

Student Discount E-Platform for Higher Education Students in Sri Lanka

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Abstract

Today's Student community is one of the valuable resources of our nation and empowering the student community is one of the major responsibilities. Here This research focuses on the Higher education students, they are facing many struggles to successfully finish their higher studies. Mainly they are facing financial issues during this period and because of it, students are skipping their higher education, moving to job opportunities. we cannot provide a solution at once, but they need some kind of support or motivation from the community to overcome these situations. At the same time businesses need new strategies to capture customers for online shopping since online shopping mode is the upcoming trend. At this point I want to raise a term called "Student Discount" which is familiar in some other countries and not a famous topic in Sri Lanka. Which is a gap in the Sri Lankan market. Where there is no e-platform to fulfill the gap with required functionalities. So, as a solution for this, came up with the Mobile application and a web portal which can satisfy the requirements to fill the gap and give benefits to both Students and Businesses.

Keywords

Student Discount, E-Platform, OCR Technology, Businesses, Students

1. Introduction

"Sri Lanka is a lower-middle-income country with a GDP per capital of USD 3,852 (2019) and a total population of 21.8 million." (bank, 2020), Poverty headcount ratio at national poverty lines in Sri Lanka is 4.1% (bank, 2020), world bank statistics shows that Sri Lanka is a lower middle-income country and there is 4.1% of population living under the poverty line.

"The average tertiary enrolment rate for lower middle-income countries was around 23% in 2009" (Liyanage, 2014), According to Liyanage, in middle income countries, tertiary education enrollment rate is low, because of that a huge percentage is missing tertiary education.

Even though enrollment rate is low, the higher education Student community is a well growing community, and the total market is eventually increasing every year. (Anon, 2020) The identified problem addresses the Higher education community in Sri Lanka, according to the research that is a growing community since there are upcoming universities under state management and private. I have attached the screenshot to prove with the statistics.

13.3 University Education, 2017-2018 (Number)		
	2017	2018*
1. No. of Universities	15	15
No. of Other Higher Educational Institutions	19	19
2. No. of Students (Undergraduates) ^(a)		
Universities	88,527	94,681
Institutes	3,423	3,633
Open University	24,346	24,453
3. No. of Lecturers ^(b)	5,669	5,940
4. No. of Students (Postgraduates)	32,318	32,849
5. No. of Graduates (includes External & Open University also)		
Basic Degree	26,015	..
Arts and Education	10,305	..
Commerce & Management Studies	5,648	..
Law	627	..
Science	3,142	..
Engineering	1,713	..
Medicine	1,176	..
Dental Surgery	148	..
Agriculture	742	..
Veterinary Science	79	..
Architecture & Quantity Surveying	355	..
Computer Sc/IT/ICT/MIT	1,153	..
Paramedical Studies	741	..
Indigenous Medicine	186	..
6. New admissions for basic degrees	30,668	31,451
7. Admission as a percentage of eligible	19.16	19.16
* Provisional		
(a) Excluding external degree courses		
(b) Excluding Temporary Staff		

Figure 1: University students count growth (Anon, 2020)

So according to Figure 1, the target market of the above identified issue is a growing variable, so the solution will have a huge demand among the community.

On the other hand, Online shopping is the upcoming trend, so businesses are in need to capture their market using new strategies via online. (Günüç, 2016)

2. Problem Discussion

Unavailability of resources & Lack of knowledge about Student Discounts in Sri Lanka

This is due to the lack of awareness of the advantages. (Jayasuriya., 2018) according to the statement of Jayasuriya and the public, lack of resources to get to know about student discounts for online shopping in Sri Lanka. Lack of resources causes lack of knowledge among the community to obtain the benefits.

Unavailability of e-platform

E-commerce has become the first choice of shopping during this pandemic because it is safer than physical shopping since it is more contactless. So many businesses launch promotions through social media, where people can forward and invite friends, which will lead to spread the brand name and increase sales. (Lv,Junjie, 2020), so based on this unavailability of an e-commerce platform is being a big gap in the market to find a solution for the identified issue, in the current situation. Above identified issue is for a specific target market so there should be a way to provide a solution only for that target market, since there is no platform for higher education student verification in Sri Lanka it is hard to verify and separate the target market to provide the solution. Businesses are unable to use Student Discount strategy to increase their sales, they can promote their offers through social media, but they do not have a way to verify student eligibility, so it's hard for them to use the strategy, at the same time students are unable to grab their offers; there is no platform for them to get to know or grab offers which can help them a lot during their higher education period.

Unable to build a strong bond between the business and student community

“Common awareness of discount strategy has gradually changed from increasing the short-term profits of enterprises to making enterprises develop sustainability in the long run.” (Lv,Junjie, 2020) According to this research discount strategy will help to build the strong bond between business and customers; will help to obtain a strong loyal customer base. There can be 2 scenarios, where the student in need will use this as an aid instead of finance and then where a set of student communities might get attracted (Günüç, 2016) by the discounts and purchase more where it will increase the sales for businesses. But currently that bond is missing between students and businesses.

Lack of Motivation

The main issue for the higher education student community is finance, the ways of getting finance support, benefits and gaining motivation through that. According to all the research there should be some support from the community as well to support the student’s life.

In developing countries, Parents’ financial support for higher education plays a major role, at the same time students itself contributing for their higher education. Those are the main sources of financing for higher education. (McMahon, 1988),

According to Marcia Devlin, students are facing issues to manage the expenditure stress that falls on them, they go through a lot of pressure to work more hours to manage the situation. (Devlin, 2008) “Studies in the UK(Johnes,1990) and in Europe (Moortgat,1997) indicate that students from lower socioeconomic groups have higher non-completion rates.” (Eivers, 2002), financial stress might lead to lack of interests in the studies. “gross enrollment rates in primary and secondary education are 105 and 75 percent, respectively. In contrast, participation at tertiary level is about 3 percent, representing one of the lowest in the region” (Chandrasiri, 2003)

Educational Attainment of the Population 2000 & 2012						
Educational attainment	2000 -%			2012 -%		
	Total	Male	Female	Total	Male	Female
No Schooling	8.7	5.0	12.2	7.1	n.a.	n.a.
Primary	26.3	26.9	25.8	23.9		
Secondary	37.2	39.3	35.3	39.6		
GCE O/L	17.5	18.2	16.9	18.8		
GCE A/L	7.9	7.9	7.9	9.4		
Degree/higher	2.3	2.7	2.0	1.2		

Source: www.statistics.gov.lk (retrieved on 2013.10.13).

Figure 2: Educational Attainment of the population 2000&2012 (Liyanage, 2014)

According to Sunil Chandrasiri, and Liyanage’s report, which is shown in the Figure 2, a smaller number of students are involved in tertiary education compared to primary and secondary education. There are a lot of reasons behind the dropout but specially financing plays a major role over here. According to Martin, financial difficulty is one of the main reasons frequently raised for college dropout. (Eivers, 2002)

As per Sanyal’s sayings the fact is cost of living is rising every day, there should be some kind a continuous revenue to fulfill the needs, when we take higher education into consideration, needs for that are different these days than earlier, these days all the fields of study need some kind of electronic or technology item to carry out higher education. Even agriculture students need laptops, some other IOT devices as well. Since we are moving towards the tech era, it is mandatory to get used to technology. So, students need to manage their daily costs at the same time as the additional need of higher education in this globalized world economy. (Sanyal, 2011).

Because of the limitations on the state universities 90.8% of the students do not have a clear path to continue their higher education, some of them are unable to continue their higher education in private sectors as well due to affordability. (Lv,Junjie, 2020), according to this fact, students who pursue higher education under the private

sector should manage educational cost and additional needs as well. So, they might not get involved in higher education.

Students might have different aims to achieve, but the financial circumstances might influence the course. Some courses might require more resources, if they could get financial support they might go towards their aim, without choosing some other pathway. Financial situation totally can change someone's life. (Michael Long, 2000)

According to the study carried out here most of the students (quarter of students = 24.0%) like to enroll in higher education as full-time students but because of the financial barriers they work and carry out studies as part time. (Michael Long, 2000)

A study carried out in the US shows working while higher education period and financial difficulties plays a negative impact on student retention (Eivers, 2002), Michael states that 1 student out of 10 misses the class because of the paid work. Michael Long, 2000), the more they stuck with work, less quality of education, again it's going to affect everything in total, there are chances for students to fail in exams and assessments, again they need to pay more to re do the exams which is an additional stress and finance need for students who is already working hard to manage their daily needs. some might decide not to continue the studies and they decide to move on with jobs without getting the degree. Financial issues lead to dropouts. (PALMER, 2001)

Not completing the degree might affect the student is future (Morgan, 2001), Davies and Elias (2003) show that students who dropout because of the financial issues and who is willing to move to job opportunities find more struggles than graduates to get the jobs (Yorke, 2004), again dropouts cause a lot of problems instead of being a solution.

There are millions of students who have the capability for higher education, but unavailability of financial support is being the barrier and it is keeping them away from studies. (Rasmussen, Christopher James, 2006).

"Lack of interest in college, lack of interest in studies "(Eivers, 2002), above mentioned reasons lead to lack of motivation towards studies, lack of financial aid might lead to lack of interest,

Chandrasiri discussed the issues related to financing of higher education in Sri Lanka," paying particular attention to its adequacy, efficiency, and fundraising activities" Currently we are living in the competitive market, so the demand for higher education also increases, where it needs additional funding support to survive. Also, he has talked about funding higher education in different forms to support tertiary education. so, there should be cost sharing methods and benefits for students from the community to students to manage their financial stress and continue their studies. (Chandrasiri, 2003)

With all this evidence I would like to conclude there is a big need for financial aid for higher education students in Sri Lanka. "In online purchasing, a discount on the price had a significant impact on the sales volume of the goods in promotional activities" (Lv, Junjie, 2020). At the same time where businesses can grab the market and increase sales by using a discount strategy, so a common e-commerce platform can be a suitable solution to achieve some sort of solution for the identified issue.

3. Methodology

Table 1 shows the techniques and the objectives, which help to build the bridge between the problem and solution.

Table 1: Methodologies

Objectives	Technique
Gathering Background knowledge about student discounts, businesses who provide student discounts and students expectations	Background Reading (Research articles, Journals)
To understand the impact of similar project and pros and cons of similar platform	Interview (Similar platform users, UK students)

To understand the perspective of a business about the platform and their expectations	Interview (Businessman)
Understand the student's expectations and point of view about the platform and the struggles they face instead of finance.	Interview (Sri Lankan higher education students from private and public sector)
To make sure the point of views and usage of the platform through wide audience response.	Questionnaire

4. Results Discussion

a) Background reading results

Background reading has given lot of positive input for the project, it helped to understand the domain a lot and gave a wide knowledge about the problems and current flows in the market.

This gave an idea about the "Student discount" concept and the current usage of that in the market. Also, it was useful to get information about some shops which are already providing students discounts in the physical stores. Also details like how the similar apps in the global market is functioning, what are their strategies, marketing points and additional functionalities, how the developing platform can improve and differ from those platforms also gathered through background reading.

Also, could find out that, there is an international web portal where students have to pay and get a discount card to grab some offers but that platform also functioning with limited functionalities where they cannot even do online purchasing.

b) Findings from interviews

Interviews were conducted with Businesspeople, similar application users and higher education students in Sri Lanka.

- Findings from businesspeople's interview

They were quite interest about the platform since the current market is focusing more into online sectors. As they do not need to pay anything to come on board, they were okay with the concept and ready to market their product on the platform, but they were concern about some privacy policies which can be sorted by signing an agreement between two parties.

They agreed that they are missing out a loyal customer base because they could not market their business using this discount strategy since there is no platform out their which can mainly focus on local business. And which can be a useful platform to give a helping hand for student community at the same time by increasing revenue of the business.

- Sri Lankan students interview findings.

Students who are in need for finance aid and who is not in need for that also have been interviewed. Students who are in need really appreciated the concept and they said almost every student will start using the platform since no additional cost for this to grab offers and it is great that the platform focus more into food, fashion, and technology. They openly said that even 5% discount for a simple purchase is high support for us in this stage. Also, they mentioned their friends dropped out because of the financial need, may be some sort of support like this from the society might have helped them.

Finally, they felt they could not believe that this platform can be a main solution for the problems they face, but this can be a huge support for all the higher education student community.

Some know about the student discount concept and some said they do not know what all is about. Some said they have used that for physical shopping, but they exactly do not know which shops provide student discounts and there are no exact sources to find out the relevant information.

- Findings from similar application users

They said it is useful for them and kind a motivation for university students and feel special about it. Also, they have discussed about the improvements that the applications can make, and which functionalities are useful for them.

c) Findings from questionnaire

Questionnaire gathered from private and public sector higher education students, Got 85 responses.

Only 52.9% people were aware of the student discount concept and from that only 21.2% have used it. Since there are no relevant resources to find out the shops details students have to ask and check whether the shops provide student discounts or not, 49.4% of people said that they might feel uncomfortable, and 14.1% people said they feel uncomfortable to ask.

Through questionnaire a fact got confirmed that student community prefer online shopping. 84.7% of students said they prefer online. The most expected products to be in the platform is shown in the Figure 3.

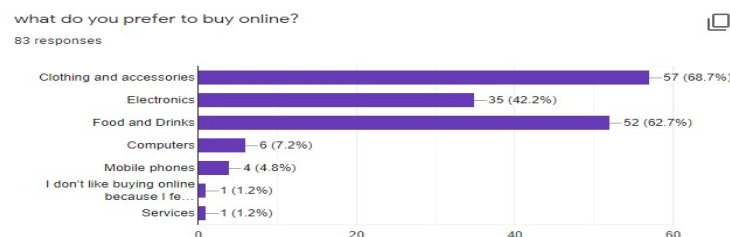


Figure 3: Online purchase preference Survey result

81.2% of students agreed that they will be using a platform like that if it is implemented and 82.4% of the students believe that can be a financial aid for higher education students.

4. Gap Analysis

There are some applications available in the global market for the concept of Student Discount. If there is an application for a specific community there should be a way to differentiate that specific community by some special identification, the applications out there in other countries use educational email for their verification, but unfortunately some of the Sri Lankan educational institute's mail id does not expire at all, so there are lots of possibilities to miss use the platform.

Some global apps use id, document verification. Some do id verification through automated systems but only for similar formats of ids, some do manual verification which needs manpower as well to finish the procedure. If we take Sri Lanka into consideration different universities provide different formats of id cards, so to extract and detect the information a system is needed with the ability to extract information from different formats of id cards.

There is no app with similar functionality in Sri Lanka, there is a web portal somewhere similar where students can pay and register for a specific id card and use that to grab offers, where they must pay and renew every 12 months' time. Where it is not going to be a solution for the student community which is already struggling with financial issues. And on the other hand, where the ongoing research and new platform will allow students to login without any payment and enable them to grab offers.

Other applications which are very famous in other countries do not exist or function in Sri Lanka, where there is a big market gap for this platform.

4. Solution

The Solution proposed is a mobile application with a web portal, where businesses can sign up and promote their products using the Student discount strategy and higher education students can sign up using educational mail id and institute id and grab offers.

This application will be built with the normal e-commerce mobile features and some luxury features like a chatbot, rewards system, gamification interaction, and a special feature using OCR technology (Hahn, 2012), where it will extract information from different format of id cards and set the expiry date for the account automatically depends on the expiry date of the id card. This feature will help to differentiate the target market which is the student community, and it will enable the businesses to check the eligibility of the student to provide the discount. There is no such application to verify using different formats of id cards in Sri Lanka, so it will fill a big gap on the technology side and the overall solution will help to fulfill the gap in the business market. Also, to strengthen the validation OTP technology will be used.

To extract the information from different formats of id cards using machine learning, the model will be trained to perform that with the help of large amounts of data.

Also, shops will be getting suggestions to promote their products using an in-built prediction model with the application. Trending technology QR codes also will be used in the solution to track audience response.

All these features will be developed using different technologies and different developing platforms and languages. Java Script will be the main language to develop this solution which is a Universal front-end development platform and useful in systematic, fast development. Also, Current growing technology languages such as CSS, HTML will be used as open-source languages to create symmetrical layouts. React Native development platform will be used as the main development platform which is easy to create native looks and NodeJs will be used for backend development. Before the development process design will be performed using the Astah application.

Firebase database will be used to manage real-time data and provide recommendations. Also, RStudio and Business intelligence tools will be used to perform data analysis.

5. Conclusion

This solution will be used by both the students and businesses, Businesses will show interest to come on board in this application since the shopping mode is moving towards online and this is a way where they can increase sales by providing discounts and grab loyal customer base, students will automatically use this solution since they can grab the offers without any payment where it will help them to manage their financial stress a bit.

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Biographies

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