Introduction

The role of entrepreneurship in engineering education has undergone a substantial transformation over the last several years. The recent widespread adoption of the Lean Launch curriculum and Business Model Canvas has provided engineering programs with a straightforward, common curriculum and pedagogical approach to vetting potential business models.

Research Question

How does student understanding change following a Lean Launch Customer Discovery course?

Lean Launch

The Lean Launch curriculum was developed by serial entrepreneur, Steve Blank, leveraging customer discovery (Blank and Dorf 2012) and business model development (Osterwalder and Pigneur 2010) to help students identify scalable and repeatable business models. The practice of customer discovery is the forced exercise of talking to real customers and stakeholders to discover customer needs and wants: the product market fit.

Methods

- Entrepreneurship students were prompted with a series of open-ended survey questions regarding the launch of a diabetes management system application before and after taking a course using the Lean Launch curriculum.
- Participants included 39 students of various disciplines including: engineering, science, arts and humanities, and social science.
- Student response were coded and categorized based on recurring themes.
- Data analysis was conducted in Microsoft Excel to calculate the frequency of particular responses.
- This poster presents preliminary findings, representing student knowledge of the customer discovery process prior to taking the entrepreneurship course. Post data has been collected, but has yet to be analyzed.

Influence of Additional Information?

In speaking with potential users, you discover that the majority of diabetic patients are over the age of 60. Describe how this might influence your company’s next steps with the app.

Figure 3: How Students Would Respond to New Target Demographic (N=38)

- Conduct Customer Research: 11%
- Change Marketing: 11%
- Rethink Venture: 24%
- Make App More User Friendly: 63%

The majority of students (63%) recommended making changes to their application to accommodate the new demographic. Suggested changes included: increasing font sizes on the user interface to ensure readability and simplifying the design to improve accessibility for the elderly.

“We would have to simplify the content and accessibility of the application, as we would assume that people in that age group aren’t as familiar with technology.

Next Steps?

An elderly woman is having trouble managing her diabetes. Describe at least five steps you would take to determine if this cellphone app would be a potential solution for her problem.

Table 2: Top 5 Steps Students would Take to Determine if the Product is a Viable Solution (N=38)

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<tr>
<th>Top 5 Steps</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>1. Ask if diabetic has a cell phone</td>
<td>82%</td>
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<td>2. Determine her current diabetes management system</td>
<td>50%</td>
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<td>3. Assess her comfort with technology</td>
<td>40%</td>
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<td>4. Demonstrate/Explain the App</td>
<td>28%</td>
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<td>5. Ask about the usefulness of the app for the diabetic</td>
<td>23%</td>
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Students were primarily concerned that their customer might not have access to a smartphone.

Preliminary Findings

- Students possess a clear awareness of who product stakeholders might be and reasons for contacting them prior to taking the entrepreneurship course. However, students seem to be less certain regarding how to make connections with potential customers beyond attempting to make contact in person, by phone, and email.
- In determining the usefulness of the diabetes management app for an elderly person, students were mindful to consider issues of product accessibility and customer comfort with technology.
- Prior to the entrepreneurship course, the majority of students (63%) indicated that they would likely make adjustments to the app to accommodate the needs of their new customer demographic. However, only 11% of students mentioned conducting customer research of that particular demographic to inform product adjustments.

Project Next Steps

- Complete the analysis of the pre and post-survey data
- Compare student responses across cohorts (College of Engineering, School of Music, and School of Public Health)
- Examine the qualitative results in relation to the quantitative results measuring entrepreneurial self-efficacy and behavior.

References


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