

Establishing Requirements Using Elicitation Technique

Student Names : Salsabeel Alsahory / Dareen Obeid / Shahd Ghayadah / Mais Qunebi / Maan Alwahsh

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Abstract:

In this paper, the elicitation technique has been used to gather the requirements for the Uranus system, which is a new social media app. The process began by interviewing members of the target audience, including a group of college students.. Laddering techniques were employed during the interviews to elicit more data from the participants' personal disclosures. As well as the Triading to reveal deep-seated attitudes, perceptions, and feelings toward the apps, and the services. The data were then reviewed and utilized to create a Repertory Grid. These data were also used to create a survey, and the results were included in the RepGrid statistics.

1- Introduction:

Eliciting software requirements is a crucial and important step in the software development life cycle. It is well acknowledged that the specifications upon which software has been produced affect the quality of the product. The quality of the requirements has a big impact on whether a software development project succeeds or fails. Therefore, in order to determine the user's or customer's demands in advance, a number of elicitation strategies are required. Even though it can be challenging to elicit comprehensive needs from users, using the best elicitation technique possible in light of the characteristics of the software could help ensure that the

requirements are accurate. A method adopted from psychology that has been used in new product development to help elicit customers' hidden needs is the Repertory grid technique (RGT). The RGT used to set up the interview produced a form where a collection of constructs were retrieved and evaluated on a particular scale. The interview is a traditional technique used in the elicitation. It is used to gather information about users and other stakeholders of the system that is being developed by having face-to-face conversations. There are two types of interviews: the closed interview, where the required elicitor has a set of questions in mind and is looking for their responses. In the open interview, the requirements engineer and stakeholders talk openly to learn about their expectations for a system. Open interviews with the usage of Laddering and Trading techniques are utilized in this research.

2- Research Scope

This study's participants were selected from Bethlehem University students aged 18 to 25, about 30 students were enrolled. The data was gathered using surveys and in-person interviews. The study area concentrated on using elicitation techniques to extract new social media app requirements and put up empathy maps for particular user profiles so that researchers could better comprehend the research topic and knowledge.

3- Interview analysis:

The first stage of conducting interviews

A group of interviews were conducted with a number of students, which we thought were wrong because 6 elements were not presented to the students to choose between, but it was clear to us that this is what is required, but in these interviews, Ladder Interview technique was not used enough

Interview 1:

Female, Second Year, Medical labs

Q: What are the three applications you prefer to use?

Ans: Instagram WhatsApp and Telegram

Q: Why did you choose these apps?

Ans: WhatsApp to communicate with family and friends.

Telegram is for communication, but less than WhatsApp, because most of the community around me does not use it.

Instagram: for fun.

Q: What is your favorite application among them?

Ans: Instagram

Q: why?

Ans: Because it is more entertaining and has a variety of content, not like WhatsApp and Telegram, just to communicate. And most of the celebrities use it

Q: Are there other reasons? Like ease of use?

Ans: yes, also easy to use.

Mistakes in this interview:

Q: Are there other reasons? Like ease of use?

This question is wrong because it is a closed question, as it contains the answer that is being sought.

Ladder Interview technique is not used enough.

Facial expressions and body language:

She was a bit nervous and worried about the questions, but then she felt more confident when the interview started with a simple question that reflected her daily life using social media.

Rep Grid for this interview:

Step 1: Identify elements

Instagram WhatsApp and Telegram

Step 2: Identify constructs

Usability, Used by Local Community, Entertainment, chatting

Step 3: Rate the constructs

similarity Scale 1	WhatsApp	Instagram	Telegram	Similarity Scale 5
Used By Local Community (Not Used)	5	4	1	Used By Local Community (Widely used)
Entertainment (Low)	2	5	3	Entertainment (High)
usability (Not Easy)	5	4	3	usability (Easy)
Chat (Low use for it)	5	4	2	Chat (High use for it)

Interview 2:

Female, Second Year, Software engineering

Q: Do you use social media a lot?

Ans: I don't use it much because it wastes time

Q: What are the three apps you use the most?

Ans: Facebook, WhatsApp, LinkedIn

Q: Why are you using these particular apps?

Ans: Facebook to know the news

WhatsApp: to communicate

LinkedIn: Because it's content is useful and serious

Nots:

We notice that there is a group in society that does not prefer to use communication sites except for the necessity

Facial expressions and body language:

- Fluent speaker, with an open mind
- She used hand movement while speaking
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Rep Grid for this interview:

Step 1: Identify elements

Facebook WhatsApp and LinkedIn

Step 2: Identify constructs

Chatting, news, content

Step 3: Rate the constructs

Similarity Scale 1	WhatsApp	Facebook	LinkedIn	Similarity Scale 5
content (Not useful)	4	2	5	content (useful)
News(Not easy to get)	3	4	3	News(Easy to get)
Chat (Low use for it)	4	1	3	Chat(High use for it)

Interview 3:

Female, Second Year, Business Administration

Q What are the three sites you use the most?

Ans: Instagram, WhatsApp, Snapchat

Q: Why are you using these particular apps?

Ans: Because it is more effective than others

Q: What do you mean more effective?

Ans: It is used by more people

Q: What is the most used application among them?

Ans: Snapchat

Q: Why?

Ans: because I like Streak

Q: Why?

Ans: Because it's entertaining and I see people's lives through it

Q: What is the difference between Instagram and Snap?

Instagram easy for communication

Q: And WhatsApp?

Ans: To communicate but with people close to me

Q: Why you didn't choose Facebook?

Ans: Because most of my friends don't use it

Q: Why do they use Instagram more than Facebook?

Ans: Because Facebook is used more by the elderly, and Instagram is more fun in terms of content and easier to use

Q: What app are you not using and why

Ans: TikTok because its content is bad

Q: What app do you use to get useful information?

Ans: No, I use social media for communication and entertainment

Q: How much time do you spend using social media?

Ans: Almost 6 hours a day

Problems and mistakes in this interview:

More Ladder Interview technique should have been used

Q: What app do you use to get useful information? This question is wrong because it is a closed question

Facial expressions and body language:

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Rep Grid for this interview:

Step 1: Identify elements

Instagram WhatsApp and Snapchat

Step 2: Identify constructs

Used by Community, entertaining, communication, easy to use, content, Daily Challenges

Step 3: Rate the constructs

Similarity Scale 1	WhatsApp	Instagram	Snapchat	Similarity Scale 5
Content (Not diversified)	1	5	4	content (more diversified)
Entertainment (Low)	2	4	5	Entertainment (High)
Chat (Low use for it)	4	5	4	Chat(High use for it)
Used By Local Community (Not Used)	5	5	3	Used By Local Community (Used)
usability (Not Easy)	5	4	3	usability (Easy)
Daily Challenges (Not active)	1	1	4	Daily Challenges (active)

Interview 4:

Male, Fourth year, Software engineering

Q: What are the three apps you use the most?

Ans: Instagram and Twitter

Q: Why?

Ans: Twitter there is freedom of expression

Instagram only shows the content that I followed, not like TikTok that shows content that I did not follow

Q: What is the least app you use?

Ans: Because it is an official platform

Q: Which app do you use the most and why?

Ans: Twitter due to the many notifications that I receive from this application

Problems and mistakes in this interview:

More Ladder Interview technique should have been used

He told only two applications and we forgot to ask him about the third application

Rep Grid for this interview:

Step 1: Identify elements

Twitter, Instagram

Step 2: Identify constructs

Content restriction, official, notifications

Step 3: Rate the constructs

Similarity Scale 1	Twitter	Instagram	Similarity Scale 5
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Content restriction(less)	1	4	Content restriction(High)
Official(low)	3	1	Official(High)
Notifications (few)	5	3	Notifications (many)

The second stage of conducting interviews:

At this stage, the questions have been changed, as 6 elements (social networking applications) have been identified, and the person chooses the three elements he uses most to talk about them. Problem in this interviews define 6 items for a person

Interview 5:

Male, Fourth year, Accounting

Q: Can you live without using social media and why Yes/No?

Ans: No, because all aspects of life have become linked to social media

Q: What are the three applications that you use the most among these applications (Facebook, Snapchat, Instagram, YouTube, TikTok, and WhatsApp)?

Ans: Instagram, WhatsApp, YouTube

Q: Why did you choose these 3?

YouTube: It contains beautiful content and wastes time on it

Instagram: Comfortable to communicate

- What does " Comfortable" mean?

Easy to communicate with

WhatsApp: Better in video calls

Q: What is your favorite app among them?

An: Instagram

- Why?

Ans: Diverse content of articles and videos, easy to use and well organized

- What's meant to be well organized?

Ans: The form of the application is comfortable and the arrangement of the content in it.

Q: What are the things that you would like to increase on the Instagram application?

An: Increase privacy

- Like what?

Like not taking a screenshot

Q: Is there anything else you would like to change?

An: At the moment no

Q: Why did you choose Instagram over Facebook?

An: Because I am used to it more and more beautiful

Q: What are the positive and negative effects of social media on your life?

An: It made learning easier, but it wastes a lot of time

Rep Grid for this interview:

Step 1: Identify elements

Instagram, WhatsApp, YouTube

Step 2: Identify constructs

Communicate, usability, privacy, content, user interface

Step 3: Rate the constructs

Similarity Scale 1	WhatsApp	Instagram	YouTube	Similarity Scale 5
content (Not diversified)	1	5	4	content (more diversified)
Privacy (Low privacy)	4	3	3	Privacy (high privacy)
Chat (Low use for it)	5	4	1	Chat(High use for it)
user interface (not trendy)	2	4	3	user interface not trendy
usability (Not Easy)	5	4	4	usability (Easy)

Interview 6:

Male, third year, Accounting

Q: Can you live without using social media and why Yes/No?

An: No, because all aspects of life have become linked to social media

Q: What are the three applications that you use the most among these applications (Facebook, Snapchat, Instagram, YouTube, TikTok, and WhatsApp)?

An: Facebook, Snapchat, WhatsApp

Q: Why did you choose these 3?

WhatsApp: Used at work and good at communicating

Facebook: for news

- Why is it specifically used to see the news?

Because it is the fastest to spread

- Why?

Because most of the news pages are on Facebook and the news spreads quickly

- Why are most of the news pages on Facebook?

- Because it is the most used by people interested in news and the oldest among the sites

Snapchat: to streak

- Why do you care about Streak?

Just for fun and to see what my friends do

Q: What is your favorite app among them?

An: WhatsApp

- Why?

An: High privacy and ease of use, and you can share daily life, but with greater privacy than others

Why did you choose WhatsApp in terms of privacy, even though Snapchat has high privacy?

An: I feel that WhatsApp is more special for me and more preferable.

Q: What are the things that you would like to increase on the WhatsApp application?

An: suspension sometimes

Q: Is there anything else you would like to change?

An: Increased speed and ease of use

Q: What are the advantages of Instagram in your opinion?

An: Photography and photo editing

Communicate, privacy, used at work, news, fun, usability, speed, Photography

Not:

The user said that he does not prefer social media very much, because sometimes it causes problems between people and sedition

Rep Grid for this interview:

Step 1: Identify elements

Facebook, Snapchat, WhatsApp

Step 2: Identify constructs

Communicate, privacy, used at work, news, entertainment, usability, speed, Photography

Step 3: Rate the constructs

Similarity Scale 1	Facebook	Snapchat	WhatsApp	Similarity Scale 5
Chat (Low use for it)	2	4	5	Chat(High use for it)
Privacy (Low privacy)	3	4	5	Privacy (high privacy)
use at work (Low use for it)	2	1	4	use at work (High use for it)
News(Not easy to get)	4	3	2	News(Not easy to get)

usability (Not Easy)	4	2	4	usability (Easy)
Entertainment (Low)	2	4	4	Entertainment (High)
Photos (Low quality)	2	5	2	Photos (High quality)
Speed (stop working)	3	4	2	stop working(not stop working)

Interview 7:

Male, third year, Business Administration

Q: Can you live without using social media and why Yes/No?

An: It is difficult because it has become a part of our lives

Q: What are the three applications that you use the most among these applications (Facebook, Snapchat, Instagram, YouTube, TikTok, and WhatsApp)?

An: Instagram, Snapchat, WhatsApp

Q: Why did you choose these 3?

Because they are the most used by people

Why?

Because they are easier and fun

Q: What is your favorite app among them?

An: WhatsApp

- Why?

An: Because it now contains all the features such as story and privacy, such as not taking a screenshot. For example, in Snapchat, can take a screenshot and it appears to me that he has done so, but WhatsApp does not allow to take it.

Q: What are the things that you would like to increase on the Instagram application?

An: nothing

Q: like privacy?

An: No, There are many ways to privacy

Q: Is there anything you would like to add to WhatsApp?

An: It is possible to add the post feature

Q: What are the advantages of Instagram in your opinion?

An: Useful in promoting products and business

Mistake in this interview:

Q: like privacy? This question is wrong because it is a closed question

Rep Grid for this interview:

Step 1: Identify elements

Instagram, Snapchat, WhatsApp

Step 2: Identify constructs

Communicate, privacy, used in business, entertainment, usability, contains, most use by people

Step 3: Rate the constructs

Similarity Scale 1	Instagram	Snapchat	WhatsApp	Similarity Scale 5
Chat (Low use for it)	4	3	5	Chat(High use for it)
Privacy (Low privacy)	3	4	5	Privacy (high privacy)
use at work (Low use for it)	4	1	4	use at work (High use for it)
Used By Local Community (Not Used)	4	3	5	Used By Local Community (Widely used)
usability (Not Easy)	4	3	5	usability (Easy)
Entertainment (Low)	4	3	4	Entertainment (High)
content (Not diversified)	4	3	4	content (more diversified)

Interview 8:

Teacher at Bethlehem University

Q: Can you live without using social media and why Yes/No?

An: yes, because I did not make it essential in my life

Q: What are the three applications that you use the most among these applications (Facebook, Snapchat, Instagram, YouTube, TikTok, and WhatsApp)?

An: Instagram, YouTube, WhatsApp

Q: Why did you choose these 3?

Instagram: for show news, and picture

WhatsApp: to communication

YouTube: to show video and music

Q: What is your favorite app among them?

An: no one, every app has a specific job.

- What's the most used app?

Instagram

Why?

To show news and it's more pictures than writing

Q: What are the things that you would like to increase on the Instagram application?

An: Advertisements

Q: Is there anything else you would like to change?

An: When you watch a video, an option for another video appears, and this wastes time and forgets the main purpose for which you were using the application.

Rep Grid for this interview:

Step 1: Identify elements

Instagram, YouTube, WhatsApp

Step 2: Identify constructs

Communicate, news, contains

Step 3: Rate the constructs

Similarity Scale 1	Instagram	YouTube	WhatsApp	Similarity Scale 5
Chat (Low use for it)	1	1	5	Chat(High use for it)
News(Not easy to get)	4	2	3	News(Easy to get)
content (Not diversified)	4	4	2	content (more diversified)

Interview 9:

Female, Fourth year, Physical therapy

Q: What are the three applications that you use the most among these applications (Facebook, Snapchat, Instagram, YouTube, TikTok, and WhatsApp)?

An: WhatsApp: for communication with my friends.

Instagram: for stories and people news and watch reels.

YouTube: To listen to music and watch series.

Q: What is your favorite app and why?

An: Instagram for stories and people news ,my friends use it and watch reels.

Q: What are disadvantages for the other two apps?

An: WhatsApp: nothing to do if there is no one to chat with.

YouTube: Boredom watching movies.

What will you modify on Instagram?

All apps have the same features, therefore something new that is not found in other applications can be added to make it more distinctive

Note: Not a fan of social media just when she needs to communicate with someone.

YouTube is distinguished from other sites by the content of movies and songs

Rep Grid for this interview:

Step 1: Identify elements

Instagram, YouTube, WhatsApp

Step 2: Identify constructs

Communicate, news, contains, Used by Local Community

Step 3: Rate the constructs

Similarity Scale 1	Instagram	YouTube	WhatsApp	Similarity Scale 5
Chat (Low use for it)	4	1	5	Chat(High use for it)
News(Not easy to get)	3	1	4	News(Easy to get)
content (Not diversified)	5	4	1	content (more diversified)
Used By Local Community (Not Used)	4	4	5	Used By Local Community (Widely used)

Interview 10:

Male, first-year, Hotel management

Q: What are the three applications that you use the most among these applications (Facebook, Snapchat, Instagram, YouTube, TikTok, and WhatsApp)?

An: WhatsApp: for communication with my friends.

Instagram: for stories and people news and watch reels.

YouTube: To learn from it.

Q: What is your favorite app and why?

An: Instagram for stories and people news ,my friends use it and watch reels.

Note:

The interviewee did not interact sufficiently, and there is also a great similarity in the answers of the interviewees

Rep Grid for this interview:

Step 1: Identify elements

Instagram, YouTube, WhatsApp

Step 2: Identify constructs

Communicate, news, contains, Used by Local Community

Step 3: Rate the constructs

Similarity				Similarity
Scale 1	Instagram	YouTube	WhatsApp	Scale 5
Chat (Low use for it)	3	1	4	Chat(High use for it)
News(Not easy to get)	4	1	3	News(Easy to get)

content (Not diversified)	4	4	1	content (more diversified)
Used By Local Community (Not Used)	4	5	4	Used By Local Community (Widely used)

The third stage of conducting interviews:

The last stage of the interviews, in which the interviews were conducted without informing the person of 6 elements only he chooses 3 sites from social networking sites.

Interview 11:

Female, third-Year, Software Engineering

Q: What are the three applications that you use the most among social media App

An: Best three app: WhatsApp, Snapchat, Instagram

Q: Why?

An: WhatsApp: for communication

Snapchat: for streak and taking good photos by filters

Instagram: for stories and people news

Q: Why do you use WhatsApp to communicate?

An: Because it is easy to use and all my friends and family use it

Q: Why is everyone using it, not other communication apps?

An: Because it is easier to use, good at making calls, and saves phone credit

Q: Why is Streak important to you?

An: Because it is entertaining, through it I can share my daily life with greater privacy and see through it the lives of my friends

Q: What is your favorite app?

An: Instagram

Q: Why?

An: Because it's fun and everyone uses it and wastes time

Q: What will you modify on the application?

An: Add the alert feature when taking a screenshot of the story or conversation

Q: If you built an app what are the features you will add?

An: ease of use /privacy/chat/story/post/reel

Note:

This person is a long time social media user (Social media fan)

Rep Grid for this interview:

Step 1: Identify elements

Instagram, Snapchat, WhatsApp

Step 2: Identify constructs

Communicate, news, contains, Used by Local Community, photos, ease of use, privacy, entertainment

Step 3: Rate the constructs

Similarity Scale 1	Instagram	Snapchat	WhatsApp	Similarity Scale 5
Communicate (Low use for it)	3	2	5	Communicate (High use for it)
News(Not easy to get)	5	4	3	News(Easy to get)

content (Not diversified)	5	3	1	content (more diversified)
Used By Local Community (Not Used)	4	3	5	Used By Local Community (Widely used)
usability (Not Easy)	4	2	5	usability (Easy)
Entertainment (Low)	4	4	2	Entertainment (High)
Privacy (Low privacy)	3	5	4	Privacy (high privacy)
Photos (Low quality)	4	5	1	Photos (High quality)

Interview 12:

Female, third-Year, Medical labs

Q: Can you live without social media? Why?

An: No, because my whole life has become linked to social media

Q: What are the three applications that you use the most among social media app?

An: Best three app: WhatsApp, TikTok, Instagram

Q: Why?

An: WhatsApp: for communication.

Instagram: for stories and people's news.

Tick-tock: to watch reels.

Q: Why do you use WhatsApp to communicate when you can communicate through Instagram?

An: Because all my family and friends use it

Q: Why is everyone using it?

An: Because it is easier to use and does not waste time like Instagram, it has one use, which is communication

Q: What is your favorite application or the most used application among them?

An: Instagram

Q: Why?

An: for stories and people news and It is a more realistic and spontaneous application than other applications.

Q: What do you mean by " It is a more realistic and spontaneous application than other applications."?

An: ان الناس تنشر عليه حياتها دون تعديل او مونتاج

Q: What is the purpose of the stories?

An: entertainment

Rep Grid for this interview:

Step 1: Identify elements

Instagram, TikTok, WhatsApp

Step 2: Identify constructs

Communicate, news, Used by Local Community, ease of use, entertainment

Step 3: Rate the constructs

Similarity				Similarity
Scale 1	Instagram	TikTok	WhatsApp	Scale 5

Communicate (Low use for it)	4	1	5	Communicate (High use for it)
News(Not easy to get)	5	1	3	News(Easy to get)
Used By Local Community (Not Used)	4	3	5	Used By Local Community (Widely used)
usability (Not Easy)	4	4	5	usability (Easy)
Entertainment (Low)	5	5	2	Entertainment (High)

Interview 13:

Female, third-Year, Medical labs

Q: Can you live without social media? Why?

I tried, but I couldn't because our lives became linked to it, especially communication, so it's cheaper to make calls than calling using the phone

Q: What social media sites do you use?

An: Instagram, messenger, Snapchat, Telegram, WhatsApp

Q: What are the three best for you?

An: Instagram, Telegram, WhatsApp

Q: Why?

An: Instagram: I love Rails and Stories, and there is more privacy in messages than WhatsApp

Q? Why is it more privacy ?

An: For example: if I send a message to a person and delete it, it does not appear to the person that I sent a message and deleted it, unlike WhatsApp, which shows that there is a deleted message.

As for Telegram, I upload large files to it and study materials such as recording lectures because it does not specify the size of the files that I can upload to it, like WhatsApp, which does not allow uploading large files.

What is the impact of these applications on your life?

Instagram: take my time

WhatsApp: To communicate quickly without credit

Telegram: I follow the news on it because it has a lot of news channels

Which app do you use the most and why?

An: Instagram because it takes time because of stories and relays

Q: What do you not like about Instagram?

An: Palestinian Content Restriction

Q: Why didn't TikTok choose among the apps you use?

An: Because I do not use it, it is a waste of time and its content is bad or, let's say, unacceptable in society. As for Instagram, it is less, or you can specify what you want to watch on it.

Q: What are the things that you wish to add or remove from Instagram?

An: Instagram does not exist, but WhatsApp downloads large files, so I can give up Telegram and save space on my phone

Rep Grid for this interview:

Step 1: Identify elements

Instagram, Telegram, WhatsApp

Step 2: Identify constructs

Communicate, entertainment, privacy, upload large files, news, Content Restriction

Step 3: Rate the constructs

Similarity Scale 1	Instagram	Telegram	WhatsApp	Similarity Scale 5
Communicate (Low use for it)	4	3	5	Communicate (High use for it)
News(Not easy to get)	3	5	2	News(Easy to get)
Privacy (Low privacy)	4	4	3	Privacy (high privacy)
upload large files(not allowed)	1	5	2	upload large files(allow)
Entertainment (Low)	5	1	2	Entertainment (High)
Content (not restricted)	5	1	1	Content (restricted)

Interview 14:

Female, Midwife, Medical labs

Q: Can you live without social media? Why?

An: I always try to live without using social media, but I can't because without it, I feel cut off from the world, and it has an entertaining side

Q: What social media do you use?

An: Instagram, Snapchat, WhatsApp, Facebook

Q: What are the three apps you use the most?

An: Instagram because of Story and Reels

Snapchat: because Streak

WhatsApp: to communication with my friends

Q: What is your favorite app among them?

An: Instagram

Q: Why?

An: Because its content is more diverse and people use it more and interact with it

Q: Is there something you would like to change on Instagram?

An: Palestinian Content Restriction

Q: Why did you choose Instagram and not Facebook, even though they are similar?

An: Because Instagram is more fun, but Facebook is more serious and suitable for the elderly, and it is for more news

Q: Is there anything you would like to add on social media?

An: Restrict content differently in each country to suit the culture of each country

Rep Grid for this interview:

Step 1: Identify elements

Instagram, Snapchat, WhatsApp, Facebook

Step 2: Identify constructs

Communicate, entertainment, news, Content Restriction

Step 3: Rate the constructs

Similarity Scale 1	Instagram	Snapchat	Facebook	WhatsApp	Similarity Scale 5
Communicate (Low use for it)	3	4	2	5	Communicate (High use for it)
News(Not easy to get)	4	2	4	1	News(Easy to get)
Entertainment (Low)	5	4	3	3	Entertainment (High)
Content (not restricted)	4	1	3	1	Content (restricted)

Interviews analysis:

Of the 25 interviews that were conducted, it was noticed that there was a group of interviews whose results were repeated, meaning that people chose the same applications and the same constraints. These results are the application of Instagram, YouTube, and WhatsApp, and the constraints are communication and entertainment, it was concluded that this group is one persona. In another group of interviews, but their number was small, it was found that the people who were interviewed are serious and use social media to communicate, watch the news and learn, it was concluded that this group is one persona. The final group of interviewees uses social media apps for entertainment, education, and work, it was concluded that this group is one persona they use social media for two serious and entertaining purposes.

One of the most important observations resulting from the interviews is that a large number of users of a social media app use it because celebrities use it and they have no other reason to use this site.

As for the content of social media sites, it was mentioned in several aspects, namely the diversity of the content in terms of video, images, reel and stories, and restricting the content, and what is meant here is the restriction of political content on some social media applications and sensitive content that is inconsistent with the culture of a particular society. Also, the content was talked about in terms of interest in education or general information and the possibility of watching movies or listening to songs.

problems we encountered:

Many people refused to be interviewed for various reasons:

1. They don't have time
2. They are not in a good mood
3. Fear of conducting the interview, as some said that he did not have information or that he could not speak well and they were nervous and shy.
4. They want to know the questions before starting the interview.

Some people agreed to do the interview, but did not interact with us sufficiently.

For example :

Some of them showed that they only wanted to end the interview with the first question. Some people were unable to express their opinion or reserved information. For example, someone we interviewed told us that he prefers WhatsApp to communicate over other applications, and when we asked him why? He said only because it is a personal opinion and I have no other answer.

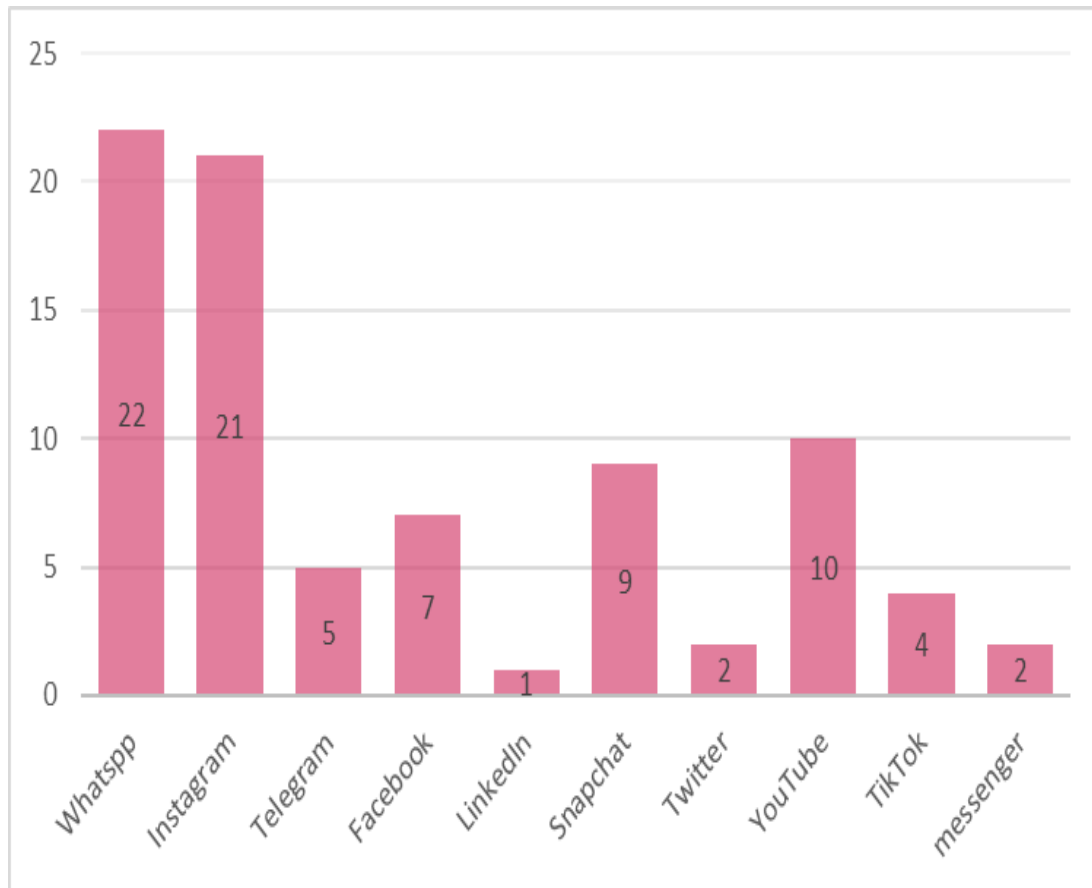
The results:

Twenty-five interviews were conducted with different people living in the environment of Bethlehem University who use social media sites to find out what constructs they look for and prefer in social media App.

The total number of elements (social media applications) that resulted from the interviews is 10: WhatsApp, Instagram, Telegram, Facebook, LinkedIn, SnapChat, Twitter, YouTube, TikTok, and Messenger.

The results of choosing the best three applications:

Social media App	The number of people
WhatsApp	22
Instagram	21
Telegram	5
Facebook	7
LinkedIn	1
Snapchat	9
Twitter	2
YouTube	10
TikTok	4
messenger	1

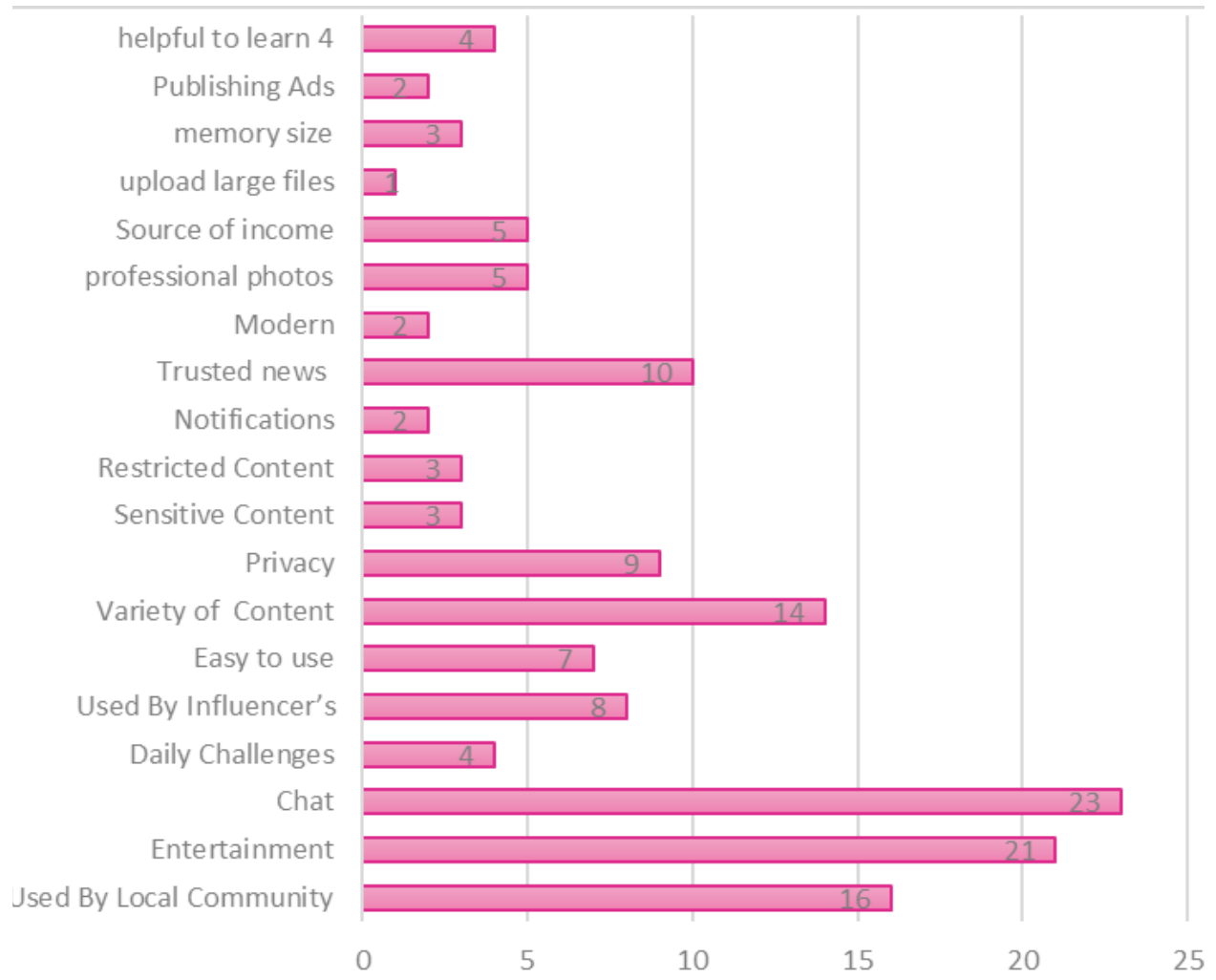


The number of constraints that resulted from the interviews is 19.

constraints	The number of people
Used By Local Community	16


Entertainment	21
Chat	23
Daily Challenges	4
Used By Influencer's	8
Easy to use	7
Variety of Content	14
Privacy	9
Sensitive Content	3
Restricted Content	3
Notifications	2
Trusted news	10
Modern	2

professional photos	5
Publishing Ads	2
Source of income	5
upload large files	1
helpful to learn	4



4-Personas:

- This persona shows passion and maintains a relaxed demeanor throughout the interview. She also speaks well and gestures with her hands while speaking.



Noor

Noor is a student who lives with her parents in Bethlehem and she is studying at BU. She enjoys social media apps and communicating with her friends.

Age: 19
Status: single
Location: Bethlehem
Studying: Medical labs

GOALS

- good grads.
- Time Management.
- be an active person.
- Support the Palestinian cause.

PAIN POINTS

- She is wasting a decent amount of time scrolling reels on Instagram
- Most of her posts that support Palestinians are being deleted or restricted to a small audience due to content filtration algorithms on Instagram
- She's feeling overwhelmed by the new apps released and facing a hard time staying up to date with trendy things that her friends follow and know.

PERSONALITY

non-social ————— social person

Analytical ————— Creative

Busy ————— Time rich

Messy ————— Organized

PRODUCTS/BRANDS THEY LOVE :

- Instagram
- Telegram
- Snapshat

Behavior :

She is spending about 4 to 5 hours on social media apps, viewing her friend's stories, and browsing videos She's posting usually about more general things and her opinions about different topics. and sometimes about her personal life and achievements

MOTIVATIONS

- To keep in touch with friends.
- To keep track of the news.
- To share her daily life with friends.

INTERESTS

- Diseases study.
- Time tracking methodologies.
- learning how to improve self-esteem techniques.
- Politics.

- This persona used their hands and eyes while speaking, but this was not the case throughout the entire session.

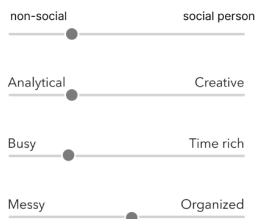


Omar

Omar is a student who lives and studies in Bethlehem and works as a part-time free-lancing designer. He doesn't like using social media apps for socializing however he uses them for marketing his online business, therefore he prefers to meet his friends in person and have scheduled time to chill out and communicate. He would prefer to stick with a routine and lives far from the city's noise and traffic.

Age: 20
status: single
location: Bethlehem
studying: physiotherapy

PERSONALITY



PRODUCTS/BRANDS THEY LOVE :

- Whatsapp
- Facebook
- LinkedIn

Behavior :

He is spending about 2 to 3 hours on social media apps either to post samples of his designs and recent work or to communicate with his clients mostly on LinkedIn and WhatsApp

GOALS

- Work well.
- Be constantly proactive.
- Get money.

PAIN POINTS

- He is an introverted person who prefers to stay away from social media trends.
- He would rather be career-focused.

MOTIVATIONS

- Expand and improve his business through social media.
- Attract more clients using social media communities

INTERESTS

- Track his time
- Improve his life quality.
- Improve his job.

- This persona, has a social personality, and throughout the interview, he said the word "hello" to many people. Which suggests that he has several social connections.



Sally

Sally is a BU student who lives in Jerusalem. She enjoys going out with friends, taking selfies, snaps, and recording stories. Enjoys establishing live streams and doing trendy challenges.

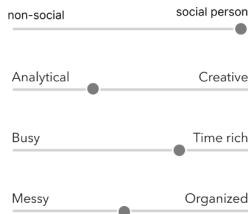
Age : 21

status : single

location : Hebron

studying : Hotel Management

PERSONALITY



PRODUCTS/BRANDS THEY LOVE :

- Instagram
- Snapchat
- TikTok

Behavior :

- She is spending about 5 to 8 hours on social media apps, using apps for fun.
- She doesn't put much work into her studies since she wants everything to be simple and easy.

GOALS

- Make TikTok videos.
- Watch reels.
- Want to get a huge number of followers and join influencer community.

MOTIVATIONS

- View the newest celebrity trend.
- Send daily streak to her friends.
- Post regularly on different social media platforms

PAIN POINTS

- She is a person who, as a result of her mistake, ignores her lessons.
- Wasting time.

INTERESTS

- Following trends.
- Following celebrities and their lives.

5-Empathy Map:

Empathy Map of a college student who works online part-time.

Action	Wake up	Get ready	Lectures	Eat	Study	Work	Back home	Family time	Sleep
Doing	Wake up and check the phone	get ready and go to collage	attend the lectures	Eat lunch	Study at the library	Attend work meetings	way to go back home	eat dinner and chill out with my family	Bed time
Thinking	<ul style="list-style-type: none"> • replay to any coming messages • check my calendar • browse Instagram for 20 m 	Taxi Time: <ul style="list-style-type: none"> • reading Quran • listening to podcasts 	<ul style="list-style-type: none"> • Listing to the lecturer • Check out new friends' stories on insta • Browse Facebook for minutes 	<ul style="list-style-type: none"> • Taking break and eat Sausuh • send a strak of my lunch 	<ul style="list-style-type: none"> • Play 2 hours "Study with me" video on youtube • Send a streak of my study view 	<ul style="list-style-type: none"> • Send a streak of my Espresso • Replay to my colleagues on slack 	Taxi Time: <ul style="list-style-type: none"> • check new reels on Instagram • play on TedTalk on youtube 	<ul style="list-style-type: none"> • Record funny TikTok challenges videos with my little sisters 	<ul style="list-style-type: none"> • Brushing my teeth • Watching short clips of movies summary
Feeling	sleepy and stressed by the news	In a hurry, thinking about the plane of the day and worried about being late	Trying to stay focused and not being distracted by the notifications	Enjoying my meal, and excited to share a pic of it with my friends	Focused, and started to feel sleepy eventually	Get my energy back after the coffee.	Tired, hardly focused, hungry	Enjoyed dinner, Having Fun, The warmth of the family	Sleepy, barely focused, thinking about tomorrow's plan
Emotions (Mood Meter)									
TouchPoint	check the Instagram			taking a photo for the launch and sending it as streak	taking a photo for the studying papers and sending it as streak	Replay to my colleagues and sending streak	check reels	record tik tok videos	watching short movies summary

Action	Open the app	Watch the stories	Comment and like the Story	Watch Reels	Comment and like the Reels	Post a post	Knowing the news	Comment and like the post	Watch videos
Doing	Open Instagram application	Watch my friends' stories on Instagram	Comment and like the story of my friends on Instagram	Watch Reels on Instagram	Comment and like the Reels on Instagram	Post a post on my personal page on a topic	Know the news of the world	Comment and like the post of my friends on Instagram	Watch videos on Instagram
Thinking	I want to know the news and diaries of my friends	I want to search for a story for someone dear to me	A comment on the story is a comment that suits it	Open a Reels video that my friend sent me	I want to save this Reels video because I liked it a lot	Post a post that people will benefit from	Knowledge of road news and whether there are barriers on the way to my place of work	A comment on the post is a comment that suits it and within the community standards	Watch a video that helps me understand English
Feeling	Excited to see news and friends' diaries	I look forward to seeing my friends' diaries	I am curious what will be answered by the story owner	I don't like watching reels because some of the videos remind me of some painful events	Interested to respond to my comment	I'm curious what my friends' reaction will be when they see this post	I feel desperate to know some bad news	I'm ready to see the post owner's reaction to my comment	I feel good when I watch some videos for fun and entertainment
emotions (mood meter)									
Touch point		Watch the stories on Instagram 	Comment and like the Story on Instagram 	Watch Reels on Instagram 	Comment and like the Reels on Instagram 			Comment and like the post on Instagram 	Watch videos on Instagram

6- Final RipGrid:

Similarity Scale 1	Whatsapp	linkedin	Telegram	Messenger	Instagram	Snapchat	Twitter	TikTok	Youtube	Facebook	Similarity Scale 5
Used By Local Community (Not Used)	5	1	1	2	4	3	1	3	5	1	Used By Local Community (Widely used)
Entertainment (Low)	2	1	3	1	5	4	1	5	3	3	Entertainment (High)
Chat (inflexible)	5	3	2	3	4	4	1	1	1	2	Chat (Flexible)
Daily Challenges (Not active)	1	1	1	1	1	4	1	1	1	1	Daily Challenges (Active)
Used By Influencers (Not Used)	1	1	1	1	5	2	3	3	4	1	Used By Influencers (Widely used)
Easy to use (Not Easy)	5	1	3	1	4	3	1	4	4	1	Easy to use (Easy)

Similarity Scale 1	Whatsapp	linkedin	Telegram	Messenger	Instagram	Snapchat	Twitter	TikTok	Youtube	Facebook	Similarity Scale 5
Variety of Content (Limited)	1	5	1	1	5	3	1	2	4	2	Variety of Content (Vary)
Privacy (Low privacy)	4	1	4	1	3	4	1	1	1	1	Privacy (high privacy)
Content(unformal)	1	5	1	1	1	1	1	1	2	3	Content(formal)
Sensitive Content (not have)	1	1	1	1	3	3	1	4	1	1	Sensitive Content (have)
Restricted Content (Unrestricted)	1	1	2	1	4	1	1	1	1	3	Restricted Content (restricted)
Notifications (few)	1	1	1	1	3	1	5	1	1	1	Notifications (many)
Trusted news (not contain)	3	3	5	1	4	4	1	1	1	1	Trusted news (contain)
Modern(not Trendy)	2	1	1	1	4	1	1	1	1	1	Modern(Trendy)
professional photos (High resolution)	1	1	1	1	4	5	1	1	1	1	professional photos (low resolution)
Publishing Ads (not contain)	1	1	1	1	5	3	1	2	1	1	Publishing Ads (contain)
Source of income (can not be used)	4	1	1	1	3	1	1	1	1	1	Source of income(can be used)
upload large files(not allowed)	2	1	5	1	1	1	1	1	1	1	upload large files(allowed)
Memory size(low)	1	1	3	1	1	1	1	1	1	1	Memory size(high)
helpful to learn (not helpful)	1	2	4	1	3	1	1	1	4	1	helpful to learn (helpful)

RipGrid analysis:

The rate of constraints in the Rep grid was calculated by percentage

For example: 10 people rated the content of WhatsApp, 8 people rated it 1, and 2 people rated it 4.

This means that 80% rated it 4 and 20% rated it 1.

20% is outlier, so it can be ignored.

In general, people prefer social media applications that allow communication with their friends and family, and unofficial applications, because the primary use for social media applications is for entertainment until they evade their responsibilities. These users prefer that users themselves determine the content that will be shown to them, taking into account the restrictions on sensitive content Which contains violent or obscene scenes, and people are also interested in educational content that allows them to develop themselves. As for ads, a group of people are bothered by the appearance of a lot of ads.

As for privacy, which is of interest to many users of social media applications, who are bothered by the screenshot feature, so they prefer that the screenshot feature be removed from the application in order to preserve their privacy.

As for usability, users prefer easy-to-use applications that do not need to learn or watch their videos to know how to deal with the application. Therefore, they prefer applications that have the same experience using apps.

As for the storage space, users prefer applications that have a small memory size, in order to preserve their devices. For this reason, users resort to applications that include all constraints such as communication, entertainment, learning, and high privacy.

7- Functional Requirements

- The application shall allow the user to communicate in all common ways (video calls, voice calls, text chat and voice note chat).
- The application shall support features including (stories, reels, posting pictures, texts, streak)
- The application shall show the content type based on what the user selects
- freedom of expression on the platform commensurate with the culture of the user
- possibility to upload large files
- do not show that sent messages, if deleted, have been deleted to the receiver
- The application can be used to make new business
- The app is modern and colorful

- The content of the application is suitable for all age groups
- contains various filters

8- Non-Functional Requirements

1) External Quality

a) Availability:

- i) AVL-1. The system shall be at least 99 percent available on weekdays between 6:00 A.M. and midnight Eastern European Standard Time, and at least 90% available the same time on weekends Eastern European Standard Time.
- ii) AVL-2. Downtime that is excluded from the calculation of availability consists of maintenance scheduled during the hours from 6:00 P.M. Saturday Eastern European Standard Time, through 12:00 A.M. Sunday Eastern European Standard Time.
- iii) AVL-3. The system shall work in the offline mode most of the time and send data when connected to any internet network, and shall not keep attempting to send the data when the device is not connected to the internet.

b) Installability:

- i) INS-1. The installation program shall verify the correctness of the download before beginning the installation process.
- ii) INS-2. An untrained user shall be able to successfully perform an initial installation of the application in an average of 5 minutes.
- iii) INS-3. Following successful installation, the installation program shall delete all temporary, backup, obsolete, and unneeded files associated with the application.
- iv) INS-4. When installing an upgraded version of the application, any new feature shall be retrieved from the servers keeping the application available to use.

c) Integrity:

- i) INT-1. After performing a file backup, the system shall verify the backup copy against the original and report any discrepancies.
- ii) INT-2. The system shall protect against the unauthorized addition, deletion, or modification of data.
- iii) INT-3. The system shall confirm daily that the application executables have not been modified by the addition of unauthorized code.

d) Interoperability:

- i) INTROP-1: The system shall handle encrypted communication between the bank API and the financial module of the application. If a salary is

deposited, the application should respond accordingly and illustrate the change.

e) Performance:

- i) PER-1. Sending chat messages through the application chat modules shall take less than 0.4 second for messages less than 0.5 MB
- ii) PER-2. Application's data shall fully download in an average of 2 seconds or less over a 30 megabits/second Internet connection.

f) Reliability:

- i) REL-1. No more than 5 experimental runs out of 1,000 can be lost because of software failures.
- ii) REL-2. The mean time between failures of the Venus Application shall be at least 120 days.

g) Robustness:

- i) ROB-1. If uploading data was interrupted, the system shall automatically reupload the necessary data upon recovery.

h) Safety:

- i) SAF-1. The system shall prevent sent chat messages for any profanity or keywords before sending them, incase of a security breach or unauthorized access of any account, so that it protects the reputation of the user.

i) Security:

- i) SEC-1. The system shall lock a user's account after four consecutive unsuccessful login attempts within a period of five minutes.
- ii) SEC-2. The system shall log all attempts to access secure data by users having insufficient privilege levels.
- iii) SEC-3. A user shall have to change the temporary password assigned by the security officer to a previously unused password immediately following the first successful logon with the temporary password.

2) Internal Quality

a) Efficiency:

- i) EFC-1. Running the application in the background shall not excess 400MB of RAM, otherwise, the system shall terminate and reboot into a clean state.
- ii) EFC-2. When in use, the system shall continuously collect garbage from RAM and empty space for any application use.
- iii) EFC-4. The system shall support multithreading in case of using more than one module of the application.

When [situation] I want to [Task] So that [Outcome achieved]

9- User story

As a <Type of user>	When [situation]	I want to be <tasks to be performed>	so that I can <goal to be achieved>	Acceptance Criteria
As a regular user for Venus	When I use Venus	I want to loge in on the application by entering my email and password	So that I can get in to his profile.	<ul style="list-style-type: none"> - Ensure that the user is able to : - Enter there password and email - Click submit - Retrieve their password in case they forgrt it by click ‘forget password’
As a Palestinian	When I use Venus	I want to enable content that supports the Palestinian cause without limits.	So that i can support the Palestinian	<ul style="list-style-type: none"> - The application should allow for the expression of opinion. - (solve problem of content limitations on Palestinian cause) -
As a student	When I use Venus	I want to notify me. If I use the application for a while.	So that I can manage to organize my time.	<ul style="list-style-type: none"> - The application should allow the user to control the time they spent on the app. - (solve problem of wasting time on the app)
As a student	When I use Venus	I want to display content relevant to my course of study.	So that I can benefit while using the application.	<ul style="list-style-type: none"> - The application should allow the user to control the content in the app. - (solve problem of bad content)
As a parent	When I use Venus	I doen’t want the Sensitive Content to appears on the application.	So that I feel comfortable while my sun using the app.	<ul style="list-style-type: none"> - The application shouldn’t allow posting the sensitive Content. - (solve problem of sensitive content)

As a user	When I use Venus	I don't the app to contain a lot of adds.	So that I browse the app without the annoying ads.	<ul style="list-style-type: none"> - The application should contain many ads. - (solve problem of ads)
As a new user for Venus	When I use Venus	I want to use a modern app that contain new feature.	So that the application will have new users (young users)and be popular.	<ul style="list-style-type: none"> - The application should be with the trends (with what the young people want). - The app should contain taking photos ,share storys,and share posts.
As a new user for Venus	When I use Venus	I want to remember how to use the application.	So that I don't have to research how to use it.	<ul style="list-style-type: none"> - The application should be usable. - (solve problem of hard use and remember).

Conclusions:

This report sought to describe the feasibility of the Repertory Grid approach using group administration of the technique and take a step forward towards understanding the Social media applications preferences of the Bethlehem University community. We examined 7 elements representing Social media applications that were consequently described by 18 bipolar constructs. A social media apps map created by Principal component analysis shows the diversified perception of these elements.

References:

- [Microsoft Word - 06_Kačániová \(ue.katowice.pl\)](#)
- [\(PDF\) A Methodology for the Selection of Requirement Elicitation Techniques \(researchgate.net\)](#)

Appendix:

- Empathy map :
https://www.canva.com/design/DAFUMSK8omI/0DbQ194yFOCE4Gz-ECzmFQ/view?utm_content=DAFUMSK8omI&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink