included in the final course review (Hendry et al. 2001). Finally, during their period of curriculum reform, the Stanford School of Medicine

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convened student focus groups midway through each quarter, and curriculum evaluation staff presented focus group findings to course directors while the courses being reviewed were still in progress (Fetterman et al. 2010).

While these focus groups have been found to elicit meaningful and constructive input from medical students, they invite participation from only a fraction of the student body and may be susceptible to influence by faculty and staff. To encourage greater student involvement in the pre-clinical curricular improvement process, Johns Hopkins University School of Medicine students established the Student Curriculum Review Team (SCRT) in 2012. The goal of SCRT is to implement a dynamic curricular improvement process that would empower all students by creating for them the opportunity to work directly and collaboratively with both their peers and course directors to catalyze prompt curricular changes.

## What we did

The SCRT at the Johns Hopkins University School of Medicine aims to foster a learner-centered model of curriculum review. It seeks to forge an interdependent and respectful relationship between students and faculty and to convey student opinion in a manner that reaches beyond course questionnaires (Schumacher et al. 2013). Its goals are as follows.

### Goals of SCRT

- (1) Engage the *entire* student body in an active, two-way course improvement process, as opposed to course questionnaires, which are more passive and one-sided.
- (2) Gather this active feedback in a manner that is not influenced by faculty and allows for productive discussion among students.
- (3) Ensure that student body feedback is not only presented but also *discussed* with course directors, with students and faculty both having the chance to express their viewpoints.
- (4) Maintain documentation of the entire SCRT process for future curricular improvement and transparency of the process for students and faculty.

The entire SCRT process is outlined below. Goals are mentioned throughout to indicate which parts of the process correspond to the goals above.

*Step zero: establish open SCRT membership (goal 1).* SCRT consists of medical students who voluntarily join the team at any point during their first or second years. This allows for the entire student body to participate for varying lengths of time, from one hour to dozens of hours over the year, depending on their availability. Members are not compensated for their time. At the beginning of each academic year, the members of SCRT designate co-chairs who delegate responsibilities and ensure completion of all necessary tasks for each course review, a process outlined below.

*Step one: gather and review course evaluation data.* After each pre-clinical course, students anonymously complete the School of Medicine's course evaluation. The Curriculum Office

then sends these completed evaluations to the SCRT members. Team members who have elected to review that course read the evaluations and identify recurrent positive themes and opportunities for improvement. These themes are presented to the student body at a Town Hall Meeting.

*Step two: generate solutions through Town Hall Meeting and online survey (goals 1 and 2).* A fundamental element of the SCRT process is its engagement with the broader student body in a manner that elicits constructive ideas and generates quantitative data to support them. To accomplish this, a Town Hall Meeting is held during the lunch hour every 6–8 weeks during the academic year to discuss 2–3 courses. Every effort is made to review courses close to their completion to reduce recall bias. This is balanced with the effort to group courses together to decrease student burden. Every student is welcome to attend the Town Hall Meetings, and faculty are not present, allowing for candid discussion among students. By allowing everyone to attend, students are empowered with the responsibility for shaping their education. Typically, one-third to two-thirds of the class attends each Town Hall Meeting.

At the beginning of the Town Hall Meeting, SCRT members present a summary of course evaluation data and list the evaluation-derived themes. They also note the changes that resulted from the previous year's SCRT review (Table 1), assuring students that their time and contribution to the SCRT process are having a positive impact on the curriculum and allowing students to put the current status of the course in context. The student body is then organized into smaller discussion groups led by SCRT members who are tasked with leading discussions on potential solutions to address a specific course's opportunities for improvement. These designated SCRT members rotate from group to group throughout the Town Hall Meeting so that all students in attendance discuss each course. At the conclusion of the hour, the designated SCRT members summarize the solutions generated.

In order to increase student representation and quantify support, the proposed solutions are presented to the entire class in a short online survey. The survey is composed of a series of multiple choice, mostly simple "yes" or "no" questions, and generally one-half to two-thirds of the class participates in the online survey. The data collected from this stage of the evaluation process helps determine and substantiate the suggestions SCRT will include in its preliminary report to faculty. With each step of the process, an increasingly thorough, refined and actionable understanding of student opinion becomes evident.

*Step three: implement changes via course director meeting and Student Assessment and Program Evaluation report (goals 3 and 4).* Using quantitative and qualitative data collected from the first two steps, SCRT members create a preliminary report that outlines positive themes from student feedback and potential solutions that target the identified opportunities for improvement. Using this preliminary report as a launchpad for discussion, SCRT members meet with the course directors, the Dean of the Curriculum and the SCRT faculty advisor. This meeting is a unique aspect of SCRT that allows faculty to discuss ideas with students, enabling a productive dialogue that cannot be accomplished through standard course evaluations and focus groups. In addition,

**Table 1.** Selected changes implemented by course directors after SCRT review.

Course title	Course changes following 2012–2013 SCRT process
Clinical foundations of medicine	<ul style="list-style-type: none"> <li>• Added opportunities for interviewing and examining standardized patients and hospital inpatients.</li> <li>• Added guidelines for charting physical exam findings.</li> <li>• Adjusted assignments and presentations to reduce redundancy between e-lectures, demonstration videos and text reading.</li> </ul>
Foundations of human anatomy	<ul style="list-style-type: none"> <li>• Created new lecture on the neck region.</li> <li>• Included discussion of lab resources in introductory lecture.</li> <li>• Restructured team-based learning sessions to encourage more group interaction.</li> </ul>
Foundations of public health	<ul style="list-style-type: none"> <li>• Redesigned all lectures in the Health Systems portion of the course.</li> <li>• Introduced a core textbook in one portion of the course.</li> <li>• Increased emphasis on ethics throughout small group sessions.</li> </ul>
Metabolism	<ul style="list-style-type: none"> <li>• Restructured the entire course with all new lecture notes and presentations, which included clinical vignettes.</li> </ul>
Microbiology and infectious diseases	<ul style="list-style-type: none"> <li>• Shortened E-lectures.</li> <li>• Streamlined pharmacology lectures.</li> <li>• Moved practical lab to the end of the course and included cases for each station of the lab.</li> </ul>
Oncology	<ul style="list-style-type: none"> <li>• Increased emphasis on communicating the chemotherapy experience.</li> </ul>
Renal	<ul style="list-style-type: none"> <li>• Updated a journal club session to be more interactive.</li> </ul>
Clinical epidemiology	<ul style="list-style-type: none"> <li>• Added a lecture to introduce basic biostatistical tools and concepts.</li> <li>• Developed concept sheets for each lab that include the key “Take Home Points”.</li> </ul>

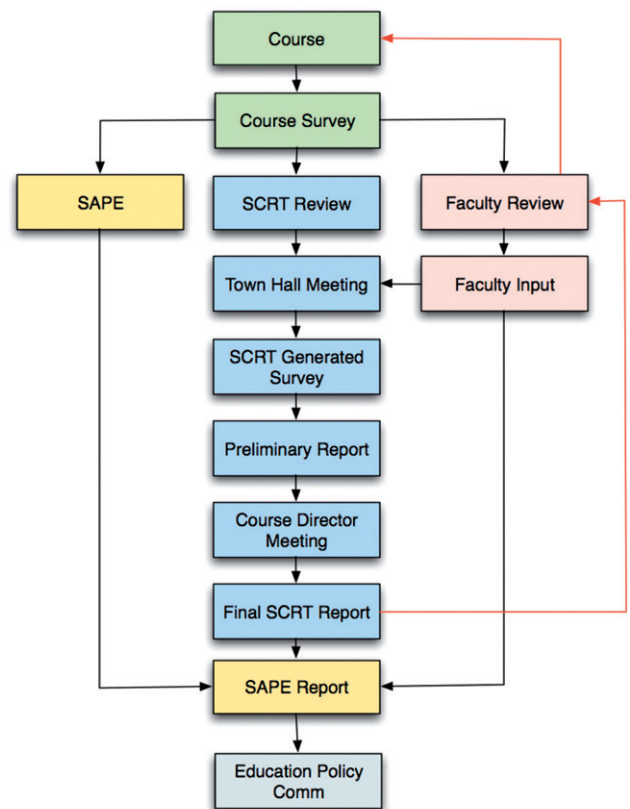
because SCRT members are sharing the viewpoints of their class rather than individual opinions, they are able to speak honestly without fearing repercussion from faculty. The SCRT faculty advisor, who serves as a crucial bridge between student representatives and course faculty, can also moderate any tension that may arise. Following the discussion, SCRT updates the preliminary report with notes from the meeting, including unresolved issues and action items that course directors agreed to consider. The report and notes are circulated among meeting attendees and then are made available to all students on an internal website. The final SCRT report is sent to the Student Assessment and Program Evaluation (SAPE) Committee, a pre-existing faculty-led committee that formally evaluates each course every 1–2 years. The SAPE committee includes the SCRT report in its preparation for recommendations to the Educational Policy and Curriculum Committee, chaired by the Vice Dean of Education. This process is outlined in Figure 1. In addition, an example showing the sequence of implementing a change to a course is provided in Figure 2.

This process allows SCRT to effect change in two ways: (1) directly through a meeting with course directors who can implement changes before the next iteration of the course and (2) indirectly through SAPE’s final recommendations, which may include broader administrative measures.

*Course improvements.* SCRT’s ultimate goal is to advocate for student-supported changes throughout the curriculum to improve student learning and satisfaction. Table 1 includes a representative list of changes made by course directors following the 2012–2013 SCRT reviews.

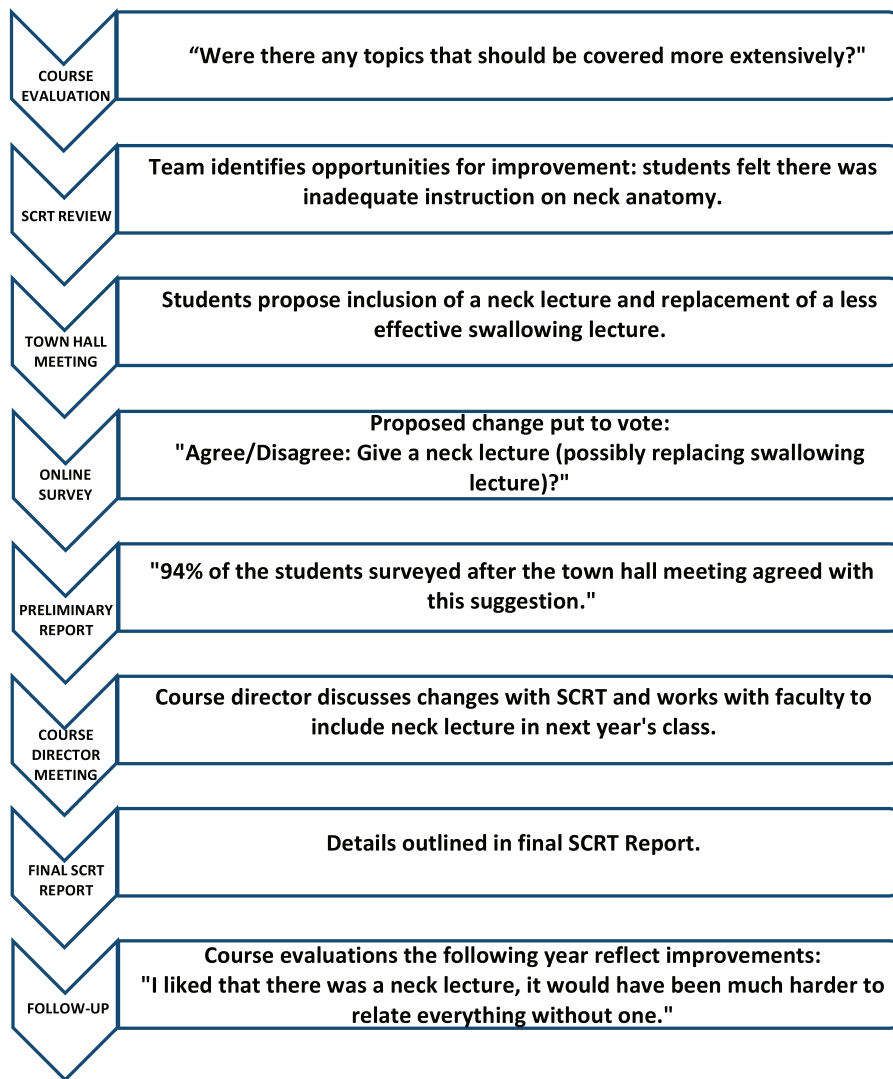
### Next steps

A review of SCRT suggests that the program is well-received: since its inception, directors from 100% of preclinical courses have met with SCRT representatives, even though it is optional to do so. We administered a brief survey to course directors in the Fall of 2013 in an initial attempt to quantify the usefulness



**Figure 1.** SCRT Flow Diagram.

of SCRT. We asked “How helpful did you find the SCRT process as an addition to the unedited student course evaluations?” and 75% ( $n=15$ ) indicated that it was “very helpful”, while the remaining 25% ( $n=5$ ) responded “somewhat helpful”; no course directors answered “neutral”, “somewhat unhelpful” or “very unhelpful”. All of the course directors responded that the SCRT process should be continued. Students were also surveyed in November 2013



**Figure 2.** Sample Course Review: Foundations of Human Anatomy.

on the impact of SCRT. When asked "How helpful have you found the SCRT process?" 23 of 52 students (44%) responded "very helpful", 16 (31%) said "somewhat helpful", 11 (21%) said "neutral", 2 (4%) said "somewhat unhelpful" and no students selected "very unhelpful". Further investigation should probe deeper into the perceived usefulness and effectiveness of SCRT from the perspective of both faculty and students. One way SCRT might measure its impact on student satisfaction more systematically may be to incorporate questions about SCRT-initiated course changes into course evaluations.

Moving forward, SCRT will need to identify an accurate and objective method to measure its effectiveness that goes beyond surveys of the stakeholders involved. The SCRT process relies on information gleaned from course evaluations, Town Hall discussions and the online survey. Incorporating objective data such as year-to-year exam scores may improve the SCRT process by allowing students and faculty to assess its impact on student achievement.

Finally, an area for improvement for SCRT is to boost student response rates to surveys and evaluations and attendance at Town Hall Meetings. We are currently exploring strategies to increase course evaluation and online survey response rates. Given the number of surveys involved in the SCRT process, avoiding survey fatigue is vital. Faced with these and other challenges, SCRT will continue working with all parties as it strives to enhance students' educational experience via thoughtful, inclusive and data-driven means.

## Conclusion

We encourage other institutions to use SCRT as a model of student-led curriculum review. As schools adopt this method of curriculum improvement, we advise carefully planning how program outcomes will be measured as well as keeping a detailed record of the team's activities. This will allow students and faculty to gauge the effectiveness of the program as it is

implemented, enabling iterative changes to maximize the team's impact on curriculum improvement.

## Notes on contributors

All authors, except Harry Goldberg, are second- and third-year medical students at the Johns Hopkins University School of Medicine.

HARRY GOLDBERG, PhD, is the Faculty Sponsor of SCRT and an Assistant Dean.

**Declaration of interest:** The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

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