NEW EDUCATIONAL METHOD

Beginning with the End-User in Mind: Application of Kern’s Six-Step Approach to Design and Create a Literary Journal for Healthcare Students [version 1]

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Abstract
This article was migrated. The article was marked as recommended.

Expression through the arts has been shown to improve resilience and enhance patient care amongst healthcare trainees. This is all the more relevant when considering that many healthcare students feel that insitutions lack an outlet for artistic and creative expression. The creation of a student-run literary review is one possible strategy to allow learners to engage in artistic expression and mitigate rising burnout rates. Utilizing the Kern six-step model for curriculum development, we present a novel, replicable, and stepwise approach to designing a forum for artistic engagement in the form of a literary review.

Keywords
Literary Review, Kern, Poetry, Prose, Reflection

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Introduction

Health professions students suffer from high levels of burnout, disillusionment, deterioration of communication skills, and decreased empathy, [Cohen 2002; Dyrbye et al. 2008], which progressively worsen over time, and are associated with poorer patient care [Shanafelt et al. 2002; Chen et al. 2016]. To help students cope with these stressors and enhance professional development, medical schools have sought to identify methods to improve resilience and enhance empathy [Cooke et al. 2010]. By building resilience early in their professional education, providers may be able to incorporate wellness strategies during a time of dynamic professional identity formation and continue to build upon these strategies throughout the remainder of their careers.

Engagement with the arts, including reflective writing, poetry, prose, and visual art, may be particularly well suited to meet this need. Arts engagement enhances subject’s observation, communication, and collaboration skills, improves self-awareness, reduces burnout, and enhances empathy [Reilly et al. 2005; Yang et al. 2011; Chen & Forbes 2014; Blease 2016]. In addition to these benefits, engagement with the arts provides an avenue for critical reflection and facilitates the development of leadership skills, professionalism and ethical behavior, each a critical component of provider competence [Branson 2007; Cohen 2006]. At the Uniformed Services University (USU), an array of opportunities exists for students to engage with the arts, including open microphone events, expressive mask-making classes, humanities electives, medical improvisation seminars, and narrative mapping workshops. Positive feedback from learners prompted the following questions: (1) what unmet needs for arts engagement exist? (2) how can we increase learner engagement with the arts?

In this context, the Kern six-step model for curriculum development provided a framework for an innovative, replicable strategy to answer these questions. Using this model, we explored students’ views on the use of arts as a medium for professional development and enhanced empathy. We further identified barriers to student engagement with the arts, identified modalities ideally suited to overcome such barriers, and created a forum for arts engagement in the form of a student-driven, online and print literary review for federal healthcare students.

Development Process

Our development process was guided by Kern’s six steps: [Kern et al. 2009].

(1) Problem Identification and General Needs Assessment

In spring 2015, we conducted a focus group of USU students and faculty, asking participants to comment on potential benefits of, and barriers to, opportunities for student engagement with the arts. In addition, participants were asked what, if any, artistic modalities they perceived to be of greatest value for their professional development and wellness.

Increased resilience and enhanced professional development were the most commonly cited potential benefits. The lack of a forum in which to share personal artistic expression and where learners could read, observe, and engage with the artistic expression of others was the most commonly identified limitation. The creation of a student-run literary review was identified as one possible strategy to overcome this limitation. This and other information gathered was used to develop a needs assessment for our targeted learners.

(2) Needs assessment for targeted learners

In summer 2015, we sent a targeted needs assessment to 750 students via electronic survey. This assessment was designed to: (1) identify the degree to which the arts were incorporated into students’ curricula; (2) explore students’ views regarding use of arts as a medium for professional development; (3) identify barriers to engagement with the arts, and (4) explore whether students felt a healthcare student literary review was likely to overcome such barriers.

Results:

Among respondents (n = 121, response rate: 16%), 24.8% agreed or strongly agreed that literary or visual arts were included in their curricula. While nearly 55% reported that they had an outlet at their institution where they could express themselves artistically/creatively, fewer than 33% reported regularly engaging in any form of artistic expression.

Eighty-two percent of students reported reading at least somewhat likely to read a student-run literary review, and greater than 50% agreed or strongly agreed that the presence of a literary and visual arts review would enhance professional development. Further, 67% agreed or strongly agreed that the presence of a literary arts review would contribute to the cultural identity of the federal healthcare student community.

Students preferred that the literary review be available in print and online formats, that the online version be delivered quarterly, and that it contain poetry, reflective writing, fiction and visual art.
Thereafter, we interviewed eight editors of diverse medical literary journals to identify best practices for creation of a literary review. Interviews were standardized and included questions regarding journal stratification and philosophy, editorial staff composition, roles, and workflow, journal content and formatting, and publication.

(3) Goals and objectives
Based on needs assessment data, we established the goal of our literary review: To nurture and celebrate the finest art of federal healthcare students, to foster empathy and professional development by encouraging reflection on the human condition, and to cultivate a sense of community among federal healthcare students. Our objectives were: After reading the federal healthcare student literary journal, students, as demonstrated by comments offered during subsequent focus groups and/or survey responses will report: (1) an enhanced sense of community identity; (2) an enhanced sense of professional identity; and (3) enhanced empathy for their fellow human beings.

(4) Educational Strategies
To achieve our goals, we endeavored to create a student-run literary review, available in print and online formats. An online presence was necessary to meet the stated needs of our users, to reach users who were not in close proximity to USU, and to help solicit content for future volumes. To prepare the student editorial team for its tasks, we organized a series of workshops taught by faculty advisors with the requisite expertise. Please refer to Table 1 for further description of the workshops.

(5) Implementation
Informed by survey results and editor interviews, we created an organizational structure for the literary review’s editorial staff. Please refer to Figure 1 for an overview of the organizational structure. Student editors were recruited for each role and standard operating procedures were established. Content was solicited using email, social media and personal networks. The review was primarily student-run, with faculty members available for guidance. Design and layout were completed by the editorial team, with the help of a professional graphic designer. In May 2016, the literary review, Progress Notes, was produced in print and online versions. (https://goo.gl/FPKSw)

Submissions:
We received 71 submissions: 28 visual art pieces, 12 reflections, 22 poems, and 9 fiction stories. Our final publication included 19 visual art pieces, 5 reflections, 11 poems, and 5 fiction stories, for an acceptance rate of 56%.

(6) Evaluation and Feedback
The impact of this intervention on federal healthcare student empathy, resilience, and professional identity among healthcare students is yet to be determined, as the process of soliciting post-publication feedback is ongoing (see below).

Discussion
Here we present a novel, stepwise approach to designing a forum for artistic engagement in healthcare trainees. Drawing from the curriculum development literature, we discovered that use of Kern’s Six-Step Model offered a blueprint for creation of a forum for arts engagement that is likely to be replicable at other institutions. We have created a model which (1) determines the art engagement needs of learners at a given institution (2) delineates arts engagement outcomes that are most likely to meet these needs (3) matches targeted outcomes to art-based strategies likely to achieve them (4) implements forums for arts engagement that are feasible and sustainable, and (with future projects) (5) evaluates the effectiveness of the implemented program, drawing on community member feedback to modify the forum to better meet those needs.

One barrier to broadly adopting this model may be the heavy demands placed on administrators and faculty at schools of healthcare professions, which could result in hesitancy to engage in the creation of activities perceived to make that burden even heavier. This may be especially true for activities more likely to be perceived as extracurricular. Our model addresses this concern as it is driven by students and is based on literature demonstrating the benefits of arts engagement [Reilly et al. 2003; Branson 2007]. Further, despite recognition of the importance of the art and science of medicine, there remains a bias towards “hard sciences” that are perceived to be more “measurable” [Cooke et al. 2010]. The inertia of this train of thought may impede creation of forums for arts engagement at some institutions. We feel that that use of the data driven Kern Model makes this more agreeable to those who would otherwise be hesitant to adopt an arts-based tool. Finally, given the unique nature of our sampled population, it is also reasonable to question the utility or desirability of a literary review as a generalizable intervention at other institutions. Instead we favor the broad use of this framework to create and adapt a locally desired product, fit to meet the needs of the local population.

In the future we aim to use qualitative and quantitative data to evaluate the extent to which our intervention resulted in students meeting our stated goals and objectives. We also hope to identify opportunities for improvements in helping
students more effectively achieve these outcomes, and determine additional benefits that *Progress Notes* may offer students. Data obtained from these investigations will be analyzed and lessons learned will be communicated to future leadership as part of continuous quality and process improvement in order to optimally meet the needs of our target population.

**Take Home Messages**

- Engagement within the arts, including reflective writing, poetry, prose, and visual art may improve resilience and enhance empathy.

- Students within the health professions may feel their institutions lack an outlet for artistic and creative expression.

- The creation of a student-run literary review is one possible strategy to allow learners to engage in artistic expression.

- The Kern six-step model provides an effective and practical framework for the development and implementation of a literary arts journal within the medical professions curriculum.

**Notes On Contributors**

Adam Saperstein is an Associate Professor in the Department of Family Medicine at the Uniformed Services University School of Medicine and Daniel K. Inouye Graduate School of Nursing.

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**Declarations**

The author has declared that there are no conflicts of interest.

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Appendices

Illustrations and tables

Table 1: Literary Review Workshops

| Student Workshop                                      | Managing Editors | Project Manager | Section Editor(s) |
|-------------------------------------------------------|------------------|-----------------|-------------------|
| 1. Educational Theory: The Kern Model for Curriculum Development | •                | •               |                   |
| 2. Public Affairs: University Publication Procedures  | •                | •               |                   |
| 3. Leadership: Managing Teams-Communication as the Key| •                | •               |                   |
| 4. Leadership: Content Solicitation                  | •                | •               |                   |
| 5. Scholarship: Qualitative Research Methodology      | •                | •               |                   |
| 6. Editing and Mentoring: Poetry                      | •                | •               |                   |
| 7. Editing and Mentoring: Visual Art                  | •                | •               |                   |
| 8. Editing and Mentoring: Creative Writing            | •                | •               |                   |
| 9. Editing and Mentoring: Written Reflections         | •                | •               |                   |

*Student participants in each workshop identified with *

Figure 1. Healthcare Student Literary Review Organizational Chart. Submissions are received by project manager via email (blue arrow) and sent to appropriate student section editor for edits and recommendations. Managing editors then make additional edits and recommendations before sending pieces to Editor-in-chief, who makes third set of recommendations. Editor-in-chief sends submissions (green arrow) back to the managing editors, who together determine the final status of the piece. Project manager communicates all comments to author through email. During this process faculty advisors assist with any questions student may have.

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Ken Masters
Sultan Qaboos University

This review has been migrated. The reviewer awarded 4 stars out of 5

A very nicely-structured and written paper exploring the processes leading to the introduction of a literary review for medical students, as a method of allowing them artistic expression and reflection. The authors have followed a very structured approach to their implementation, gathering information from the students and from external experts (editors and faculty advisors) in order to ensure that they meet the needs of the students and also meet expected standards and best practice. From a brief look at the journal, I would say that it appears to be going strong. It would be valuable for the authors to write a follow-up article on what has been learnt and what has changed in the journal since that first issue. One note: for interested readers, the authors should also have supplied the URL for the journal (https://www.usuhs.edu/students/progress-notes-literary-review) rather than only to the first issue.

Competing Interests: No conflicts of interest were disclosed.

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Subha Ramani
Harvard Medical School, Brigham and Women's Hospital
This review has been migrated. The reviewer awarded 5 stars out of 5

Teaching humanism, resilience and other essential skills in the era of multiple commitments and shrinking time, certainly requires inclusion of artistic and creative expressions in curricula. Burn-out is of increasing concern in the medical profession and teaching trainees and faculty resilience is one remedy to promote wellness. I agree with the authors that incorporation of art not only promotes empathy/compassion among healthcare professionals, but also enhances their observation skills which are required clinical skills. What may be novel in this study is that the students lead the curriculum, and it is modelled on a well-known and established curricular framework from the Johns Hopkins group. The paper is well written, well referenced with an appropriate problem statement, and educational framework. It also emphasises the learning outcomes and the importance of program evaluation and based on needs assessment- general and targeted. One limitation is the low response rate in the needs assessment phase, so it is hard to extrapolate the usefulness of this area to all students, especially the non-respondents. I do hope the authors will continue to the next steps of program evaluation as they have indicated. For this subject, sound qualitative outcomes would be very important. I believe this paper would be useful to all those involved in health professions education, regardless of their speciality. Even those not interested in designing a similar curriculum could use these steps in designing other curricula,

**Competing Interests:** No conflicts of interest were disclosed.