Customer Feedback Prioritization Technique: A Case Study on Lean Startup

S. A. M. Jubayer

ID: 112-35-196

Department of Software Engineering
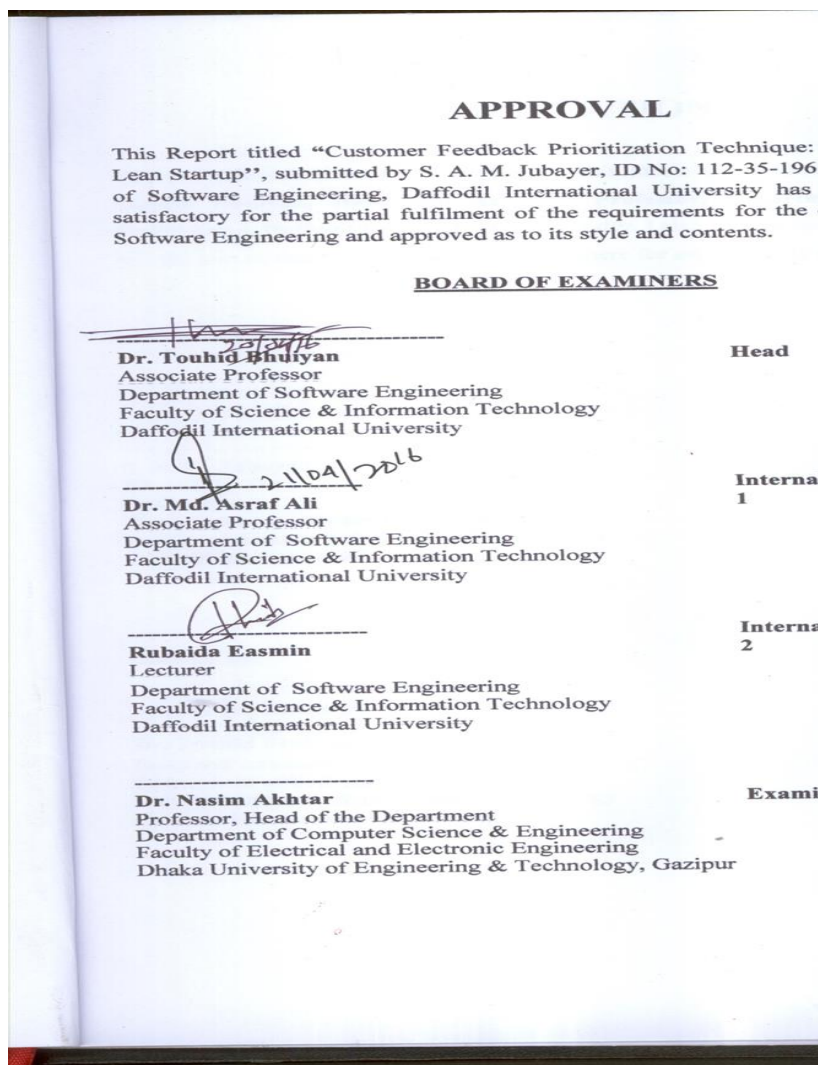
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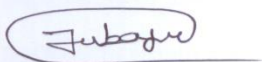
Dhaka, Bangladesh

APPROVAL

This Report titled **"Customer Feedback Prioritization Technique: A Case Study on Lean Startup"**, submitted by S. A. M. Jubayer, ID No: 112-35-196 to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfilment of the requirements for the degree of B.Sc. in Software Engineering and approved as to its style and contents.

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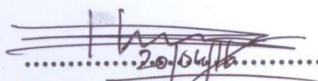
S. A. M. Jubayer
ID: 112-35-196
Batch: 5th
Department of Software Engineering
Faculty of Science & Information Technology
Daffodil International University

Certified by:

Dr. Touhid Bhuiyan
Head and Associate Professor
Department of Software Engineering
Faculty of Science & Information Technology
Daffodil International University

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Contact Information

This thesis is submitted to the Department of Software Engineering of Daffodil International University. To complete the degree of Bachelor of Science in Software Engineering this is required to submit this thesis. This thesis is equivalent to 40 weeks of full time studies at this university.

Author:

S. A. M. Jubayer

Email: jubayer35-196@diu.edu.bd

Department of Software Engineering

Daffodil International University

University advisor:

Dr. Touhid Bhuiyan

Head and Associate Professor

Department of Software Engineering

Faculty of Science & Information Technology

Daffodil International University

Faculty of Science and Information Technology   +88 02 9138234-5,
Daffodil International University   +88 02 9136694, +88 02 9116774
102/1, Administrative Building, Shukrabad,   Cell: +880 171 3493100
Dhanmondi, Dhaka-1207   Fax: 88-02-9131947
   Website: www.diu.edu.bd
   www.daffodilvarsity.edu.bd

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Abstract

Nowadays, startup is being very popular and entrepreneurs are increasing day by day. Many successful startups are now established in the present world, e.g. Dropbox, Amazon, Viber and so on. Though we are watching many successful startups, the list of unsuccessful startups is very long. Who are being successful they must have their own strategy, which they apply in their startup and get success. Lean Startup is such kind of strategy which is very suitable for startup. A startup can be managed very well through the Lean Startup strategy. In lean startup strategy, the customers are very much important for startup from the beginning of startup project. The customers give feedbacks about the startup and the owner understands the demand of customers by collecting feedback from customers. The startup needs to provide the service, according to the feedback of customers. On the other hand, all the feedbacks of the customers are not important for startup project. So it is needed to separate or prioritize feedbacks which are needed to execute for startup project. But there are not sufficient techniques for prioritizing the feedbacks which are collected from customers. So the purpose of this research is to propose a technique which will be used to prioritize customer feedback in lean startup.

Keywords: Lean Startup, Customer, Feedback, Prioritization Technique

1 Introduction

Software engineering is a specific domain in engineering where software is developed by following appropriate principles, procedures and methodologies. In the very beginning of software development to maintaining of the developed product all steps are covered according to software engineering, that ensure a solution that is reliable, usable, maintainable and meets the customer requirements properly. From the very first stage to the last stage of system development it shows a systematic and disciplined way to develop the system properly, moreover customer support must be given after system publishing. Most of the time customer support is like as maintaining the system, fix the bugs, update system features according to customer demands [1].

Now a day, people want to launch startup where those people are known as entrepreneurs. This enterprise could be a technology based startup or anything else. But most of the time a large number of entrepreneurs and their startup cannot be successful. Eric the writer of the Lean Startup book, think that the number of unsuccessful startups is very high [2]. Again, it is mentioned in "Why the Lean Startup Changes Everything" by Steve Blank that is, the 75% of startup is unsuccessful [3]. Startup starts with a unique idea and launches the new product based on the idea in a very uncertain condition. Startup is always started for unknown customer and of startup customer demands always change [2]. The entrepreneur does not know that the customer will like the product or not. Nowadays, many entrepreneurs use a way to reduce the unsuccessfulness of startup by using a methodology which is called 'lean startup'. The lean startup methodology helps the entrepreneurs to test their idea to the customer by interviewing them in several ways. They able to justify their ideas before launching of their product for the customers when they following the lean startup.

Customer feedback has played an important role in lean startup [3]. To use customer feedback on startup is not a very old concept, but very effective for every startup project. If the startup able to fulfil the user or customer expectation, then the startup can be successful, though being successful is a continuous process. If the customer is not satisfied with the service on startup, then it could be the end of the startup. A startup has not finished after publishing the product in the market, because it may not meet the customer demands properly. When the customers use the product they may have some others demands which they expect on a startup product again, they may dislike some features and do not use those features which is a waste in the lean startup [3]. It is important to know the feedback of customers to be successful in the startup world.

At present the customer feedback is not a new concept for ensuring the system usability and availability. But all the feedback of customers is not required to execute. It is needed to select the proper feedback for execution on startup service. Otherwise the wrong feedback may be selected for execution. There is not sufficient resource to select the proper feedback or to prioritize the feedback which is given by the customers of startup. This could be a big problem when the number of the startup is large. So the intension of this research is to propose a technique for prioritizing the feedbacks of. The goal of this research is:

1) To find a ways how practitioners prioritize the customer feedbacks on lean startup.

Expected Outcomes

- Customer feedback prioritization technique.
- Research gaps in this area and bridge the gaps.

2 Background

The concept of using customer feedback on startup is not very new idea, where one of principle of lean startup is 'Learn', which may compare to customer feedback [2]. Every startup can improve its level when they use customer feedback properly on startup project. To find out the areas of improvement can be identified from the feedback which is given by different customer [3] [6]. Though using of feedback in a startup is not a very old idea, for this reason there are not sufficient resources to work with the customer feedback, mainly how to use the feedback properly. According to the search result of different database about the topic of this thesis, the researcher cannot find any method or framework which is suggested to prioritize customer feedback for lean startup. But everywhere it is said that the feedback of customers is important for the improvement of startup.

3 Research Methodology

In this research, two research methods have applied. First one is a systematic mapping study and the second one is a case study. The case study is conducted based on the data which is found is first research method. The research question is:

RQ: How practitioners prioritize customer feedback on lean startup?

3.1 Systematic Mapping Study

The Systematic mapping study is used to identify the current study of research area and find out the literature ratio in related fields. It is used to find out research gaps to contribute in the research area. Systematic mapping study reduce the bias of research, and mitigate time and cost. The systematic mapping is extensively used in the field of medical research, at the present time it is used in the area of software engineering. Limited number of systematic mapping studies performed in the software engineering area such as Scoot J. Dixon et al. [19] performed a systematic mapping study for developing a concept about Genetic Interaction Networks. The following steps are proposed in the systematic mapping study [16] [17]:

3.1.1 Step 1: Definition of Research Questions (Research Scope)

In the systematic mapping study, the research question is the main key factor rather than in a systematic review [18]. The research question has to manipulate in such way that reflects the main and secondary goal of the systematic mapping of the study [16] [17].

3.1.2 Step 2: Formulation and Execution of Research Query (All Studies)

The search string has to make according to research scope. The search strings are used to find the primary studies from digital sources or databases. The purpose of this search strategy is to identify and formulate search terms, define search process and resources to be searched [16] [17].

3.1.3 Step 3: Screening of Studies (Relevant Studies)

Research question plays very important role in inclusion and exclusion process. Inclusion and exclusion process the researcher to include and exclude studies based on research question [16] [17].

3.1.4 Step 4: Developing a Classification Scheme (Key wording based on title, abstract and index terms)

Key words help to achieve objectives in a targeted point. It is done in two steps:

Reading the abstract and title to find out the keywords and concept that reflects the contribution of research and reduce the time and efforts.

If the title and abstract is not clear the reading the introduction and conclusion to know the depth of a paper [16] [17].

3.1.5 Step 5: Data Extraction Process and Mapping of the Studies (Systematic Map)

After development of classification schemes, all relevant studies have been classified [16] [17]. Graphs are used to generate reports or visualized studies.

There are two types of research: quantitative research and qualitative research. The purpose of our research is to identify the customer feedback prioritization technique or methodology is used by a software startup project.

Thus, the research question is: How practitioners prioritize customer feedback on lean startup?

In this research, based on the research question the qualitative research is in this research approach.

3.2 Qualitative Research

The qualitative research approach is primarily exploratory research where 'how' or 'why' question is investigated very depth. Qualitative research is mainly gathering verbal data instead of measurable data. The primary aim of this approach is to give a clear view of research topic and provide a complete, detailed description. According to Merriam [8], this approach is used to discover the problems, understanding events, phenomena, analysing human behaviours and ideas and answer the question in order to obtain inside [8].

Qualitative research is an approach which is used to understand the phenomenon and to solve the 'how' or 'why' problem. Qualitative research helps to know the background reason, opinions and motivations. It is providing insights on the problem or shows a way to quantitative research in this area. The purpose of this research is to provide such a way for startup projects so that they able to identify a statistical data of customer feedback prioritization methodology. Data collection way in this approach is unstructured or semi-structured. Group discussion, individual interview or observation is some common methods used to collect data in this research approach. In this research group discussion and individual interview is used to collect data.

3.3 Case Study

In Applications of case study Research by Yin [9] said that, the researcher can use exploratory case study, explanatory case study or descriptive case study in their research. An exploratory case study is conducted as a separate task. When some major aspects are initially uncertain about, like the questions to be asked, the hypotheses of the study, the data collection methods, the access to the data, or the data analytic methods then researcher start research with exploratory case study [9]. So it is important to investigate these issues. Once investigated, the pilot or exploratory phase is considered as having been completed. Now, the exploratory should start the real case study from scratch with a complete study design, a whole new set of sources of information, and a fresh set a date.

According to Yin [9], descriptive case study represents a multiple case design, and it is an especially education in four states: Massachusetts, South Dakota, North Dakota, and New Jersey. The case study followed a pattern-matching procedure: Data about each state's activity were compared with two rival, idealized, and theoretic patterns [9].

Explanatory case study is a theory about "how" and "why". It is suitable for designing and doing the exploratory case study. The more complex and multivariate is the explanatory theory, the better. The case study of Yin analysis can then take advantage of pattern-matching techniques [9]. A study conducted on the subject of research utilization benefited from the prior existence of several complex and rival theories - readily translatable into operational terms and serves as this chapter's fifth illustrative use.

In this research the exploratory single case study is used. To know the depth knowledge about our topic is important for our research. The exploratory case study is more appropriate where in-depth and detail knowledge is not available [11]. Participation and structured are two types of observation. In participation researcher needs to involve with the selected case and in structured researcher need to look from outside of the selected case [11] [12]. So to observe the collection of customer feedback process and the prioritization technique, the researcher involved with the team to perform the participatory case study. In this process, the researcher has gotten a depth understanding about the process because the researcher has become a part of the daily routines, events, rituals and interactions with the company [12].

This case study was conducted during the time of October, 2015. It took 4 working days to conduct the case study. The startup company, which is investigated, named it as Alpha. Because, the startup Company does not want to publish their company name in this research. The Alpha Company only provides the team structure of the feedback

collection team and customer feedback decision making team. That is shown in following Table-1:

Table-1: Different Teams of Alpha

Team Name	Team Member
Customer Feedback Collection	1
Customer Feedback Decision	Not Fixed (Usually 3 to 5 including lead engineer and CEO)

The customer feedback collector collects feedbacks from customers once in a month using email, phone calls, Skype. After collection of feedback the team makes known the lead engineer. They discuss about the feedback in meeting where three to five members include based on the feedback types. The CEO and the lead engineer must attend at the meeting. They discuss about the feasibility of the collected feedback. Then they make decisions which feedback needs to implement first and which are not needed to implement at all.

3.4 Data Collection

The researcher performed four working day participatory observation case study to find the answer to our research question. After getting in-depth knowledge about the research area, the researcher also performed semi-structured interviews with the feedback collection team and with the leader of the feedback decision making team. Overview of this single case study is given Table-2:

Table-2: Research Activity

Activity	Participants	Focus Area
Observation	Customer Feedback collection Team; Customer Feedback Decision Making Team	Focus on customer feedback, feedback collection process, feedback priority process
Interview	Customer Feedback Decision Making Team Leader	Challenges to collect feedback, decision making to implement the feedback

Six types of data collection technique proposed by Yin [10]: documents, archived records, structured interviews, direct observation, participatory observation and artifacts. Firstly, the researcher performed participatory observation to get data. After gathering knowledge and data, reviews some demo email document where the

feedback collection team asks for feedback to the customer. The researcher maintains a notebook to write down daily observational data so that those can help future linkup between our findings. Data also collected from some demo email document. During this observation on of the researcher maintain communication with team leader over the phone call and face to face discussion to know more about customer feedback prioritization techniques they have used in their lean startup.

Secondly, a face to face semi-structured interview with the team leader was performed which is 30 minutes long. The interview topic covers the feedback prioritization technique, which customer feedback should give priority first, how to set the value of customer for startup and some follow up questions. To find a new insight, semi-structured interview works perfectly [11] [13]. Which data are collected from the interview that is used to triangulate while comparing or contrasting them with data collected during participatory observations. The semi-structured interview was a combination of both open, focused and followed up with questions. The interview questions were descriptive and based on the questions there was follow up questions.

3.5 Data Analysis

The data are collected from different data sources. But that data cannot be understandable by the reader. Well organized data help the reader to understand the context or the purpose of research clearly [14]. The researcher documented the result of the interview together. The qualitative data analysis technique is used which is called thematic data analysis technique. The researcher revisited the recorded interview multiple times and triangulates this with the data which is collected in observations. Later use mind mapping tools to visualize our findings to the reader [11].

Mapping of Research Question and research Methodology
The research question is mapped by several research methodologies and steps. Every step is described in Table-3:

Table-3: Mapping of Research Questions to Research Methodology

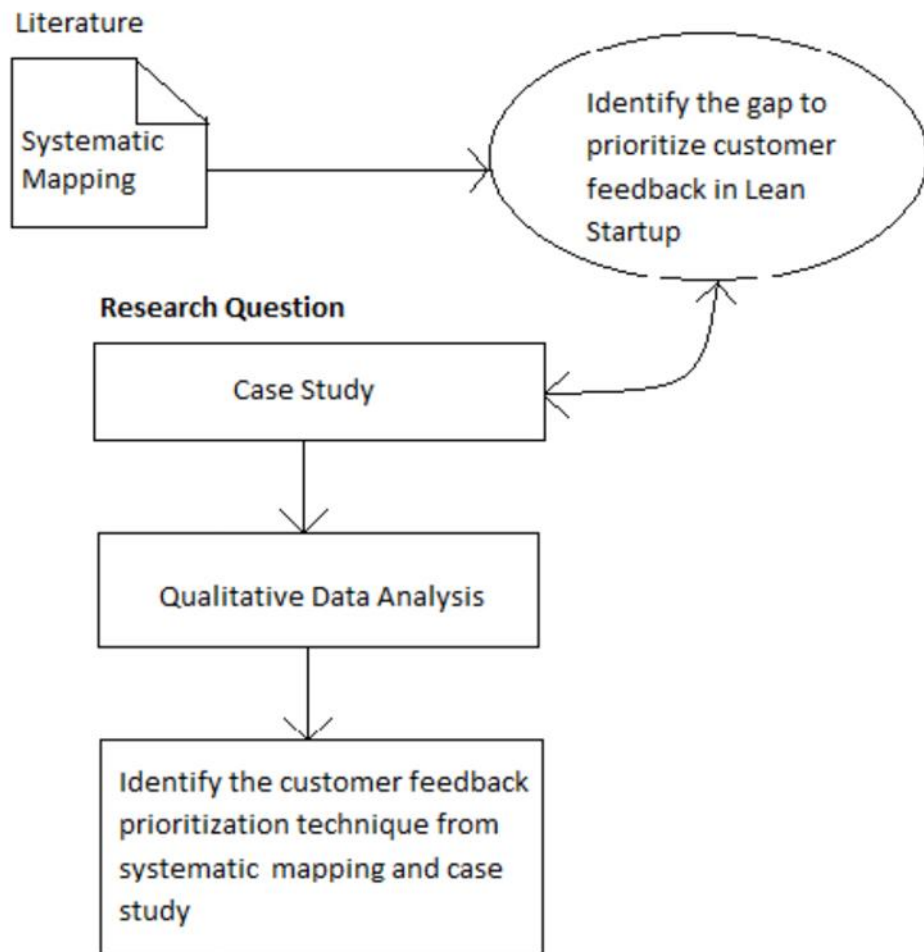| Research Questions	Research Step	Research Methodology
How practitioners prioritize customer feedback on lean startup?	To Identify the techniques of feedback prioritization, where feedbacks are collected from customers on a lean startup project.	Systematic Mapping Case Study Qualitative Data Analysis

Figure 1: Research Step

4 Research Design

This research has been divided into two parts (Figure 2). The process of conjoining two parts, first we have conducted a background study to initialize idea and found out the research gaps in the area of customer feedback prioritization in lean startup. Background study has been used for the input of primary study, the background study and primary study has been used as the input of secondary study which answers the research question. For the primary study we have conducted the systematic mapping study and for secondary study we have conducted the case study.
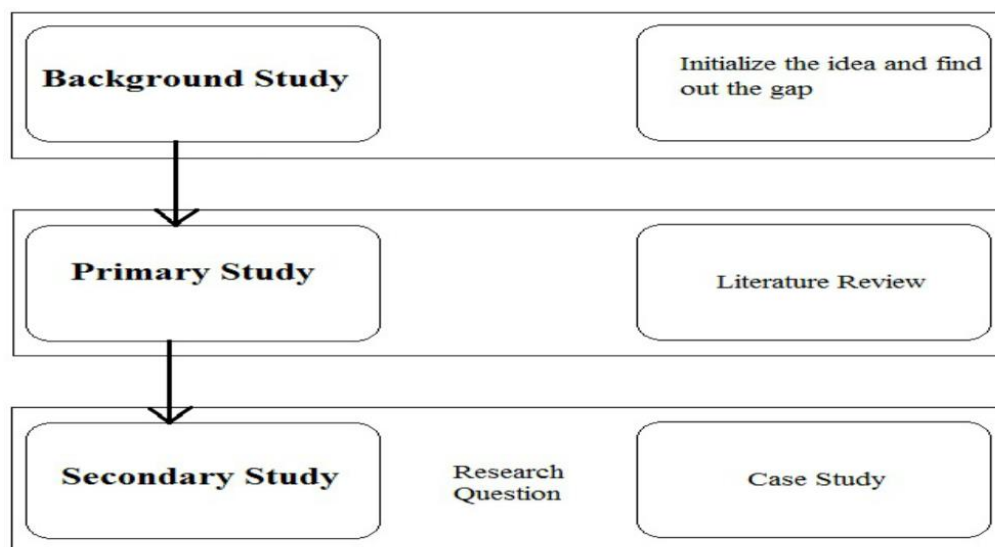

Figure 2: Study Design

4.1 Systematic Mapping Design

The systematic mapping study is used in this research to find out the related research work and reduces the possibility of research bias. According to Kitchenham [22], a systematic map is a method that can be conducted to achieve an overview of a particular research area.

4.1.1 Step 1: Definition of Research Question (Research Scope)

A research question is a precisely stated question that guides the review. In the systematic mapping study, the research question is the main key factor. This is essential to identify the quantity and related works and result according to the research questions [23]. Following these guidelines, the researcher has specified a research question (RQ) in the field of the lean startup project.

Table 4: Systematic Mapping Research Question

Serial No	Systematic Mapping Research Question	Motivation
RQ1	How practitioners prioritize customer feedback on lean startup?	To identify the techniques to prioritize customer feedback in the lean startup project.

4.1.2 Step 2: Formulation and Execution of Search Queries (All Studies)

The search string is drawn up according to intervention and scope area. Search strings are used to identify primary studies from digital sources. The following approaches are used to perform systematic search:

Search Strategy:

Lean Startup, Customer, Feedback and Prioritization have multiple dimensional contexts. It is observed that, multiple studies stated a keyword in different terms and values. Therefore, snowballing approach [20] is performed to manipulate all possible related keywords. Search strings are specified systematically drawn through the following steps:

- All the possible keywords are recognized by looking over titles, abstracts and index terms of studies.
- Relevant papers are identified by scope area and intervention in terms in terms of research question [20].
- Thesaurus is used to find synonyms for keywords.
- Search strings are specified systematically by using Boolean operators such as AND, OR etc.
- All possible keywords are listed in *Appendix A* and search strings are given in *Appendix B*. Table 5 contains a description of query formulation.

Table 5: Systematic Mapping Search Strategy

Data Items	Values
Databases	IEEE Xplore, Google Scholar
Scope Area	Lean Startup, Feedback Collection, Customer Feedback, Feedback Prioritization Process.
Intervention	Possible Keywords
Outcomes	Systematic mapping study outcomes: Identifies the gap in terms of the research question, and to find out the contribution is this area.
Search Queries Formulation	To make the search inclusive, electronic databases are searched using the following strategy [39]:

	- Boolean OR is used in between the interventions. - Boolean AND is used in between the scope and interventions. - In order to restrict this research to studies that contains only value keyword and software. Boolean AND is also used in between them. - An example is given below, while detailed queries are provided in Appendix B. Customer AND Feedback AND Prioritize AND Technique
Reference Management System	Mendeley for reference management, and Endnote (for removal of duplicated studies)
Year	All Times
Studies Target	Book, Journal and Conference Papers

Both manual and automated search is conducted for this research. Different websites have searched for finding out relevant resources.

Step 3: Searching of Studies (Relevant Studies)

To find out the relevant studies inclusion and exclusion criteria is used in this research. Those papers are included which are relevant to the research question, those papers are not taken which are not relevant to the research question. The following steps are followed to find out relevant studies:

1. The primary studies written in English and not to be duplicated.
2. In the second step the title and abstract are used to find relevant studies. If those are not clear, then introduction and conclusion section could be acknowledged.
3. The relevant studies that are in full text and clear those should be included [39]. If they are not available (either digital or printed copy), then they should be excluded.
4. The relevant studies should be included which are matched with the research area.

Step 4: Developing Classification Scheme (Key wording using title, abstract, and index terms)

Classification schemes are used to shape the objectives of our research. According to Kitchenham [21], key wording is done in two steps. First, the researcher read the title and abstract to find the keywords and concept that reflect the contribution of research also reduce the time and effort. This is the foundation level of classification scheme.

Second, if abstract and title is not clear, and then the researcher read the introduction and conclusion to take depth knowledge of papers in detail.

Step 5: Data Extraction Process and Mapping of Studies (Systematic map)

After completing classification scheme, the related study was mapped according to plans of classification scheme. The studies are listed and from all of those listed studies, the duplicated studies have been removed [41].

4.2 Case Study Design

In Applications of case study Research by Yin [9] said that, the researcher can use exploratory case study, explanatory case study or descriptive case study in their research. When it is needed to know the in-depth knowledge of a topic, the exploratory case study is used. When the 'How' or 'Why' arise in any topics, then it is needed to use explanatory case study and sometimes in multiple case study the descriptive case study is used [9].

The depth knowledge of this research area is not available. So to know the depth of the area of this research, the researcher used the exploratory single case study. The exploratory research can be done both for qualitative and quantitative research. In this research the exploratory qualitative research is used to know the deeper knowledge of the research area. It is flexible to collect qualitative data using interview, which provides a deeper understanding about the research area.

4.2.1 Interview Design

This is the most common format of data collection in qualitative research. According to Oakley, qualitative interview is a type of framework in which the practices and standards be not only recorded, but also achievable, challenged and as well as reinforced [28]. As no research interview lacks structure [29] most of the qualitative research interviews are semi-structured, lightly structured or in-depth [29]. Unstructured interviews are generally suggested in conducting long-term field work and allow respondents to let them express in their own ways and pace, with minimal hold on respondents' responses [30]. In this research the researcher conducted a semi-structured so that the interview section could be more flexible and follow up questions can arise. The researcher has some predefined questions for the interview too, which is listed in *Appendix C*.

4.3 Data Analysis

Data is collected from different data sources, this data and methodological triangulation will be turned into the research goal. Thematic analysis helps to conduct qualitative research. Thematic analysis is considered as foundation method for

qualitative analysis [24]. It is used for identifying, analysing, and reporting patterns within data. However, thematic analysis becomes one of the most used analysis methods in software engineering stated in [25]. The researcher has followed the recommended steps for thematic synthesis. The following steps are:

4.3.1 Step 1: Extract Data

The analysis starts with verbal data, which was recorded in the interview section. The data needs to be transcribed first in written form for further analysis.

4.3.2 Step 2: Code Data

The code means the most basic segment, or element of raw data [24], which is more meaningful to the analysis. The transcribed raw data are coded into meaningful groups as per interview guide was prepared. Xmain software was used to code the data.

4.3.3 Step 3: Translate Codes into Themes

When all data has been initially coded, then those data are converted from code to themes. In this step it is refocused to the coded data to find out patterns or themes among data sets. A theme is an outcome of coding, categorizing, and analytic reflection, not something that is, in itself coded [26]. As it has been mentioned before, it will map patterns or themes according to this research question. On the translation progression of themes, coded data need to be rearranged and reclassified. For visual representation theme software tools can be used, e.g. thematic networks, tree maps, mind maps, or xmind. In this research Xmind is used for deriving theme (Figure 3).
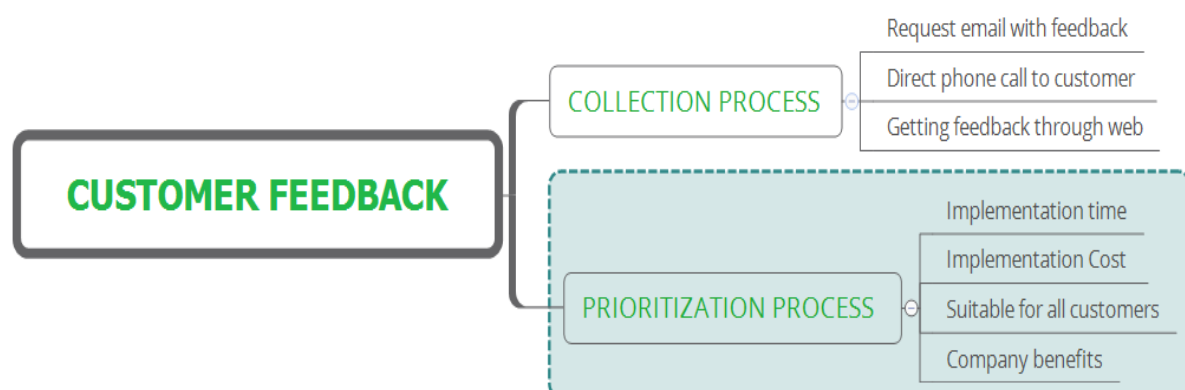

Figure 3: Translate Code into Theme Using Xmind

4.3.4 Step 4: Create a Model of Higher-Order Themes

The connection is established between the primary data and the secondary data. The relationship between primary findings and previously extracted theme will be the key aspects of the higher order theme.

4.3.5 Stet 5: Assess the Trustworthiness of the Synthesis

Research findings and outcomes should be trustworthy as per the research methodology adopted. The trustworthiness of a synthesis depends on both the quality and quantity of the studied data. The poor methodological quality of primary studies and included literature can also affect the trustworthiness of the data synthesis. Trustworthiness also depends on the methods used, e.g. measurer taken to minimize bias, and weighting of studies according to quality [27].

5 Result

5.1 Systematic Mapping Results

In this section those studies are searched which are meet the keywords of the research topic, e.g., customer, feedback, lean startup, etc. The time limit is not considered for studies because this area of research in not very old. IEEE and Google Scholar database is used to search studies. Total 366 studies are found in search, where 122 in Google Scholar and 244 in IEEE Xplore.

The findings from observation are outlined and in-depth semi-structured interview that were collected through the single case study. An overview of different findings is listed in Table-6. The presented data of Table-3 are the evidence of our findings in this case study.

Table-6: Findings from Case Study Table

Dimensions	Findings
Feedback Collection	Email; Website; Phone Calls; Online Calls
Feedback Priority Technique	Team Meeting; Customer Value; Implementation Time; Implementation Cost; Suitable for all Customers;

Every month in the last working week the customer feedback collector team collects feedback from customers in a different way. The team usually uses email; website and talk to customer for collecting their feedback about the service customers are used. The team notes down all the collected feedback and documented those feedbacks to discuss in the meeting.

When the sufficient feedbacks are collected, then they decide to call a meeting to discuss and make decisions about collected feedbacks. In the meeting minimum three to a maximum five members are present. In every meeting the CEO and the lead engineer must be participating. In our observation, we have found that the feedback collector team presents the collected feedbacks in the meeting and make acknowledged the team about the customers and customer's feedbacks. At the meeting the members discuss various issues about the collected feedbacks and make a decision to implement customer feedback based on the value of customer in this project, the implementation time of feedbacks and the implementation cost.

5.2 Feedback Collection Process

The feedback collection team where the minimum member can be only one, the team collects feedbacks from customers in every month. Most of the time they use email for collecting feedbacks from their customers. They ask their customer about the service they are using through email and they note down the feedback given by the customer even if the customer does not reply they also note it down. The website is also used to get feedbacks from customers. They ask their customers about the services through the website. Sometimes they use phone calls and Skype calls depends on customers choose. If customer wants to give feedbacks over voice call only then they use this process.

5.3 Feedback Selection

Feedback selection is an important part for every startup. This startup team is always concern about customer's comments and feedbacks. When the feedbacks are collected from customers, they call a meeting to discuss about collected feedback. In this meeting they select the feedbacks from all of the collected feedback. The CEO, engineer head and other members discuss about the feasibility of collected feedbacks. They give priority the customer value, the development time and cost of feedbacks, the necessity of feedbacks for all customers than a single customer, the business benefit of collected feedbacks for this project is important. Measuring all of those issues they select feedbacks to be implemented from all feedbacks which are collected from customers.

The startup project controller thinks that, those customers who are using their service more than others; they are most valuable customer for this project. They always give priority to those customers and give priority to their feedbacks for future release. If the customer has social value or brand value, not a prime user of this project, they also rated as a valued customer for this project.

Those feedbacks are not selected which are more costly and take more times to be implemented. This is an important issue for giving priority or prioritizes the customer feedback. If the customers feedbacks take more time that must be a cause for increase cost. So they discuss the possible implementation time and cost of feedbacks before select feedbacks.

If the collected feedbacks are not adding any value for all of the users or a maximum number of users then those feedbacks are not selected. They think that, their startup should be comfortable and useable for all of their targeted customers. If feedbacks are demanded by a customer which is not important for others at all, they skip this feedback of that customer for that time. They store this feedback for future; it may be used in the future, but not at this time.

Their main purpose to make profit from the market using their project. If any feedback does not meet the purpose of the project or does not profitable this feedback is not accepted at this meeting.

It is observed that the selection of feedbacks must depend on the above issues. At that meeting they ensure that the selected feedbacks will add value for their project for a long run. After this feedback selections meeting the selected feedbacks are delivered to the development team for implementation.

6 Discussion

In every startup feedback is very important for the improvement of the startup project. The customers of startup project give feedbacks after using of the service provided by the startup. In this research it is agreed with the startup project team that feedback plays a very important rule for the improvement of startup, but the most important thing is, the necessary feedback should be identified by the project operator. This also agreed with them, that every startup has its own way to identify those feedbacks which are important for the improvement of startup, in other words, every startup prioritizes their collected feedbacks which are collected from customers in their own way. Most of the time, few techniques for prioritizing feedback matched with each other. After the observation by the researcher in this research, the researcher categorized the feedback prioritize technique in two major parts. The first one is related to the customers and the last one is related to the startup project of the startup company. Which is related to the company that may be called as Look At Them process or LAT process and the second one may be called as Look At Me process or LAM process. After the categorization of the feedback prioritization process, the researcher proposes a new process which is depended on LAT and LAM process and named this new process as Look At Star process or LAS process.

6.1 Look At Them process or LAT process

In this research this is observed by the researcher that, the startup project team always concerned about their customer. They try to listen them and try to provide service as their customer demand. They collect feedback from their startup user or customer for implementing those feedbacks. This agreed that, when the feedback is collected from customers the value of the customer for this project should be noted. The customer value depends on the type of startup project. The startup project team decides which customers are valuable to them. Again, the feedbacks may not be taken if those are given by the valuable customers when those feedbacks are not usable for most of the customers of startup project. If those kinds of feedbacks are selected which may be used by a few of the startup's customers that may be costly for the startup, because most of the time that kind of service may not be profitable for startup project. When the feedback does not come from valuable customer, but that may be used by most of the customers in this project, then that kind of feedbacks may be taken for implementation.

6.2 Look At Me process or LAM process

Feedbacks are collected from customers and implemented for using by customer on a startup project for making profit and ensure the stability of the startup project. This is identified from the startup project team that, if the feedback takes much time to be

implemented, most of the time that kind of feedback should not be taken for implementation. If that kind of feedback is taken, then it may be a reason for the expenses of extra money, which may increase the cost of startup project. It would be a good idea when those kind of feedbacks is taken for implementation which may be implemented within a short time. The implementation time is directly related to the cost of the startup project. Those kinds of feedbacks should not be selected which have no relationship with the startup goals, though it is from valuable customers.

6.3 Look At Star process or LAS process

LAT and LAM process are divided the feedbacks into two major parts. Now to make feedback prioritize, it is needed to make a scale for LAT and LAM process. The scale has a maximum value of five stars. When the feedbacks are divided into LAT and LAM, that time those feedbacks must be given a start mark where the maximum start is five. After dividing and giving stars to all feedbacks then all the feedbacks need to be sorted according to their star, where the most given star feedback will be placed at number one. Then the implementation team will look at the stars of the feedback for future execution.

7 Conclusion

The summary of all activities and the summary of the outcome of this research is discussed in this section. The main purpose of this research in to find out the prioritization technique of customer feedback on lean startup. The technique will be helpful for the startup projects to become successful. When the technique will be used in the lean startup project, the time and cost will be reduce of startup.

7.1 Research Question Revised

The systematic mapping study and case study methodology is used in this research. The following sections are the summary of the findings of research question:

7.2 Contribution Through Systematic Mapping Study

The gap of research is found out through systematic mapping study. The research question is established after the systematic mapping study. The relation between customer and lean startup is described in different studies. It is also described that the feedback of customer is most important for the lean startup project. It is found that there is not any proper technique used to prioritize the feedback of customers for future execution, which is motivated to find out a prioritization technique of customer feedback.

7.3 Contribution Through Case Study

The case study methodology is used in situations when the depth knowledge of any research area is not available. According to the research question the depth knowledge of this research area is not sufficient. So case study needed to conduct for this research. Interview and observation are used to collect data for this research. By conducting interviews it is identified that, the investigated company has used their own process to prioritize the customer feedback for their startup project. When they prioritize feedback they consider that is that customer value, time and cost of implementation feedback, the suitability of feedback for all customers. The researcher proposes a new technique for prioritize customer feedback after conduction interviews and observation. Where in the first phase it is needed to use LAT and LAM process and in the last phase it is needed to use LAS process.

8 Future Work

In this research the researcher finds the technique of customer feedback prioritization through systematic mapping study and case study. It will be interesting to do following in future:

- Compare this technique with other startup where the lean startup approach is not used through case study.
- Use this technique in different lean startup project and collect the data using quantitative research.

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10 Appendix

Appendix A: Customer, Feedback, Lean Startup, Prioritization

Sl. No.	Population	Intervention
1	Customer	Customer or Customers or Users or Users or Stakeholder or Stakeholders
2	Feedback	Feedback or Response
3	Lean Startup	Lean Startup or Lean Start-up or Lean Start Up
4	Prioritization	Prioritize or Prioritization or Priority

Appendix B: Search Queries

Sl. No.	Research Question	Database	Query
1	How practitioners prioritize customer feedback on lean startup?	Google Scholar	(Customer or Customers or Users or Users or Stakeholder or Stakeholders) and (Feedback or Response) and (Prioritize or Prioritization or Priority) and (Lean Startup or Lean Start-up or Lean Start Up)
2	How practitioners prioritize customer feedback on lean startup?	IEEE	(Customer or Customers or User or Users) and (Feedback or Feedbacks) and (Prioritization or Priority or Prioritize) and (Lean Startup or Lean Start-up or Lean Start Up)

Appendix C: Interview Questions

Sl. No.	Introductory Questions
1	What is your designation in the organization?
2	What is your responsibility in the lean startup project of the organization?
3	Name, Age, Gender, Contact Information

Sl. No.	Domain Specific Questions
1	How do you define a startup?
2	Why do you use the lean startup approach?
3	How customers play important roles in lean startup or startup?
4	What do you think about the customer feedback in lean startup?
5	How do you prioritize customer feedback?