University of Ottawa

Faculty of Engineering

GNG2101 - Introduction to Product Development and Management for Engineers and Computer Scientists

Project Deliverable F - Business Model

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Introduction

The objective of this deliverable is to identify a potential business model that would be well suited to commercializing our virtual tool of teaching beginner 3D printing, which replaces in person workshops. Core assumptions will be made to help in the feasibility of the chosen model and decisions taken. A business model canvas will then be developed by answering the how, what, who and how much of the chosen business model. Each section of the business model canvas will break down

Decision

The type of business model that would be well suited to commercializing our product is the Freemium business model. The business model is quite simple and cheap to use and can be easily accessible by anyone in any demographic. We could use our product as a fine way to earn money based on our chosen business model. The freemium business model does not pressure users that come from the University of Ottawa brightspace but offers them the opportunity to pay for a more premium experience of the site. The site will offer sections for free while restricting others for Premium users. This will allow the site to generate profit while not pushing customers to pay for the site. Some examples of sections that will be included for free will be

- Commonly asked questions and answers,
- Pre la videos and quiz,
- TinkerCad tutorials
- Cura tutorials
- Help Center

Sections that will not be included but and will only be accessible for the Premium users of the site are:

- TinkerCad practice assignments
- Drag and drop Quiz

Business Model Canvas

<table>
<tr>
<td rowspan="2"><u>Key partners</u>

University of Ottawa

CEED

Makerspace

Accessibility advisors

Association of 3D printing, other technical groups</td>
<td><u>Key activities</u>

Interactive QA section

Pre lab videos and Quiz

TinkerCad tutorial videos

Premium members

TinkerCaD practice assignments

Drag and drop Quiz</td>
<td><u>Value proposition</u>
Low cost virtual learning tool

Replaces in-person 3D printing workshops and training sessions

Informative & Interactive

Mimics student and TA interaction’s in lab</td>
<td><u>Customer relationships</u>
Same side network effects

Cross side network effects

TA and student interaction in regards to Help Center section of website</td>
<td><u>Customer Segments</u>
University of Ottawa students

Internet Users

Advertisers and Marketers

Teaching Assistants and Professors

Other Educational Institutions</td>
</tr>
<tr>
<td colspan="2"><u>Key resources</u>

Youtube 3D printing videos

Reputable sources for 3D printing

CEED 3D printing videos

Google Sites</td>
<td colspan="2"><u>Channel’s</u>

Accessible on Channel like Internet Explorer, Google Chrome, Mozilla Firefox

Compatible with Android and iOS</td>
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<tr>
<td colspan="2"><u>Cost structure</u>
Set price for students of 20-30$ for Premium version

Price of maximum 100$ for developers</td>
<td colspan="3"><u>Revenue streams</u>
Free offering and revenue per premium member</td>
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Core Assumptions

This is a list of things that were taken into consideration when developing our business model:

- Majority of the viewers would be young so the website should optimized for efficient viewing when used on a phone
- There is little time and no professional expertise, so the homepage has to be appealing to the eyes of its viewers to attract interest.
- Lack of focus on the information that the visitors will find quite valuable; how beneficial our product or service would be and how interactive it can be.
- Our website is a reflection of the University of Ottawa but it should not be a global navigation on the site.
- Structure on the site in a logical way to visitors and the ability to communicate with your users.
- Drop-down menus do not contribute to the usability of a lead-generating website; they do the opposite because they are designed for power users, and not for users who are coming to the site for the first or second time.
- Menus often disappear once the mouse is moved, thus, users have difficulty remembering their choices because they cannot create a mental map of the site.; mega drop-down menu would be preferred because it is much larger and the links are broken up into categories with clear headings so users can make more sense of them. Lack of interactive features that you think will add value and visual appeal to your site for users.
- Slideshows can actually distract users and are often overlooked. While it may seem they help maximize space, few users scroll past the first slide.
- Use of unstoppable visual representation like videos and audios. Users should have the ability to choose.
- Many people are unfamiliar with different screen resolutions. Browser discrepancies are even more scattered with people using a range of versions of Internet Explorer, Safari, Firefox, Google Chrome, etc. It is very impossible to achieve the exact same look across each one.

- Viewers look for what they find as useful information, so the use of unnecessary information has to be avoided

Conclusion/Feasibility of our Business Model

Upon completion of our second client meeting and receiving constructive feedback and criticism on the pros and cons of our product, we believe our final business model is very feasible. It operates in a similar fashion to other interactive online learning platforms used throughout the engineering world used by students and professionals alike. Moving forward, we intend to meet with our client twice more, gathering further information and observations on the quality of our web developed product and potentially make it available to a small select audience to test our final model. Thereon, we would like to publish and host our final product to the broad public, and affirm the means through which payment processing would occur and consumer interactiveness would occur.

After completion of our final business model, we would eventually like to see our project be incorporated into the CEED profile of online learning resources and its own popular domain (via search engine optimization). CEED students would evidently have an advantage over those using it from another engine, being made available for more information and interactive principles that others would have to pay a little more for. If further developed, we would be able to appeal to other organizations and learning institutes to design and inform students of the basic principles and operations of all things 3D printing.