Problem

- Since the start of the Covid-19 pandemic prices of university e-books have increased as much as 500%[1] and the physical books are also not cheap with “today’s typical student can expect to budget between £450 and £1070 for books and equipment per year.[2]” and that was in 2016.

- Most of these books will be used for one module and then not used again for the rest of the course. Leaving them to collect dust and take up space in the students room.

- There currently is no marketplace designed specifically for reselling textbooks between students.

Solution

- A website and app that allows users to post their used university text books for sale. Other users will then be able to search for books they need and shown suggestions and they can message the original poster of an ad to discuss buying the book from them.

Key Metrics

- Number of sales on regular intervals - per day, week, month etc.
- Number of new users in the same intervals.
- Number of new posts.
- Total turnover.
- Total costs.
- Returning users after a sale is made.

Unique Value Proposition

- Biblio is a person to person university text book re-selling application and website.

- Unlike other options it is tailored specifically for selling university text books, and allows the users compete control over the sale price.

- Users are able to list their old books for sale, chat with other users to arrange sales and find books from the course they’re on.

Find the books you want for the price you want

Unfair Advantage

- Currently there are no companies that do what this is setting out to do. The closest similar companies would be sites like Gumtree, or Depop which are not designed around books. There are also sites like webuybooks.co.uk but these are not for selling between people and don’t let the user set the price.

Channels

- the majority of university students use social media with 67% of people ages 18-29 using instagram daily, and 56% using snapchat.[3] And so having a presence on these platforms is essential.
- A free to use period will encourage word of mouth growth as user base will be essential for the longevity and sustained growth of the app.

Customer Segments

Target Customers

- The main customer base for the application will always be university students. The majority of these are ages 18-25 and will be proficient with technology already.
- There are currently 2.46 million students at UK higher education institutions[4]

Early adopters

-The first users for the application would be university students and people who have recently left university who want to sell their books, and first year students who need to buy books for their course. The user base will likely remain with these people as the majority.

Cost Structure

The initial start up cost for the application are relatively low. At first someone to run the company, development of an application, customer support, and advertising would be the only essentials. As the app launches and grows there will then be costs incurred for services such as cloud hosting and advertising.

- The cost to develop an app is estimated at around £74,000.[5]
- Advertising is estimated to cost £55,000 for the first year.[12]
- Employees for customer support and advertising would cost approximately £30,000 per employee.[7]
- A CEO/CTO for the company would start on a higher salary of £50,000 to reflect the extra workload they would take on.
- An in house development team starting with one developer would also cost approximately £30,000.[8]

Initial cost for the first year - Approx. £265,000
Costs moving forward - Approx. £140,000 per annum depending on rate of growth and office space.

Revenue Streams

- At first the application will not have any revenue streams whilst the user base grows and launch problems are fixed. This is important as user growth will come from two parties, people who want to sell books, and people who want to buy books. Without charging for this service people will be more likely to try the application and allow for a user base to grow before later implementing charges once the software is working and people trust the app.
- Revenue will then be able to come from two main streams, sponsored post positions, and taking a percentage cut from each sale.
  - The sponsored positions will allow users to pay to have their posts displayed at the top of search results for instance in exchange for a small fee.
  - The percentage cut will take 20% from each sale made through the app.

Risk Register

Risk ID	Risk	Type	Likelihood 1 - Extremely unlikely 5 - Extremely Likely	Impact 1 - Extremely unlikely 5 - Extremely Likely	Total	Mitigation Strategy	Justification
1	App/project development delays	Project/technical	5	3	15	Ensure the developer of the app is reliable and has a strong portfolio and references. During development of the application there should be constant communication and updates from the developer.	There are a lot of reasons a project could be delayed and it is very likely that something will happen.[16]
2	Low user uptake	Social	3	5	15	Advertise the application in places where university students are likely to see it, such as social media and adapt the advertising strategy as the app grows to encourage what works.	Although the given number varies between 80 and 99% of new apps fail within the first year[17]

Risk ID	Risk	Type	Likelihood 1 - Extremely unlikely 5 - Extremely Likely	Impact 1 - Extremely unlikely 5 - Extremely Likely	Total	Mitigation Strategy	Justification
3	High rates of fraud on the app	Social/technical	4	3	12	Users who have issues with sales in the app should have a place they can go to complain and get support with any issues	Similar applications like Depop suffer from issues like fake listings.[18]
4	Database security - the app is not secure	Techical	1	4	4	The same applies here as for risk 1, the developer of the app should be well trusted.	Accidents happen in development and especially when outsourcing mistakes may happen.
5	Third party services go down	Technical	2	4	8	The third party services used should be well researched and reliable providers should be chosen to try and minimise the likelihood of this happening.	No company is immune to downtime. Firebase has a list of downtime incidents available at https://status.firebase.google.com/summary

Risk ID	Risk	Type	Likelihood 1 - Extremely unlikely 5 - Extremely Likely	Impact 1 - Extremely unlikely 5 - Extremely Likely	Total	Mitigation Strategy	Justification
6	The app is found to not be GDPR compliant	Technical/Legal	1	3	3	The outwear developer should again be trusted to know about this. A third party lawyer should also be bought in to check before launch.	GDPR is relatively new having only been released in 2018 and so there us a risk that outsourced developers may not know the newest rules.
7	People use the app to make sales but find ways around paying	Project	1 during the free period, 4 once fees are introduced	3	12	At first this will not matter, however once fees are introduced features should be introduced to the application to try and reduce this, such as checking messaged for keywords like PayPal, and suspicious accounts being investigated by customer support	Although there are no published statistics I know from personal experience that this is common within apps like depop, with users often asking to move to a different platform to avoid the fees

Risk ID	Risk	Type	Likelihood 1 - Extremely unlikely 5 - Extremely Likely	Impact 1 - Extremely unlikely 5 - Extremely Likely	Total	Mitigation Strategy	Justification
8	People are uncomfortable buying from strangers through an app	Ethical	2	3	6	People are already used to this from apps like depop and as long as customer service stay vigilant it should not be a problem.	People do not trust what they do not know, any new website will have some level of distrust as it has not had time to build a reputation.

Cost and Revenue

Costs

Initial Startup costs

Personnel and office space

Initial personnel required for the start up would consist of a CEO, preferably with a background in the area, an in house software developer, a customer support representative, and a head of advertising. The customer support, advertising and software developer would each be on approximately £30,000 a year[7,8] and the CEO would be on a salary of £50,000 to reflect the extra workload and responsibility taken on by them. Once staff are hired in the current climate with corona virus they could work from home which would also reduce office overhead costs for the first year. Once the staff force begins to grown alongside profit of the app, and online only co-ordination becomes harder, office space could then be looked into.

TOTAL = £50,000 + £30,000 + £30,000 + £30,000 = £140,000

App development

The initial development of the application should be outsourced to another company as it is vastly cheaper than hiring a full development team for the application.[9] It is estimated that the cost for developing an app ‘offshore’ are approximately £70,000.[5,10, 11] This can be managed and supported

by the one in house developer. Once the initial product is then complete the developer will then be able to maintain and improve it through the early stages of the app.

TOTAL = £70,000

Hosting

Firebase provides a free level of hosting that would be enough for the initial launch of the app, it allows for about 20 million chat messages to be stored (1 GB of data) 2,500 high quality images (5 GB of data) and about 600,000 write and deletes to the database, and 1,500,000 read requests.

TOTAL = £0

Advertising

The main area for advertising at first will be focused on social medias such as Facebook, instagram and snapchat as they are widely used by the target customer and relatively cheap. Facebook advertising schemes work out to roughly $0.97 per click, or $5.47 per download.[12] This means that to get 10,000 users onboard within the first year it would cost approximately £54,700. 10,000 users provides a solid base for growth as explained further on.

TOTAL = £55,000

Continued costs and benefits

Personnel

Once the user base of the app has started to grow more developers and customer support staff will have to be hired relatively quickly as this is where strain will begin to show most with the business, and delivering a good user experience is vital to app growth. New developers should be employed to keep up with development, I estimate that one new developer every two years would be enough to keep up, up to six developers[13] as beyond this it will begin to decrease productivity due to Brooks law. I would estimate that 1 new customer support worker every two years would be enough to keep up with complaints.

TOTAL = £140,000 + £30,000/YEAR AVG.

App development

Once the initial app is complete development becomes maintenance and smaller upgrades that do not need to be outsourced. Benefits in the form of sponsored posts then begin to have an effect as well. I estimate that being conservative approximately 1% of posts will use this feature at £2 per feature.

Hosting

The firebase platform offers reasonable rates for scalability of project that work on a pay as you bases. If the user base grew to 10,000 users with 6 posts each in the first year then they would have approximately 120,000 images in the database with an average of two images per listing. Firebase estimates that this would cost about $6 a month. And all other limits should still be free at this point.[14]

Advertising

For the second year I estimate a budget of £30,000 to bring in 6,000 more users will then provide the application with enough of a user base to grow more naturally from there. To try and follow the 24% year-on-year growth that app revenue has followed[15] then a yearly budget of £15,000 for the third year should be sufficient to bring in the 2,600 new users which will be supplemented by word of mouth. From there growth should become based on word of mouth as the majority and the advertising budget can remain the same.

Why 10,000 users to start, and 16,000 in year two?

I estimated a first year customer base of 10,000 and second year base of 16,000 as it provides a reachable goal for growth that will lead to profits within a reasonable amount of time. It would take 3 years, at 24% growth rate with each user selling six book on average to achieve this. This balances the cost/benefit consequences of the initial investment price and providing a large enough platform to profit and grow from. This is shown more clearly below.

Costs	Year 0	Year 1	Year 2	Year 3
Personnel	140,000	170,000	200,000	230,000
Hosting	0	100	120	150
Advertising	55,000	30,000	15,000	15,000
App Development	70,000	0 (in house)	0 (in house)	0 (in house)
Total	265,000	200,100	215,120	245,150
Target users	10,000	16,000	25,000	35,000
Target sales (users * 6)	60,000	96,000	150,000	210,000
Income (sales * 15 * 0.2)	180,000	288,000	450,000	630,000
Benefits	1,200	1,920	3,000	4,200
Yearly profit	-173,800	89,820	237,880	389,050
Debt	-173,800	83,980		
Company profit			153,900	542,950
DCF	-173,800	85,542	215,764	336,076
NPV				463,582

(All figures are in GBP)

Assumptions

- 6 sales per user on average
- Each sale is worth £15 on average
- 5% inflation occurs over the three years

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