Business Model Canvas for Medical Educators

The UGME steering committee recognizes that medical education programs are faced with the ubiquitous challenge of repeated calls for innovation and that, frequently, these calls do not adequately address the associated resource demands. As medical educators, we have become highly creative in identifying strategies to do more with less, but as we know, this is not a sustainable model of stewardship. In 2016 and 2017, the UGME section collaborated with the Group on Business Affairs (GBA) to explore evolving models to support and sustain UGME programming. A result of this work is the *Business Model Canvas for Medical Educators*. The original Business Model Canvas was proposed by Alexander Osterwalder in 2008 and has been modified over time to fit other needs.

The Table of Contents will direct you to resources, including the *Business Model Canvas for Medical Educators* template and two examples submitted by institutions who have successfully used the template to secure funding from within their own institution.

In February, 2017, Anne Barnes, Kimberly Lomis, and Michelle Sainte conducted a webinar entitled *Addressing the Cost and Process of Implementing Medical Education Innovations*. The link to the webinar is https://www.aamc.org/members/gba/477172/webinaronaddressingthecostandprocessofimplementingmedicaleducat.html

Table of Contents

The Business Model Canvas

Modified for Medical Educators

1. Value Proposition

Which one of our stakeholder's problems are we helping to solve?
Which stakeholder needs are we satisfying?

Provide a brief description of the educational rationale for the intervention.
How will this intervention enhance the education of the learner?
What value do we deliver to the learner and the learning system?

2. Key Stakeholders

For whom are we creating value?
Who are our most important stakeholders?

Define the target learner.

Are there other stakeholders in the learning system who will benefit?

3. Stakeholders Relationships

What type of relationship does each of our stakeholders expect us to establish and maintain with them?
Which ones have we established?

Consider relationships with learners and other stakeholders.

How might students perceive the proposed intervention?

Are there potential unintended consequences?

What communication with stakeholders will be needed to inform them about the intervention?

4. Key Activities

What key activities does the educational intervention involve?
What additional activities are needed to support logistics?
Stakeholder relationships?
Revenue streams?

Overview of the educational design of the intervention, with enough details to justify resource demands.

Consider related activities needed to support the educational intervention.

5. Delivery Logistics

Through which channels do we intend to reach our stakeholders?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating new activities with stakeholder routines?

Consider scheduling issues, space, supporting technology, etc.

6. Key Resources*

- *Faculty time, for teaching and assessment*
- *Staff support*
- *IT platforms*
- *Space*
- *Faculty development*
- *New administrative structures*
- *Clinical placements*
- *Students (as teachers and as change agents)*
- *Leadership team*
- *Collaborative tools*
- *Other learners and instructors (IPE)*
- *Materials*
- *Program evaluation processes*

7. Key Partners

Who are key partners and suppliers?
Which key resources are we acquiring from partners?
Which key activities do partners perform?

Which educators are needed?

What departmental support is needed?

Are other partners needed to provide clinical placements or access to learning opportunities?

8. Revenue Streams

For what value are our customers really willing to pay?
How much does each revenue stream contribute to overall revenues?

Review of revenue streams is uncommon in medical education, but consider whether there is any potential for generating revenue from the intervention (such as hosting external CME sessions).

Consider funding opportunities beyond existing budget – alternate sources of support for the intervention, such as grants, student fees, etc.

9. Cost Structure

What are the most important costs inherent in our business model?
Which key activities are most expensive?
Which key resources are most expensive?

Program evaluation and reflection on costs:

Program evaluation must be completed to assess the efficacy of the intervention.
Review the relative costs of all aspects of the intervention; consider efficiency and alternatives.
Does the anticipated benefit justify the costs?
For critical costly components, have appropriate measure been taken to promote success?

Example 1

The Business Model Canvas

Modified for Medical Educators

<table>
<tr><td colspan="4">1. Value Proposition
• Two cognitively sound premises for mastery learning and retention are spaced learning and frequent, high-quality formative assessment.
• Our fully integrated systems-based curriculum requires additional spaced learning across the continuum – not just within blocks.
• In a time-compressed curriculum, student learning is best supported by a coherent and fully integrated study and assessment strategy.
• Preparation of large numbers of high quality assessment questions is a difficult and time consuming task. Knowledge of the location of content across the curriculum also requires a time commitment few faculty can achieve. Outsourcing these tasks frees faculty to employ their expertise in helping students learn.</td></tr>
<tr><td>2. Key Stakeholders
• Students in years 1 and 2
• Faculty creating, delivering and assessing the pre-clerkship curriclulum
• FSU COM will benefit from higher Step 1 scores
• Admissions recruitment will benefit from a more attractive study program, comparable to other medical schools</td><td>4. Key Activities
Based on FSU curriculum objectives of 9 courses: Foundations of Medicine 2 through Hematologic System:
• Curriculum alignment
• Daily review questions
• Daily relevant clinical case
• Weekly formative quiz
• Practice summative exam for each block
• 3 Step 1 diagnostic tests (1 M1, 2 M2)</td><td rowspan="2">6. Key Resources*
Firecracker contract:
• M1, M2 Student access to all Firecracker resources
• Weekly 25 question formative quizzes
• Practice summative exam (100 board type questions) for each block
• 3 half-length diagnostic exams for Step 1
• Individual student daily review questions and relevant daily clinical vignette
• Faculty access to student dashboard to review progress and identify areas of courses that need clarification/improvement
• Student performance profiles with each assessment</td><td>7. Key Partners
• Dean & Sr. Associate Dean for Medical Education and Academic Affairs: financial support
• Faculty: need to improve current learning objectives and collaboration to use collected data to better define, coordinate and integrate curriculum
• Student Affairs/Academic Counselors: help students learn how to use formative assessments and tools
• Firecracker</td></tr>
<tr><td>3. Stakeholders Relationships
• Students will feel more confident and better supported
• Meets student request for more practice questions
• Faculty feel better supported
• Administration will have better evaluation of curriculum both internally and against national performance
• Admissions will have an improved marketing tool – addressing a frequent question/concern of applicants</td><td>5. Delivery Logistics
• Initial step of Curriculum Alignment requires a quick editing of the objectives from AY2015-2016 – in progress
• This proposal does not include Foundations of Medicine 1, Integrated Cases, or the Pre-Clerkship Boot Camp, as these do not seem to have the potential benefit of the program. Histology objectives from Foundations 1 would be added to Foundations 2.</td><td>8. Revenue Streams
• No direct revenue, but potential savings in student costs for Step 1 preparation and/or remediation</td></tr>
<tr><td colspan="4">9. Cost Structure
See attachments. Initial 2 year contract of $145,000 / year will drop to $132,137.50 / y in subsequent renewals. The latter will average to $550 / student per year (initial average $589). 2 iterations of the CBSE could be eliminated ($11,000/y). This level of formative assessment has the potential to reduce remediation exam costs. Overall cost is considerably less than delivery of the Foundations of Medicine 1 course.

Reflection on the entire plan: This proposal addresses both student and faculty concerns about curriculum change, assessment, and preparation for promotion and passing USMLE Step 1. In particular, given our small faculty, it promises to improve the quality of our educational program by both:
• freeing faculty time (from assessment writing) to devote to developing active learning exercises and helping students learn
• tracking and assessing cumulative knowledge across the pre-clerkship curriculum</td></tr>
</table>

Example 2

The Business Model Canvas *Modified for Medical Educators*

1. Value Proposition

- *Incorporation of a narrative medicine thread throughout the combined 7-year BS/MD curriculum*
- *Promote cultural humility and reflection as a key skill and behavior*

2. Customer Segments

- *Medical students are the key customers but in order to change the culture, faculty and staff should also buy into this*
- *Their future patients and colleagues are key stakeholders*

3. Customer Relationships

- *Students coming in from high school with little to no experience with medicine may not appreciate the value of these sessions or the purpose related to the practice of medicine*
- *They may feel vulnerable and have difficulty sharing and reflecting*
- *If there is not buy in from other faculty and the institution, the students may not value these sessions*
- *Need for an introductory session and perspectives from other students about the value of NM*

4. Key Activities

- *Introductory course on narrative medicine*
- *Required narrative medicine sessions in the Social Determinants of health course*
- *3-4 NM sessions open to all faculty, staff and students each semester*
- *NM required sessions in at least 2 courses each year (the Practice of Medicine longitudinal pre-clerkship doctoring course years 3-5) and at least one other course (Anatomy year 3), Organ Systems years 4 and 5 (first 2 years of med school)*

5. Delivery Logistics

- *Beginning with an entire course first semester that focuses on NM as a means for interpreting literature and improving communication skills (written and verbal) helps students to appreciate the value of NM*
- *Requires significant trained faculty and facilitator time for the sessions and small group rooms*
- *Requires administrative support to organize the sessions and facilitators*
- *Requires significant faculty time grading the written pieces and providing feedback to the group as a whole and to students individually*

6. Key Resources*

- *Narrative medicine faculty (leadership) to create and implement the sessions/course and to oversee recruitment of facilitators (require at least 5-6 facilitators for each session)*
- *Training for leadership and facilitators*
- *Narrative medicine faculty facilitators*
- *Space- small group rooms for each session*
- *Administrator to recruit participants, schedule facilitators and rooms*

7. Key Partners

- *Higher administration (Dean's office) is required to get buy in from others and mandate this in the curriculum*
- *One full-time faculty trained in NM to create and implement the curriculum*
- *Interested clinical faculty and students who can promote NM and facilitate the sessions*

8. Revenue Streams

- *Unless we launch a program to train facilitators ourselves and require payment, there is little revenue from this*
- *However, this can be of value in exchange for other services from our clinical sites if we offer these sessions and even train their faculty, residents and staff*

9. Cost Structure

- *The costs are predominately the costs of training facilitators and the hourly cost of using them to facilitate the sessions*
- *Additional space is needed to accommodate multiple small groups and administration to schedule and organize the sessions and facilitators*
- *Time in the curriculum to implement this*

Reflection on the entire plan:

- *A full-time faculty member will cost at a minimum $120,000 to oversee these sessions*
- *An administrator for oversight at .2FTE about $15,000 (including benefits)*
- *Facilitator time: faculty cost about $200/hour for each session. 2 hours of training (at a minimum) adds another $400. 15 sessions each year and 6 groups/session requires 90 hours of facilitator time ($18,000) plus training (at least 20 facilitators needed to run the 90 sessions) at about $8000 for faculty development annually.*
- *Total cost = $161,000/year*
- *An alternative is to pay clinical faculty (especially from other affiliates) and more senior students to take a course on NM in order to facilitate sessions and require they facilitate at least 6 sessions a year in exchange for covering the cost of the course (Clinical sites are interested in having faculty trained in NM to run sessions at their sties) Training for faculty is $1000/pp and for students $450/pp- for a total of 5 faculty and 5 students trained at $7250/year instead of $26,000/year. We train additional faculty and students each year. Training our students and faculty helps change the culture and reinforce the importance of NM in our curriculum. The value is certainly worth $7250/year.*