



UNIQUELY ADDRESSING CUSTOMER PAIN POINTS - THE CASE STUDY OF AGRITECH APP

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ABSTRACT

As entrepreneurship education in India is catching fire, faculty members are trying to find indigenous case studies which connect with the next generation entrepreneurs. While there are many successful entrepreneurs, finding them and connecting their story to educational objectives of the entrepreneurship courses is not done. The paper attempts to fill this gap by providing the case study of “NaPanta “app and its founder. Through the case study, one can understand how to create a successful product by uniquely addressing customer pain points.

Keywords: Pain points, unique selling proposition, market opportunities, unique solution, entrepreneurship, startup, innovation

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1. INTRODUCTION

Entrepreneurial activity in terms of new startups, small businesses and innovation are critical to the economical vibrancy of India. To realize the impact of a multitude of the Government of India schemes such as Startup India and Make in India, this paper focuses on a key topic in

entrepreneurship – identifying customer pain points and creation of a unique solution. The success of any new venture depends on its uniqueness – how it differentiates from competitors and value proposition – what utility customers drive for the price that they pay. An effective value proposition helps customers to realize the value of the product and results in the success of the product.

While most entrepreneurial knowledge such as accounting can easily be codified and learned, identifying customer pain points is both an art and science. Creating a unique product that effectively addresses customer pain points can be effectively learned through a mix of theory, case studies, and interactive experiences. This case study provides insights into a part of the value proposition dealing with customer pain points and how it helps to craft the product design.

2. LITERATURE OVERVIEW:

Aker (2011) [1] studied and stated that mobile phones significantly reduced information and communication costs to rural people. Rural farmers benefitted from this technology to get knowledge and agriculture related information. Similarly, use of ICTs in agricultural extension services especially mobile phone services in the agricultural sector has provided information on market, weather, transport and agricultural techniques to contact with concern agencies and department.

Mittal S and Mehar M (2015) studied on assessment of farmer's information networks in India. They highlighted the role of modern ICT on the betterment of information networks to farmers.

Menale Kassie (2011) [3] estimated the causal effect on crop income and poverty status from adoption of improved groundnut varieties (technology) in rural Uganda. Based on farm size and educational status and using Propensity score matching estimations were made to calculate the gains from adoption and to examine how those gains vary. While this method does not require ad hoc assumptions about the functional form of impacts and exclusion restrictions, it only eliminates selection bias on observable differences between adopters and non-adopters.

Z. Chunhua and Z. Bo, (2010) [4] while studying about approaches of Electronic agriculture (E-Agr) discussed the benefits of promoting agricultural informationalization and development of agricultural modernization. E-agriculture is the platform which provides sharing of information to farmers. Science and technology could enhanced agricultural information became more authoritative, timely, accurate, and in particular take advantage of convenience, timeliness, etc. The modern information technology infrastructure facilitate the integration all types of information and resources through technical facilities of communication tools, modern networks. Electronic farmers, rural electronics, and agricultural electronics together comprise E-Agri. More Ecommerce applications were discussed by several researchers [5-7].

Ahl H (2006) [8] presented their research on needs of new directions for women entrepreneurs. They pointed out the research results which are inconclusive regarding treating women being secondary to men, which a tendency to recreate this ideas. They used discourse analysis to suggest new research directions which doesn't reproduce women's subordination and captures richer and more women's entrepreneurship aspects.

Birley, S. (1987) [9] discussed on Female entrepreneurs, whether they are really any different?. They have studied literature on female entrepreneurs to find significant differences of data of male and female entrepreneurs. They concluded that choices of market-entry made, is significant. They stressed on the point of strategy of economic recovery giving example of United Kingdom's Government Department of Trade and Industry was re-named as the Department of Enterprise.

Bruni A et al (2004) [10] studied on description of the processes that position people as ‘men’ and ‘women’ within entrepreneurial practices and as ‘entrepreneurs’ within gender practices, relying on an ethnographic study carried out in small enterprises in Italy. Their analysis shows enactment of gender and entrepreneurship as situated practices and how gendered identity codes are kept, transgressed changed by constantly and sliding between different symbolic spaces. They highlighted processes of footing and gender commodification, doing ceremonial and remedial work managing the dual presence, boundary-keeping the symbolic construction of gender and entrepreneurship:,. We then propose a final metaphor which conveys a summary image of these processes. They concluded with how possible forms of entrepreneurship exist, the same way as different forms of gender.

Das M (2000)[11] studied on the problems of women entrepreneurs in India.They studied small and medium enterprises owned and managed by women entrepreneurs in Tamilnadu and Kerala, two southern Indian states. They also discussed about the work-family conflicts faced by the women entrepreneurs during settingup and operation of businesses owned by the entrepreneurs. Found that problems faced Indian woman entrepreneurs are similar to western countries women entrepreneurs. Also found that Indian women had lower work-family conflicts.

Nayyar et al (2007) [12] studied about the causes and constraints faced by women entrepreneurs in the entrepreneurial process. They studied hundred women entrepreneurs in four zines of Himachal Pradesh through snowball sampling technique. The units were General stores, Carper manufacturing units, boutiques, nursing homes, boutiques, handlooms and beauty parlours. They found transport facility issues, tough competition from larger units, non-availability of raw material, lack of sleep and rest, poor location of their units etc are the few important issues faced by the women entrepreneurs. They suggested for selfhelp mutually aided groups can support mutually.

Ramesh Babu et al (2016) [13] discussed about the entrepreneurial opportunities in rural areas like fruit and vegetable preservation and women contributions in these areas. Several technical, financial, commercial, family support issues are studied in detail by Chaudhary R (2012), Coleman S (2002), Goyal Meenu (2011), Anitha Mehta (2011), Singh Surinder pal (2008), Hanuman prasad and BL Varma (2006)[14-19]. They have highlighted about the constraints to women in entrepreneurial activities.Several other technological issues were studied and reported [20-23]

3. BACKGROUND OF THE ENTREPRENEUR

Naveen V Kumar hails from a rural background. He comes from Shyampet, a small village in Warangal district, Telangana. His father and mother raised Naveen and his two siblings in a comfortable affluent environment. The family succumbed by sudden demise of his father in 1997 when Kumar was 13 years old. Their living style was significantly altered as there were no family members who could work and earn an income. Family savings lasted for couple of years. Kumar managed to complete his degree and start post-graduation (MBA). During his post-graduation studies, Naveen spent eight months with a single meal a day. By the age of 20 years, he has seen the easy and difficult sides of life. Situations made him more vigilant and better forecaster.

Kumar joined ICICI Bank as a Trainee Executive and spent most of his time Medium, Small and Micro Enterprises (MSME) business segments. During this time he understood the working of the MSME sector. In his five years at ICICI Bank, he evaluated 800+enterprises, analyzed their balance sheets, and learned from their experiences. He identified their key challenges are less return on field produce and high investment. Out of his interest and expertise in banking sector, he founded ‘Apna Loan Bazaar’, a Fintech startup works as Retail Loan Aggregator in India and registered his firm ALB (Aspiration-Loyal – Brave) Private Limited. Naveen fell in love with his Startup, but he was advised by TiE Hyderabad.

The motivation for the current case study came when Kumar was visiting his village and witnessed a farmer's suicide. The reason for the suicide is too agnostic; a dealer sold a concocted pesticide to the farmer that literally killed the crop. This incident was Kumar's entrepreneurial call for action. Kumar spent a lot of time thinking about how to best address farmers' problems. These thoughts manifested in the form of an app for Farmers. He continuously worked with farmers to co-design the app and worked from December 2016 to March 2017 to implement the app. On June 2nd 2017, he launched the app "NaPanta" which means My Crop. "Effective communication is the need of the hour in Indian agriculture as it can fill the gaps in the entire system. The expertise and solutions to the problems in farming upheld with the agricultural officer/scientists hardly reaches to the farmer. There is huge gap between the actual on-field situations and government supported activities! To fill in these gaps we developed the app and offered it to the farmers for free! Also it is designed primarily to serve small and marginal farmers," says Mr. Naveen Kumar V.

4. IDENTIFYING CUSTOMER PAIN POINTS

Pain points are difficulties either real or perceived experienced by the customer during the use [24]. In the case of the farmer, these pain points include the problems faced by him/her including uncertainties, fertilizer and pesticide application difficulties. By identifying pain points, an entrepreneur can craft an appropriate value proposition which attracts the customer to buy the product [25]. These pain points are often identified based on ethnographic studies [26] – where the designer spends time to understand the customer problems by observing the customer's life. Based on the insights on the customer's needs and perceived values, entrepreneurs can develop effective solutions. As it solves a pain point and has a clear value proposition, the market more likely to adopt the product/service.

Farmer is spending 20% of his valuable time on

- Seed identification and procuring
- Fertilizer dealer identification and procurement
- Pesticide dealer identification and procurement
- Identification of cold storages
- Insurance schemes offered by Government
- Farm equipment arrangement

More important, the farmer often doesn't get the right price.

The difficulties faced by the farmer are due to several gaps between farmer, middlemen, agriculture research institutes or universities and Government. These gaps manifest in the form of pain points for the farmer leaving him with:

1. *A lack of awareness about critical farming know-how* – Farmers are often unaware of major issues like nature of soil and weather conditions. A proper fertilizer usage for a specific crop and timely diagnosis of pest and disease can increase the productivity up to 30 percent.
2. *A lack of actionable intelligence* – In some cases, farmers are aware of the problems, but don't know how to solve. For instance, they may get information from the soil analysis from the government lab, but are not sure what fertilizer to apply. The government agencies can't recommend the name of any fertilizer or pesticide trade name as it can be viewed as promoting a particular brand – but it can only give the chemical names. This information while totally correct, however, a farmer has to depend on the dealer for trade product for the chemical suggested by the Govt

agencies. Hence there is a chance of mis-selling the wrong product to farmer by a dealer.

3. *A lack of awareness of market opportunities:* The critical problem faced by farmers is not getting the right price for the crop. Other issue related to the opportunities include market prices for produce, insurance costs, available cold storage facilities, and dealer networks for fertilizers, pesticides



Figure.1.a

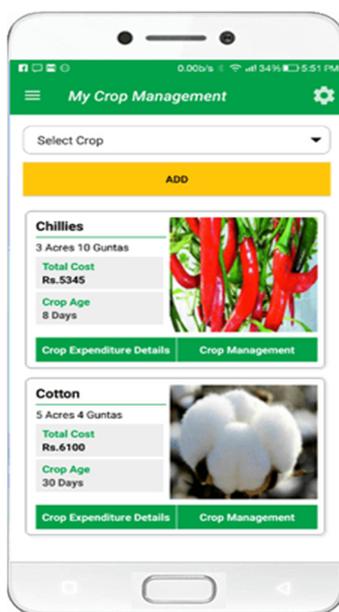


Figure.1.b

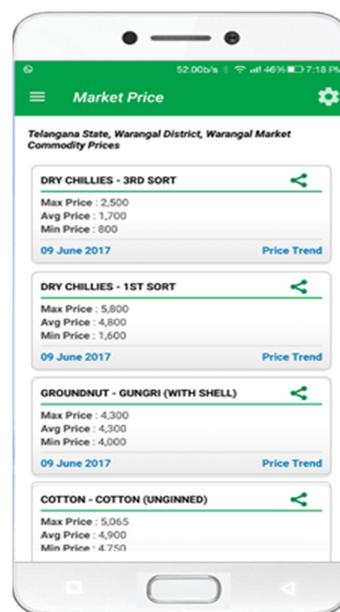


Figure.1.c

5. CREATING A UNIQUE SOLUTION

App shows on its opening screen, a clear value proposition – *15% more farm produce with 20% less investment.*

“Farmer is no more interested in theory and verbal comprehension! He is interested in facts and factual attained by other farmers on their field. Give him the information, guidance and service he requires, and then, there will be boom in Indian agriculture for sure.

The pain points and how the app addresses these pain points are provided in the table below.

Table 1. Customer pain points and solution strategies employed in *NaPanta* App

Weather information	A lack of awareness about the weather leading to wasted resources.	The app provides five-day forecast at crop location. Using this feature, the farmer can plan his activity and save money.
Sharing of information	A discussion of common problems within and across the villages helps to identify best practices.	Agri Forum feature in the app help farmers to connect and discuss best practices.
Crop management	A lack of detailed knowledge on how to manage crops.	Provides a step-by-step guidance for more than 100 crops on how to protect against numerous ailments.
Accounting	The estimated expenses and actual incurred during farming is hard to track.	The app enables the farmer to manage his/her financial resources by keeping track of expenses while keeping an eye on the big picture.
Soil information	The type of crop to be planted, and type and quantity of fertilizer to be used by any farmer depends on the soil conditions. But, unfortunately many times farmers are not aware of soil conditions and/or nearest test facilities.	The App provides soil testing laboratories Information in farmer location. Also educate the farmer, how to select the soil sample in their crop land for soil testing.
Pesticide information	A lack of know-how on the appropriate type and quantity of pesticide to use for a particular insect, disease, weeds, etc.	The app provides information on pesticide formulations and usage. It helps farmer to protect his produce and at the same time prevents overdosing.
Fertilizer calculator	A lack of actionable intelligence on what fertilizer and how much to apply for the optimal results.	Right mix of fertilizer is crucial for a better farm produce. The app suggests scientifically proven mixes of fertilizers based on the soil condition, crop and budget.
Crop insurance knowledge	A lack of crop insurance programs from the government.	The app educates the farmer on importance of insurance. It provides details about Central and State Government insurance schemes.
Fertilizer dealers	Obtaining reliable, safe, potent pesticides. Often, farmers get cheated by inferior pesticide, which can lead to crop loss.	The app helps locate nearby Government approved dealers. Using this feature, farmers can get reliable, safe, potent pesticides from approved dealers.
Market prices	One major lacuna in farming administration across nation is uncertainty of prices and lack of information on market prices prevailing on that day for any type of farm produce.	This app caters to 3800 plus market prices updates on daily basis, makes the farmer more knowledgeable and empowered. Further, the historical trends help farmers to make informed decision on whether to sell or wait. Thus, the app helps farmers realize better prices and results.
Cold storage	A lack of awareness of storage facilities and cost to store the produce to sell at a time when the price is right.	The app lists cold storage facilities information including storage capacity and contact information.

Thus, *NaPanta* app provides a one-Stop solution for farmers to reduce expenses, manage crop, increase yield and get the best prices.

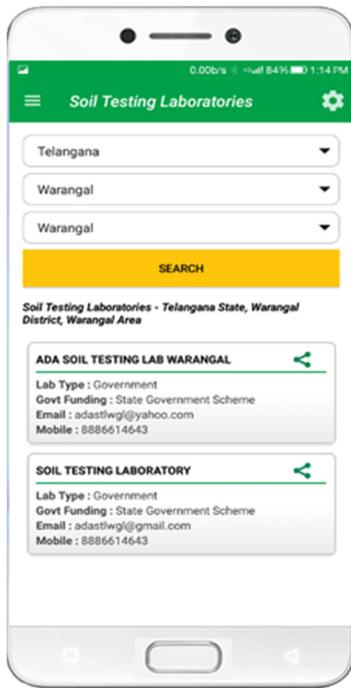


Figure.2.a

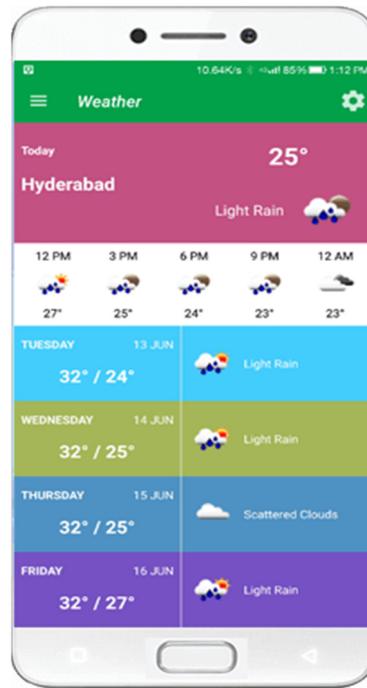


Figure.2.b



Figure.2.c

Further, the App is developed in two languages (Telugu and English) to allow farmers with little education to read in the local dialect. Also, the app doesn't need internet connection for most functions (crop management and pest control).

6. CONCLUSIONS

The paper provided all the key details in the entrepreneur's life from early difficulties to the call for action. The call for action manifested in the form an App. The App reached 50,000+ farmers within its first three months. Its early success is based on the usefulness of information, ease of use and value provided to the farmer. As one farmer said "the App brings high-level scientific knowledge of researchers to easily actionable-information for the betterment of farmers."

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