

## Final reflection paper

### Entrepreneurial Mindset at Ukrainian Catholic University

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#### Ad Fontes

Fast and convenient resource-fetching assistant program (a plugin for writing environments). Its goal is to save the time and effort you put into search and citation formatting by dynamically suggesting relevant resources for your paper as you write.

#### Why?

Proper resource research is time-consuming and hard for beginners or the people who are new to a specific topic. Optimizing search time is critical for people who need to deliver their work faster or don't have a structured view in the area of work.

#### Who needs resource suggestions?

- Students who have an intense assignment flow and need to cope with them fast to meet the deadlines and save more personal time. They don't have much time for a thorough resource searching and need a time-saving solution.
- Scientists working in a cross-disciplinary area. As they deal with a great amount of information, it's hard to know the best papers for references to each subtopic. Scientists mostly work with professionally written resources, which require a decent background for understanding. It's ok as long as their research topic is covered by their major, so they can easily read the science-jargoned text and navigate among the subtopics. However, when the research includes another area and they need some references and opinions from a bordering science, reading through the resources becomes barely effective. So, their biggest struggle is the complexity of the material they need to refer to or navigate through. The core need of this user group is simplicity and relevance.  
(e.g. statisticians, scientists, Ph.D. students, professors, etc.)

- People who work independently on their research, and therefore don't have a supervisor/mentor to ask for reference recommendations or academic resources (libraries/databases/assistants).  
(including homeschooled students and graduates who would like to continue working on personal research, but do not wish to proceed with an academic career <sup>[3]</sup>.)

## Beachhead market

For the Beachhead market, I see a bigger potential in the academic students' community. Specifically, older students (sophomore Bachelors and Masters) who have a very intense assignment flow, and have a real need to write decent work faster.

The end-users of this market have the most critical need for the product (contrary to other users that are attracted more just by its convenience). Also, academic works are usually more sophisticated and include 'deeper' topics that can't be easily googled - so the value of the product is closer to the original idea here.

+ The student community has been proven by Grammarly's experience to be a great audience for testing and spreading an innovative product. <sup>[1]</sup>

## TAM size

Size of the Total Addressable/Available Market

*'How much revenue could be accumulated if we achieved 100% of the available market share?'*

As of the 2019 year's statistics, there are ~200M university students and 7M scientists worldwide. However, from this data, we need to extract the number of students that can be considered frequent writers (probably science and media majoring students that have a big number of papers demanded by curriculum) and who prefer using online tools for their works <sup>[5]</sup>.

As it's hard to predict this percentage theoretically (due to lack of corresponding statistics for the global scale) - we'll take a look at the practical experience of other online products that our potential end-users are using in the same kind of work.

The top three products that are closest in terms market (yet different in terms of the core functionality):

Grammarly <sup>[5]</sup>	dynamical text-analyzer but for grammar correction (as this product has a much wider market, we can only use the number of students for our market size estimation)	<u>150 000</u> students as registered users <sup>[1]</sup>
Zotero <sup>[5]</sup>	a research assistant which detecting the official resources among the links you found while browsing <u>on your own</u>	<u>2 081 824</u> users mainly consisting of academic and scientific communities

Mendeley<sup>[5]</sup> a citation app allowing you to review a paper that 1 535 309 users mainly consisting of academic and scientific communities you are already using for reference

From the data above, we can say that the realistic maximum number of end-users (both students and scientists) is around 2.5M.

Now, assume we sell it in two ways: either a yearly subscription priced on average \$5 or a free service with paid advertisements emplaced. Then, approximate the revenue opportunity available for our product on the whole market set as [price] \* [number of users]  $\approx$  \$12.5M.

## End-User profile

'A narrowly defined subset of potential users with similar characteristics and needs.'

### Demographics

A student (of age 18-30) going towards a scientific degree (Bachelor/Master/Doctor). They see big importance in their studies, and do all the work by themselves, but are also proactive and creative people that need personal time and space for their passions and projects.

Spending most of the time studying/researching and not having much of industrial experience yet, they can not work in a full-time position. So, their income ranges between a lower and an average level. It's coming from a part-time job (like a tutor/assistant/freelancer), a seasonal internship, and financial support from their parents or a university program.

### Psychographics & Proxy products

Having lots of writing assignments per week they are aiming to cope with it faster to meet the deadlines and to focus more on their interests (rather than non-majoring subjects). The core feature they are looking for is time-saving (in case of short assignments) and simplifying (for the thesis/coursework). They are pretty comfortable using different online tools in their work and are willing to optimize their performance, and usually prefer online environments over desktop editors to benefit from wider functionality (like. collaboration flexibility, version control systems, and convenience of browser extension).

Their biggest problems they face in the process are:

- feeling lost while exploring an unfamiliar topic and struggling to extract the pieces needed for their topic from a huge paper without a complete view on its subject;
- spending too much time and effort searching through complex scientific resources and formating the relevant parts into their work;
- struggling to support a biased argument with a relevant fact or respected reference;
- lack of experience in finding resources that are closest to the level, style, and topic of their writing.

### Watering holes

- they don't watch TV

- listen more to the real-user feedback (e.g. recommendations from collaborative projects)
- online advertisements are more effective in social media

## Persona

One end-user who fits the End User Profile to serve as an example and direction verifier.

Yurii is a Bachelor student of an IT & Business Analytics program at Ukrainian Catholic University. Four years ago he decided to come to Lviv from Rivne to study, so he didn't have any apartments or job contacts in Lviv yet. The first academic year was pretty easy and exciting - he lived in collegium and studied with his roommates. The next year he found a cheap flat to rent with his classmate somewhere in the Sykhiv district and was chosen as a teaching assistant for the subject he excelled at. This offer gave him some basic income, but he also found two internships in the summer and tried to make some money by school-tutoring. Yet, this was only enough for good typical student life, so he didn't buy any too-fancy stuff and pirated most of the movies he watched. He also didn't see a point in buying high-priced premium subscriptions (like O'Reilly and VisualCV which are priced according to us-market) while their basic version/trial was available for free. The only exception was the YouTube subscription - as for ua-students it costed even less than his mobile tariff.

However, while his situation, in general, was settling and getting easier, his studies were only getting harder. Aside from his major subjects getting deeper into math and business, he had several projects and some non-core subjects demanding essays and science coursework. He was writing something every week - he was very busy, yet didn't really feel like what he's doing is actually relevant for his future work. Although he enjoyed the lectures on other disciplines, he hated spending days of his time just reading through history resources to grasp a topic for his history coursework, or searching for a believable resource to support his essay statements for philosophical topics. So, he tried to optimize his work: organized shared Google Drive for his team to write together, started using Grammarly and stopped checking his text; found a nice auto-complete plugin to save some typing time... But still, the most frustrating part was there: long searches for respectful references to support his subjective opinion in unfamiliar questions were taking more time than he expected.

## Results of Face2Face deep interviews

Most of the insights from market research and persona profiling were confirmed, but we also found two new ideas from our clients. A post-Masters student was complaining about his work to not being cited properly (as instead, someone copied the resource-list he mentioned without checking what parts were of his authorship). So we noted to make sure our auto-citing feature makes a deep check for the true origin.

People were mostly opening lots of tabs and taking small pieces from every article they come across. The most time-consuming part was searching for a relevant piece in big detailed work. And the time they needed help was usually at the beginning right after introduction - when they didn't see any possible directions or arguments to start research. Some students confessed to copying the citation-list from a big work thinking that no one will check that anyway (which confirmed the above issue). The observation

about younger students valuing speed was confirmed with almost every interviewee. While older students who conduct their own research turned out to value not only the simplicity/understandability of a reference but also their personal attraction to it, as they feel more ownership of their writing. I was pretty disappointed about the lack of innovation in most of the Master's student's research work, as they mostly just learn and analyze the existing approaches and give assumptions, but that's probably an advantage for our product.

## Conclusions

Overall the situation looks well to me. There's no alternative product on the global market yet, but the concept of using an online extension/plugin is well spread among the younger generation and there's a big percentage of science students using citation tools for writing. On the local scale, we know how much people like to work less :) Among the main risks, there's a challenge in the marketing strategy - as people confirmed to have the problem, but never searched for the solution. In most of the cases, people modernization to their working environment a colleague's or mentor's recommendation. However, I see an opportunity for growth from the student-oriented online market to a bigger modern scientific community.

## Information resources

### <sup>[1]</sup> - **Statistics on scientific researches and papers throughout the world**

Unesco Science report

[Facts and figures: human resources](#)

Richard Van Noorden & Declan Butler, by May 2019

[Science in Europe: by the numbers](#)

### <sup>[2]</sup> - **Market research**

Calculating TAM -MIT archive

[Step 4: Calculate the Total Addressable Market \(TAM\) Size for the Beachhead Market](#)

Chronicle Forums

[How to Continue Research/Writing Outside Academe?](#)

Similar but not alternative products

[Grammarly User Survey Analysis](#)

Robert B. Kvavik - EDUCAUSE Center for Analysis and Research and University of Minnesota

[Convenience, Communications, and Control: How Students Use Technology](#)

### <sup>[3]</sup> - **Number of Grammarly users**

Total count

<https://producthabits.com/how-grammarly-quietly-grew-its-way-to-7-million-daily-users/>

Play Market data

<https://play.google.com/store/apps/details?id=com.grammarly.android.keyboard>

<sup>[5]</sup> - **Products with the same market**

Grammarly - [app.grammarly.com/](http://app.grammarly.com/)

Zotero - <https://www.zotero.org>

Mendeley - [www.mendeley.com](http://www.mendeley.com)

**Other resources**

Vlad Bodi - Metabeta - [How to Create A Persona and an End User for Your Startup](#)

The 24 Steps - [MIT Global Startup Labs - India BMS Summer 2013 Materials](#)