

Cincinnati, OH, USA

Group Storymaking: Understanding an Unfamiliar Target Group through Participatory Storytelling

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RESEARCH BACKGROUND

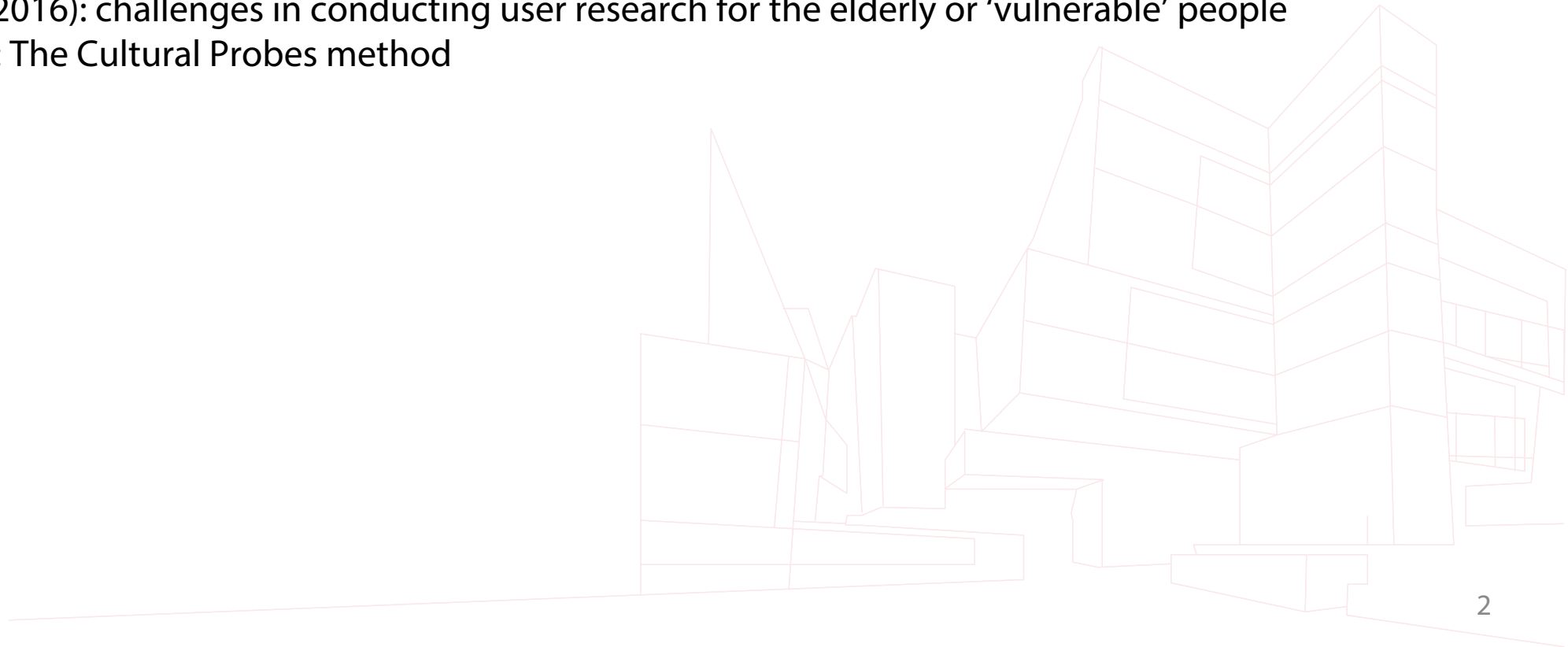
Sometimes, designers have to design for unfamiliar targets.



RESEARCH BACKGROUND

Previous research on conducting user study with unfamiliar target groups:

- Antle (2006): problems associated with defining child-users
- Slegers et al. (2010) & Duysburgh et al. (2012): difficulties in using traditional user research method for the disabled
- Campbell (2013): various challenges in designing for the inaccessible developing world
- Dee and Hanson (2016): challenges in conducting user research for the elderly or 'vulnerable' people
- Gaver et al. (1999): The Cultural Probes method



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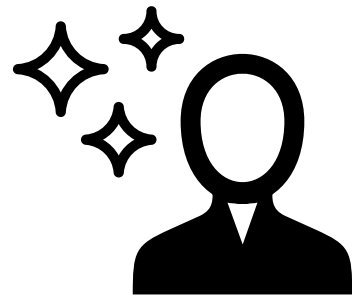
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User study results are often embodied as design personas, but...

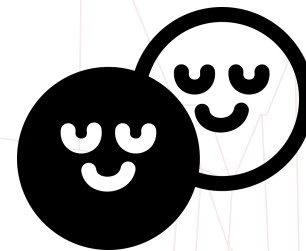


Fiction

Fiction writers excel at understanding and describing **unfamiliar characters** that are not real but *realistic*.



Realistic



Empathetic

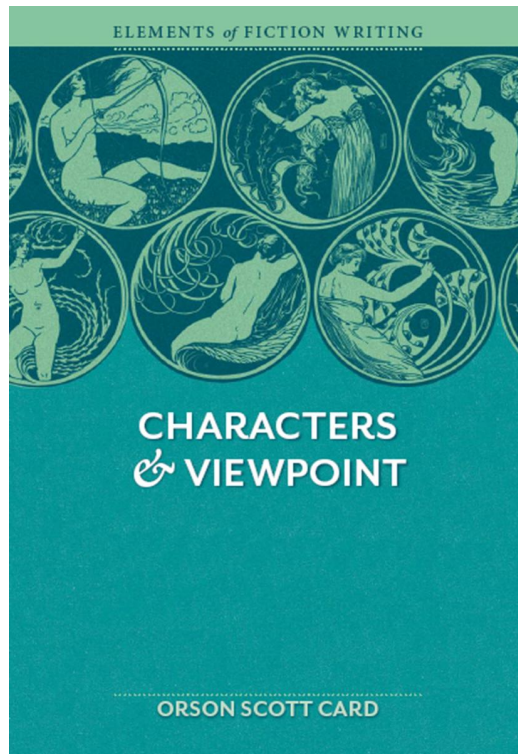
RESEARCH BACKGROUND

Card, Orson Scott.

Characters & viewpoint.

Cincinnati, OH: Writers

Digest Books, 2010.



“A Thousand Ideas in an Hour” workshop

Do you want a story about a boy or a girl?

--- *A boy! No, a girl!*

OK then, we won't decide yet. How old is this person?

--- *Ten! No, twelve!*

Twelve? Why twelve? What happens to you when you're twelve?

--- *You can stay up later.*

Oh? What do you do when you stay up later?

--- *Watch TV!*

--- *The good shows!*

--- *Scary shows!*

What else can you do?

--- *Go places by yourself!*

Where would you go?

--- *The mall!*

--- *Friends' houses!*

--- *Wherever I want!*

Heck, I'm thirty-seven and I can't do that.

--- *When you're twelve you get more money.*

How does that happen?

--- *Bigger allowance.*

--- *Babysitting.*

So twelve-year-olds can babysit. Have any of you ever done any babysitting?

--- *My brothers.*

--- *The baby.*

--- *I have.*

What can go wrong when you're babysitting?

--- *The house burns down.*

Yeah, but that doesn't happen very often.

--- *The kids start a fire!*

What do you do then?

--- *Put it out!*

--- *Call the fire department!*

--- *Get out of the house!*

--- *Get the kids out of the house!*

--- *Leave the one who started the fire!*

Oh, you're all heart. A fire would make an exciting story, but I don't feel like doing that one right now.

What else can go wrong when you're babysitting?

--- *Messy diapers.*

That's just part of the job.

--- *The baby crying.*

Okay, the baby's crying. What do you do?

--- *Change his diaper.*

You changed the diaper. He's still crying. What do you do?

--- *Feed him.*

--- *Burp him.*

--- *Tell him to be quiet.*

You do all that, he's still crying.

--- *Maybe he's sick.*

There's a chance of that. What do you do?

--- *Call your mother!*

She's isn't home. She had a meeting that night.

--- *Call the people. The people you're babysitting for.*

They're driving somewhere and they don't have a car phone.

--- *Go next door!*

(...continued)

RESEARCH BACKGROUND

(An example with a group of 4th-grade children)

Do you want a story about a boy or a girl?

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--- Go next door!

(...continued)



RESEARCH BACKGROUND

The author starts with any question that he likes.

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Each of the kids
freely answers to
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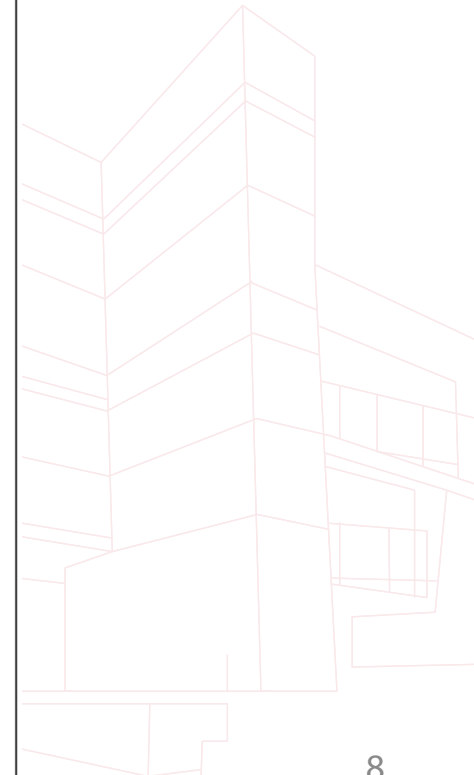
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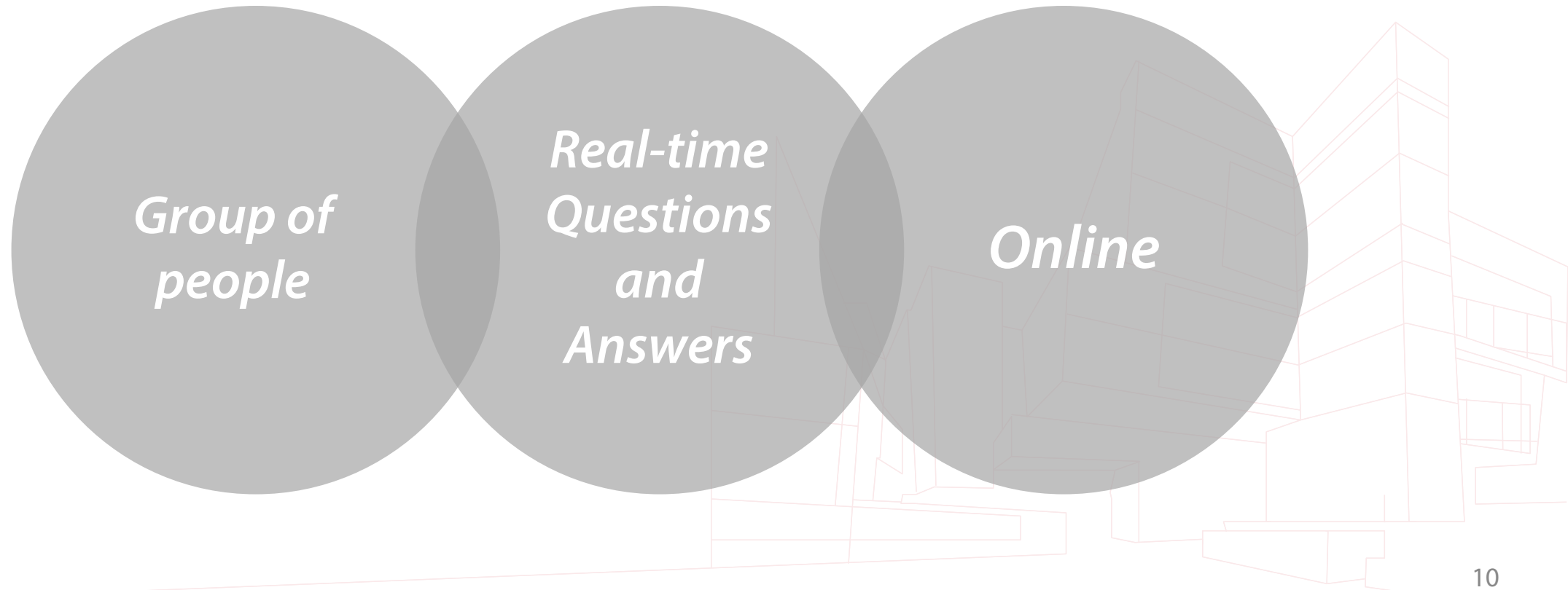
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RESEARCH BACKGROUND

Group Storymaking

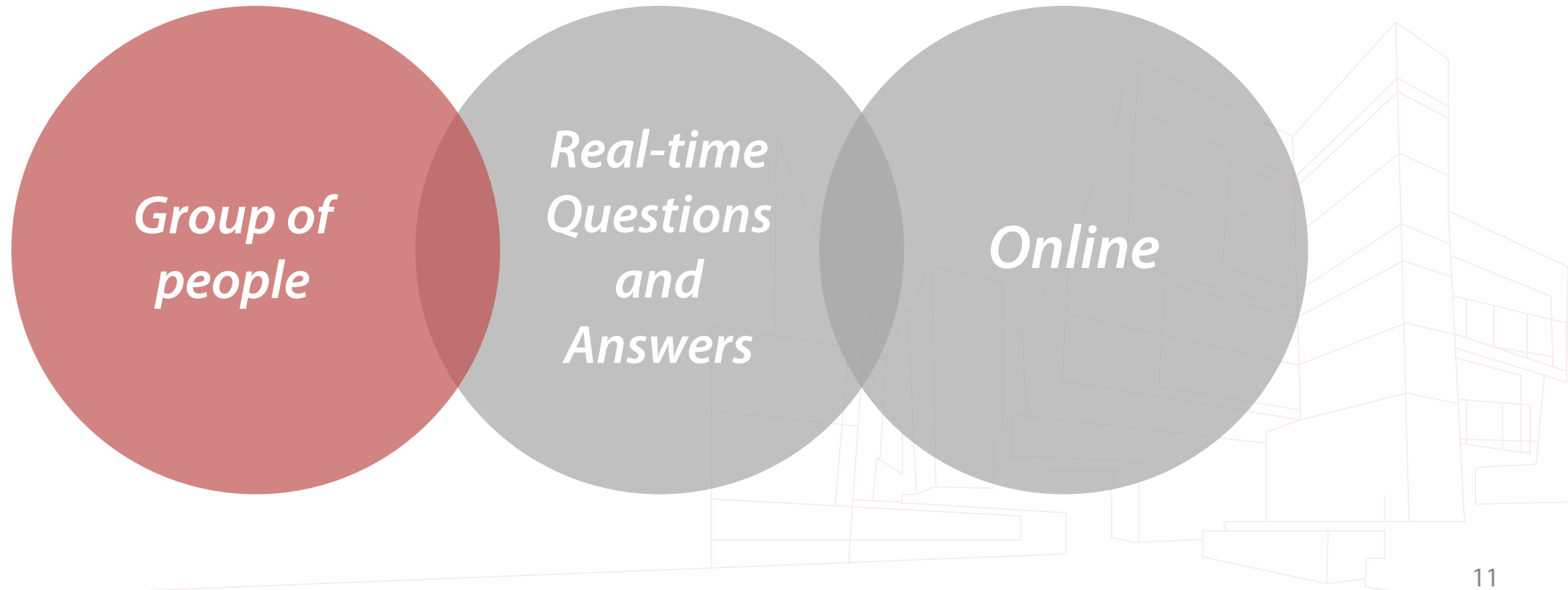
:: Group-storytelling-based user study method to understand an unfamiliar target



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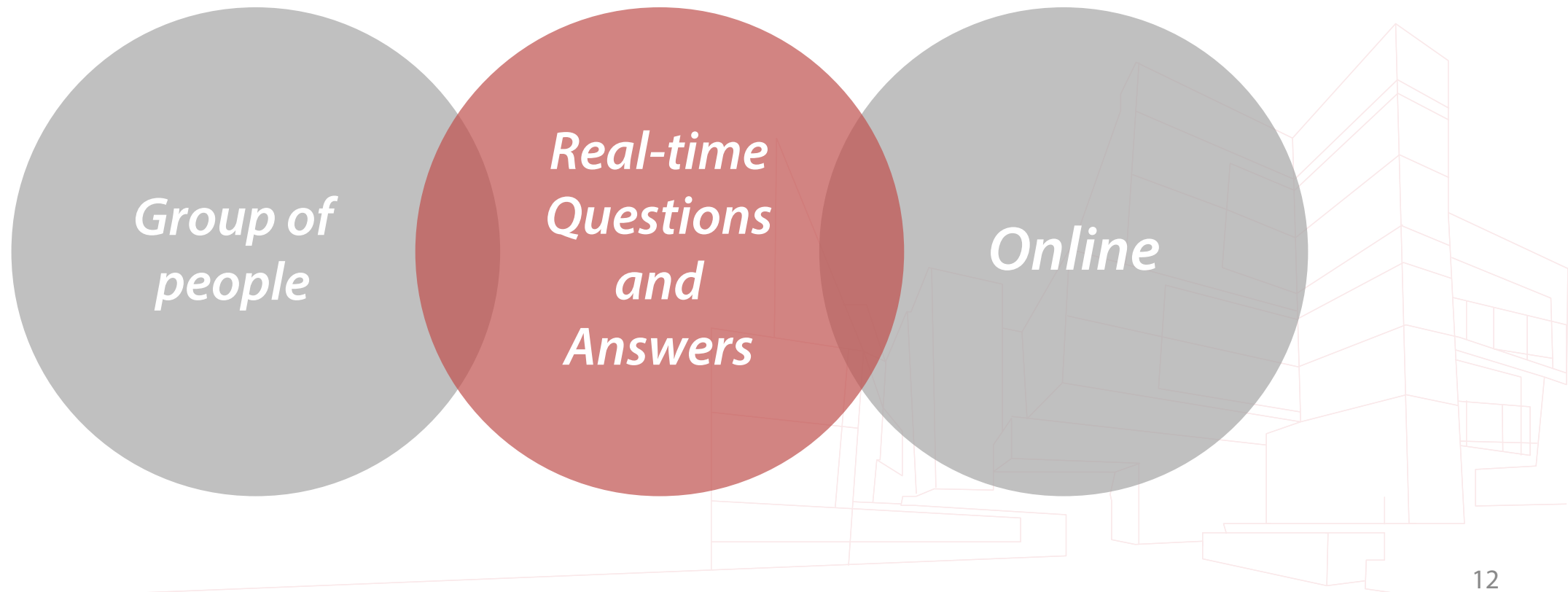
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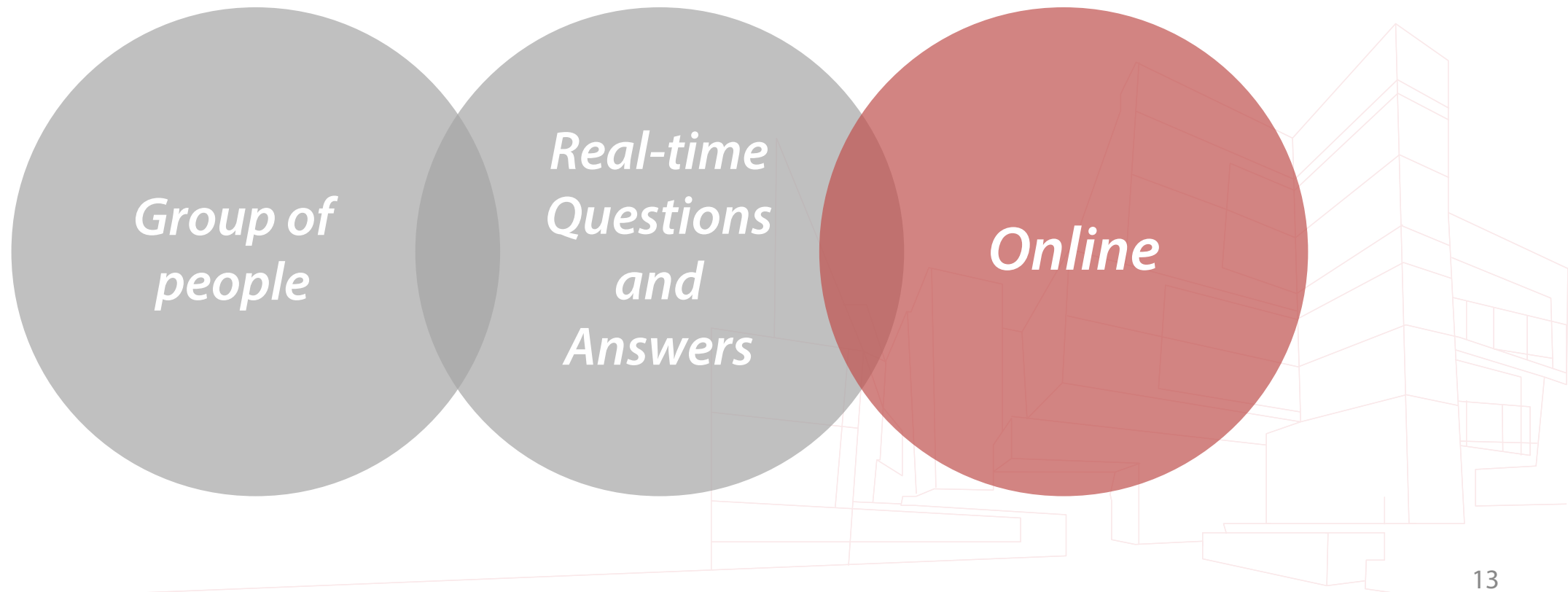
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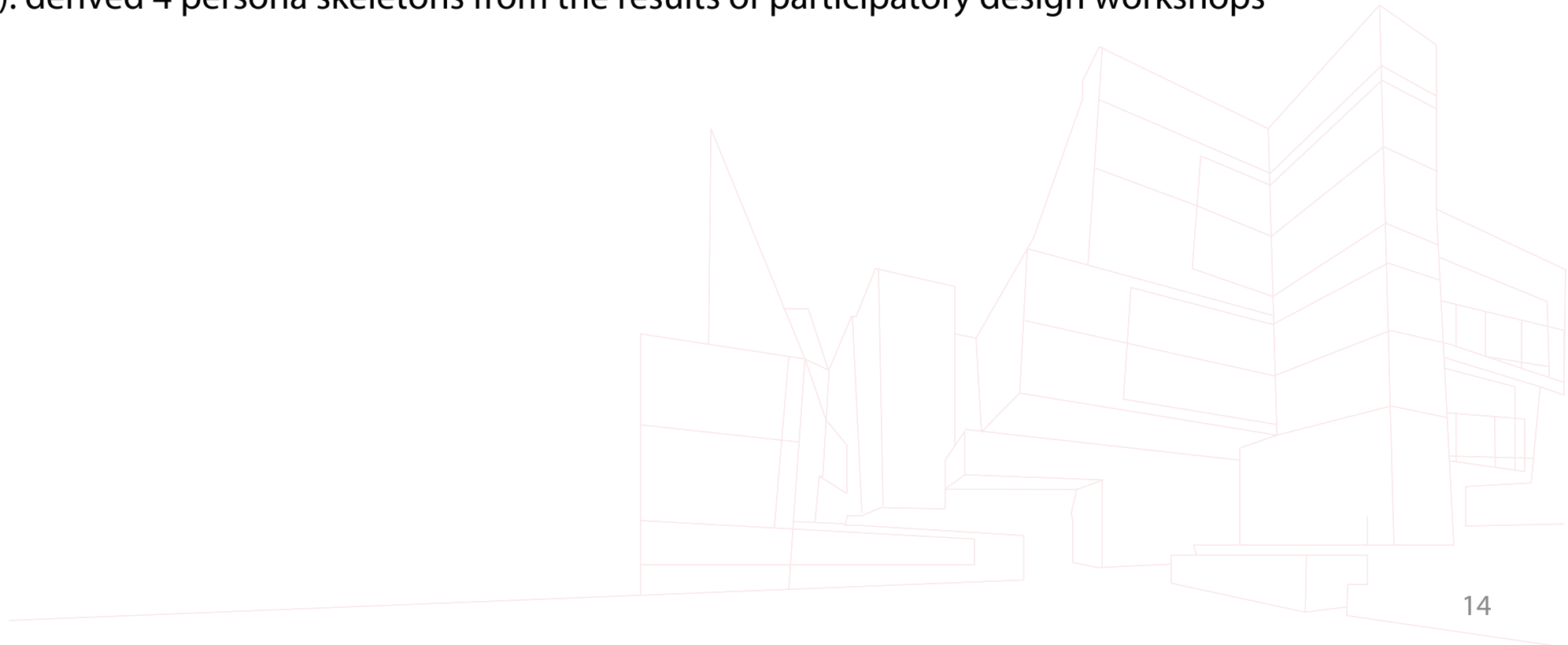
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RESEARCH BACKGROUND

Previous research on participatory design on user study and design personas:

- Nielsen (2012): involved potential users in design workshops to use scenarios and personas to come up with future solutions
- Van Doorn et al. (2013): children performed as research collaborators to interview peers and grandparents
- Dodge et al. (2017): derived 4 persona skeletons from the results of participatory design workshops



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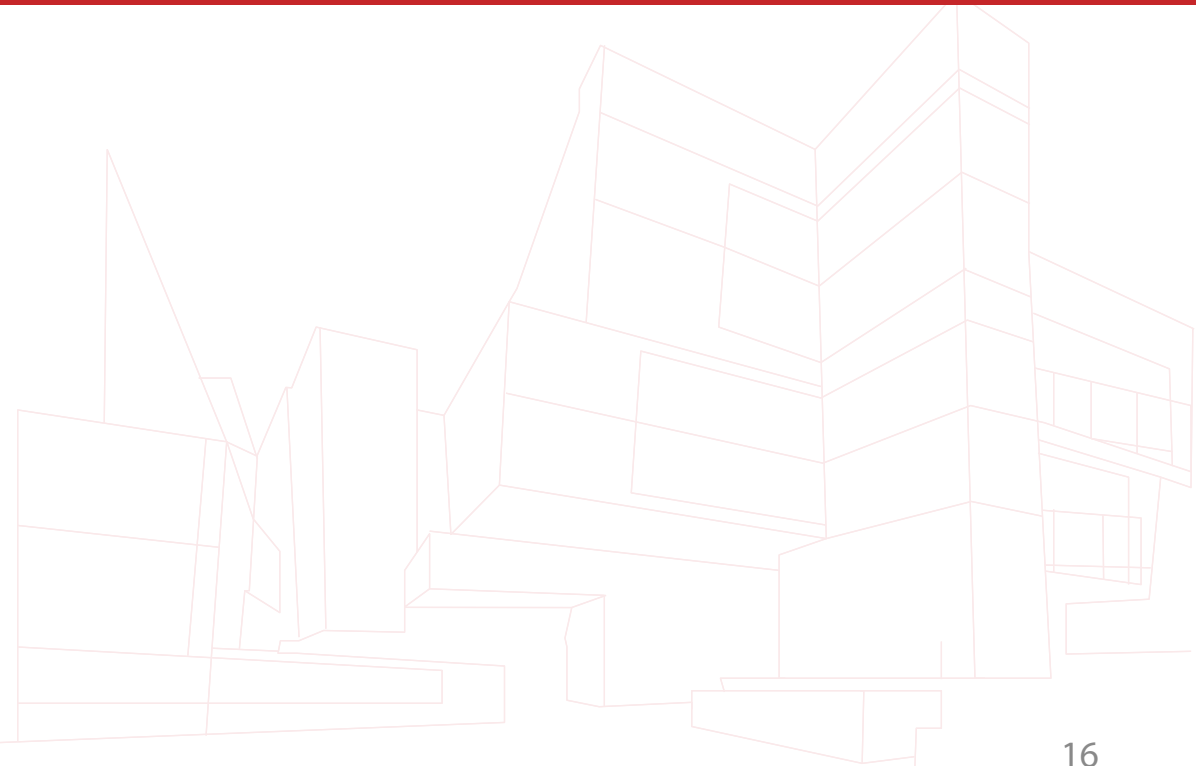
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Group Storymaking = Participatory Design + Unfamiliar Target

STUDY PROCESS

Study 1

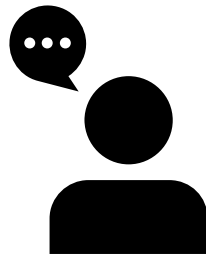
Exploring the possibility of group storytelling



STUDY PROCESS

Study 1

Exploring the possibility of group storytelling



vs.

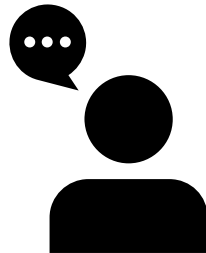


Online unstructured 1:1 interview vs. Online group interview

STUDY PROCESS

Study 1

Exploring the possibility of group storytelling



VS.



*Generated more insightful,
interesting responses*

Online unstructured 1:1 interview vs. Online group interview

STUDY PROCESS

Study 1

Exploring the possibility of
group storytelling

Study 2

Developing the guidelines
for the new method



STUDY PROCESS

Study 1

Exploring the possibility of
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x 5

5 online group story-making chats >>> back-traced key Q&As and strategies

STUDY PROCESS

Study 1

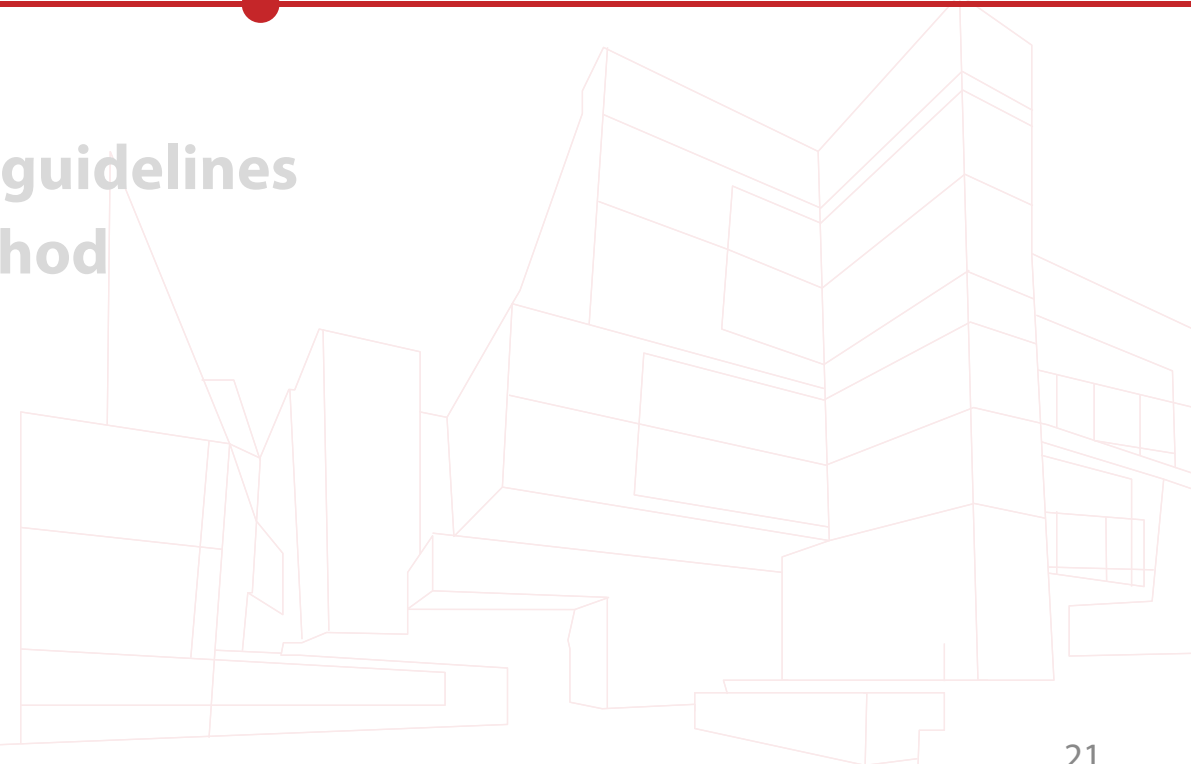
Exploring the possibility of
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Study 3

Exploring an
appropriate platform

Study 2

Developing the guidelines
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STUDY PROCESS

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Exploring the possibility of group storytelling

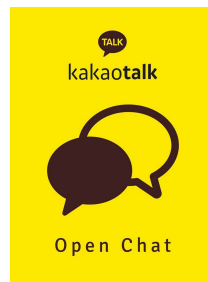
Study 3

Exploring an appropriate platform

Study 2

Developing the guidelines for the new method

- *anonymous*
- *real-time*
- *instant messenger*



VS.



- *real-name*
- *real-time*
- *posts, replies and likes*

Kakaotalk Open Chat vs. Facebook Group

STUDY PROCESS

Study 1

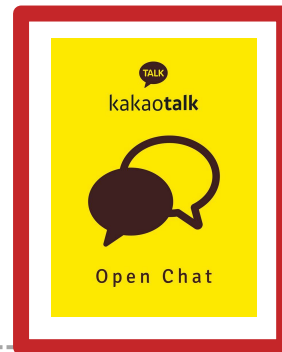
Exploring the possibility of group storytelling

Study 3

Exploring an appropriate platform

“online instant messenger that supports anonymous chatting”

- ***anonymous***
- ***real-time***
- *instant messenger*



VS.



- *real-name*
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- *posts, replies and likes*

Kakaotalk Open Chat vs. Facebook Group

STUDY PROCESS

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Exploring the possibility of
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Study 3

Exploring an
appropriate platform

Study 2

Developing the guidelines
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Study 4

Examining the
new method



STUDY PROCESS

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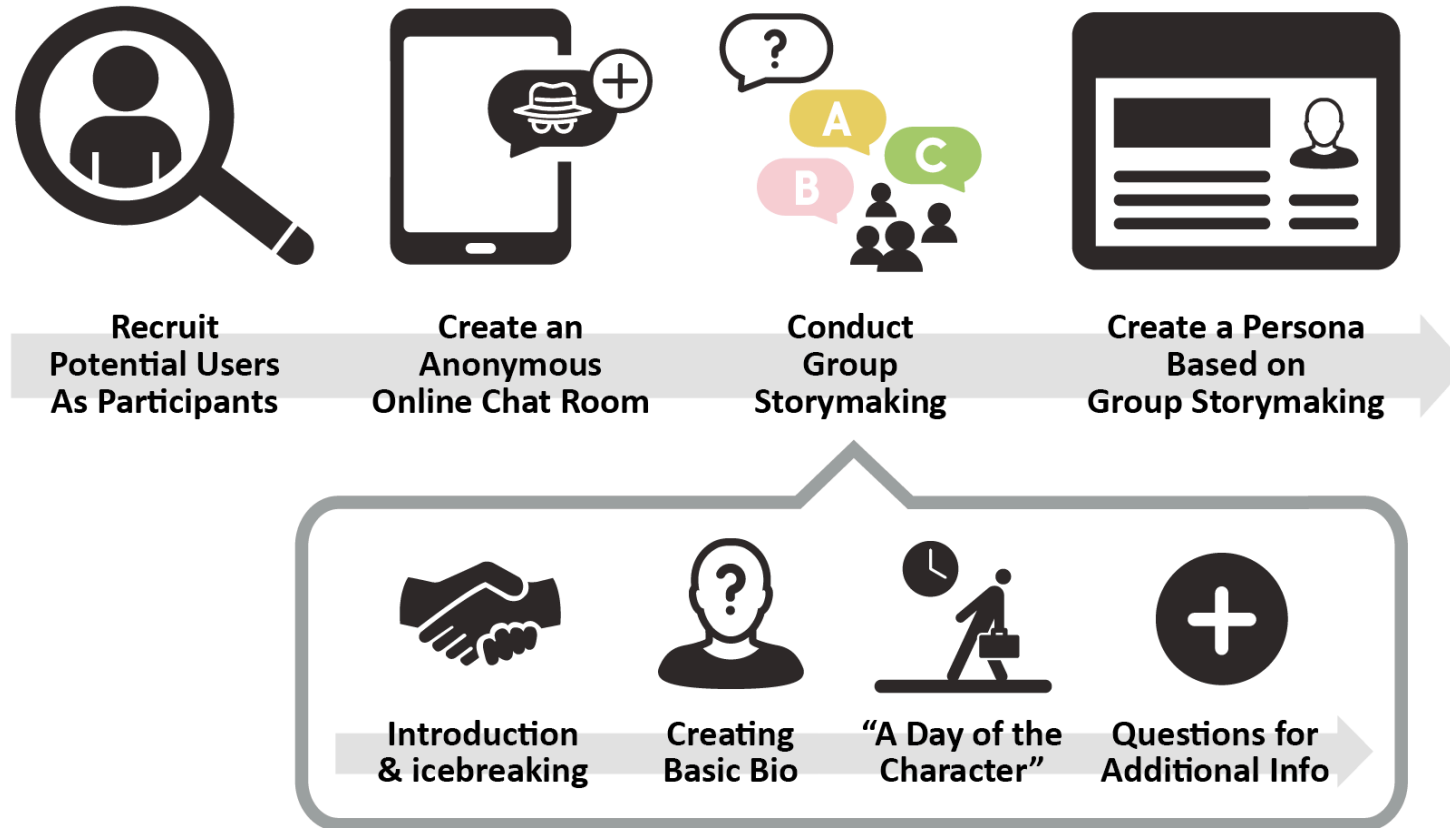
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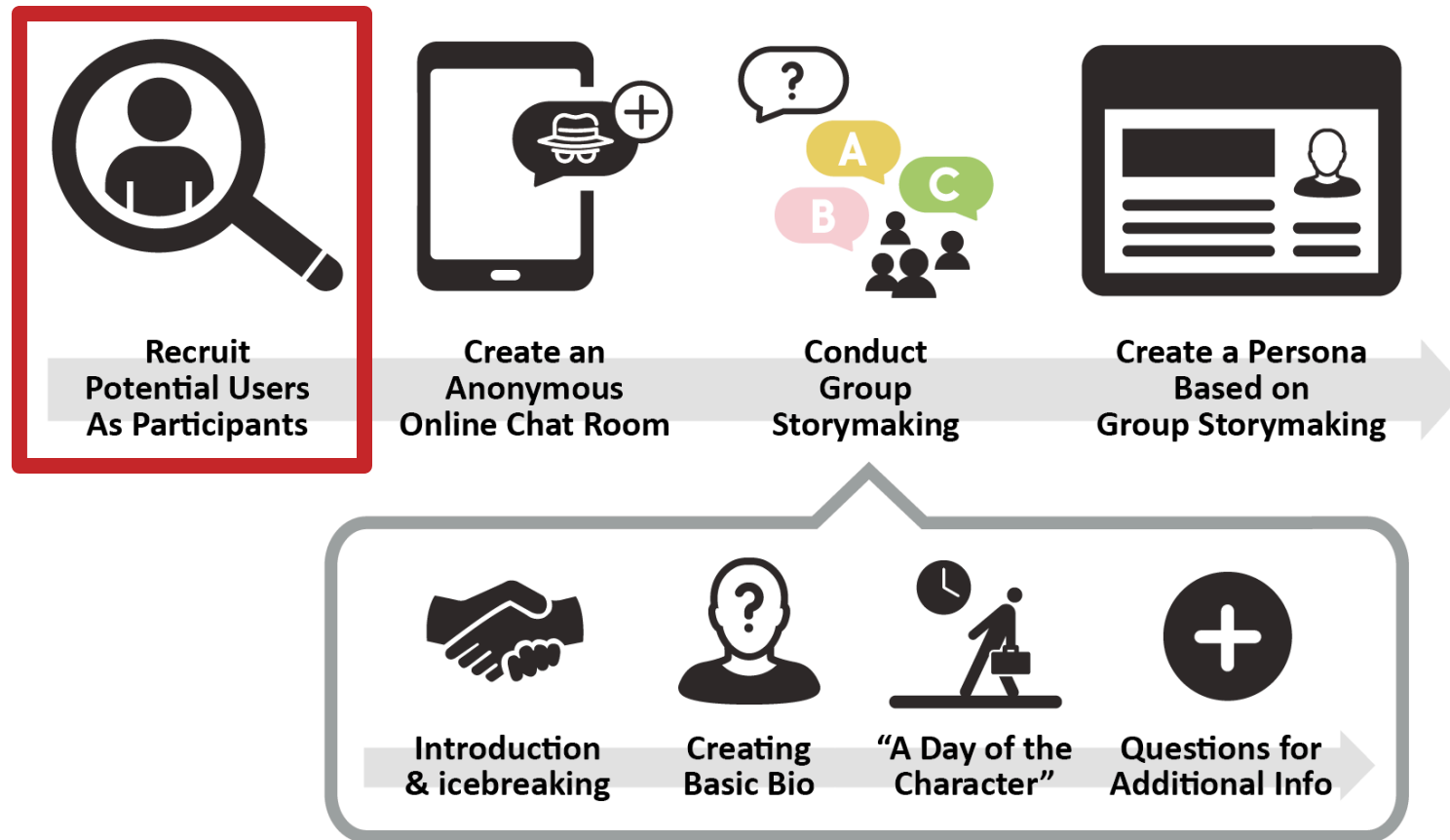
Examining the
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8 designers conducted the new method

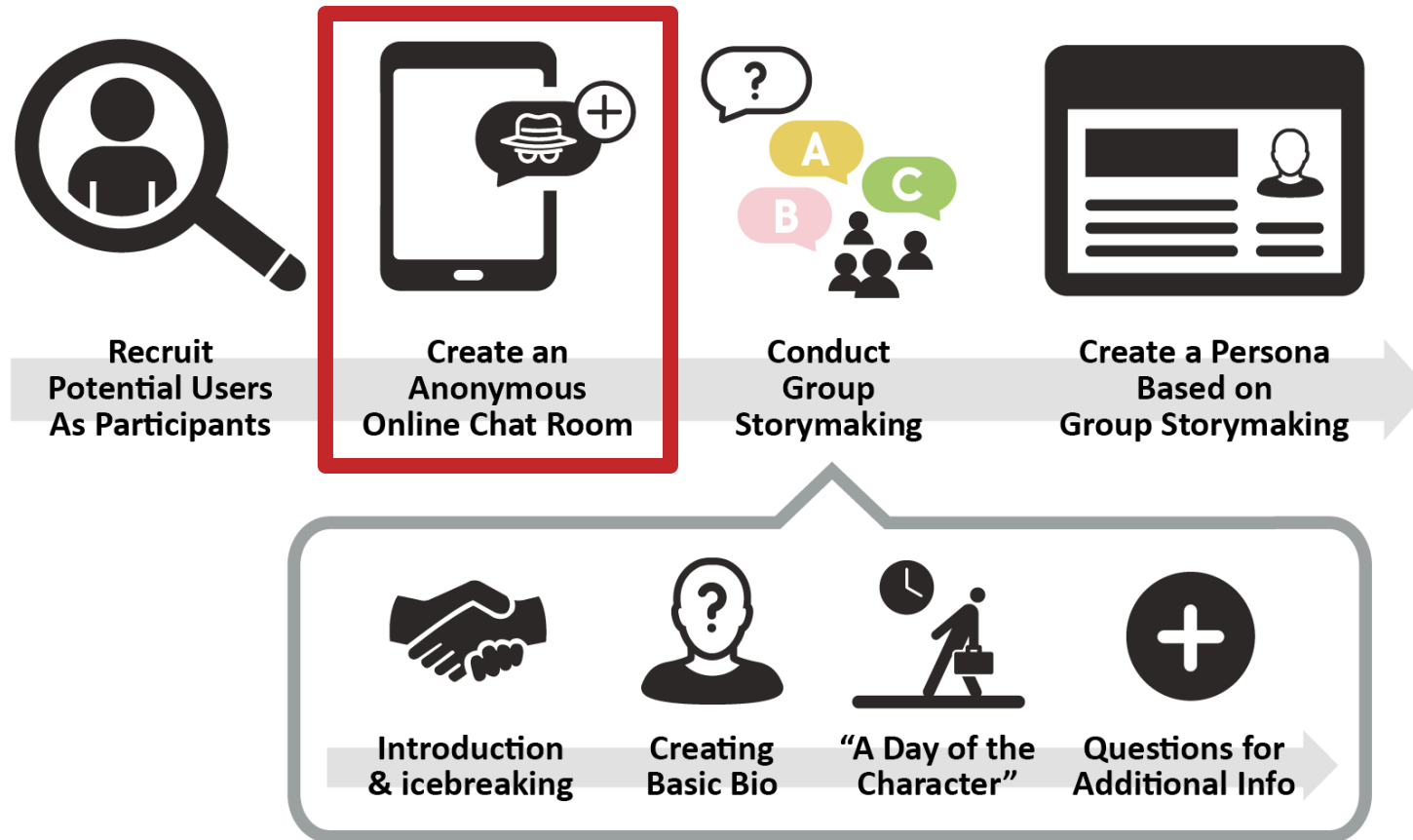
GROUP STORYMAKING : AN OVERVIEW



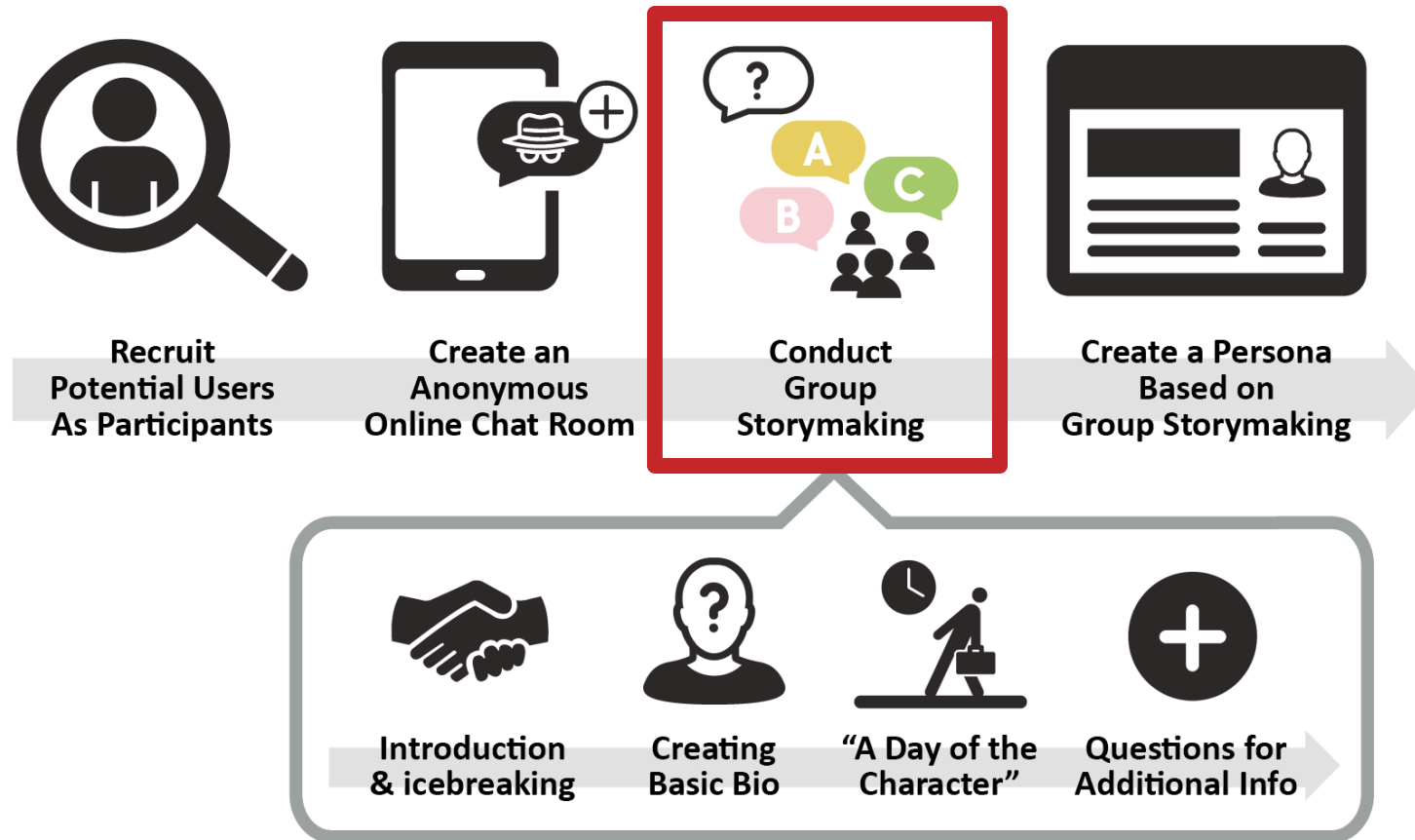
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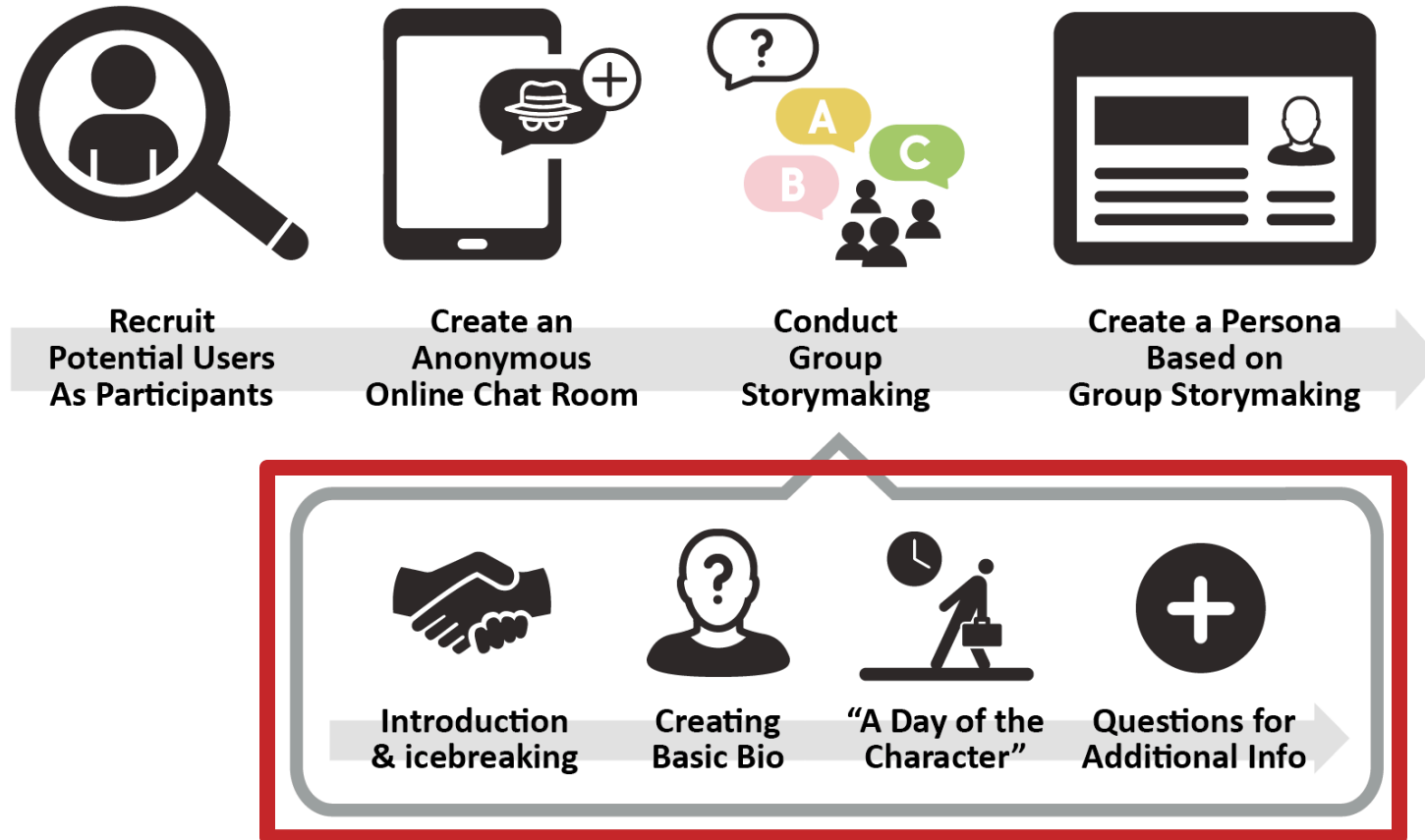
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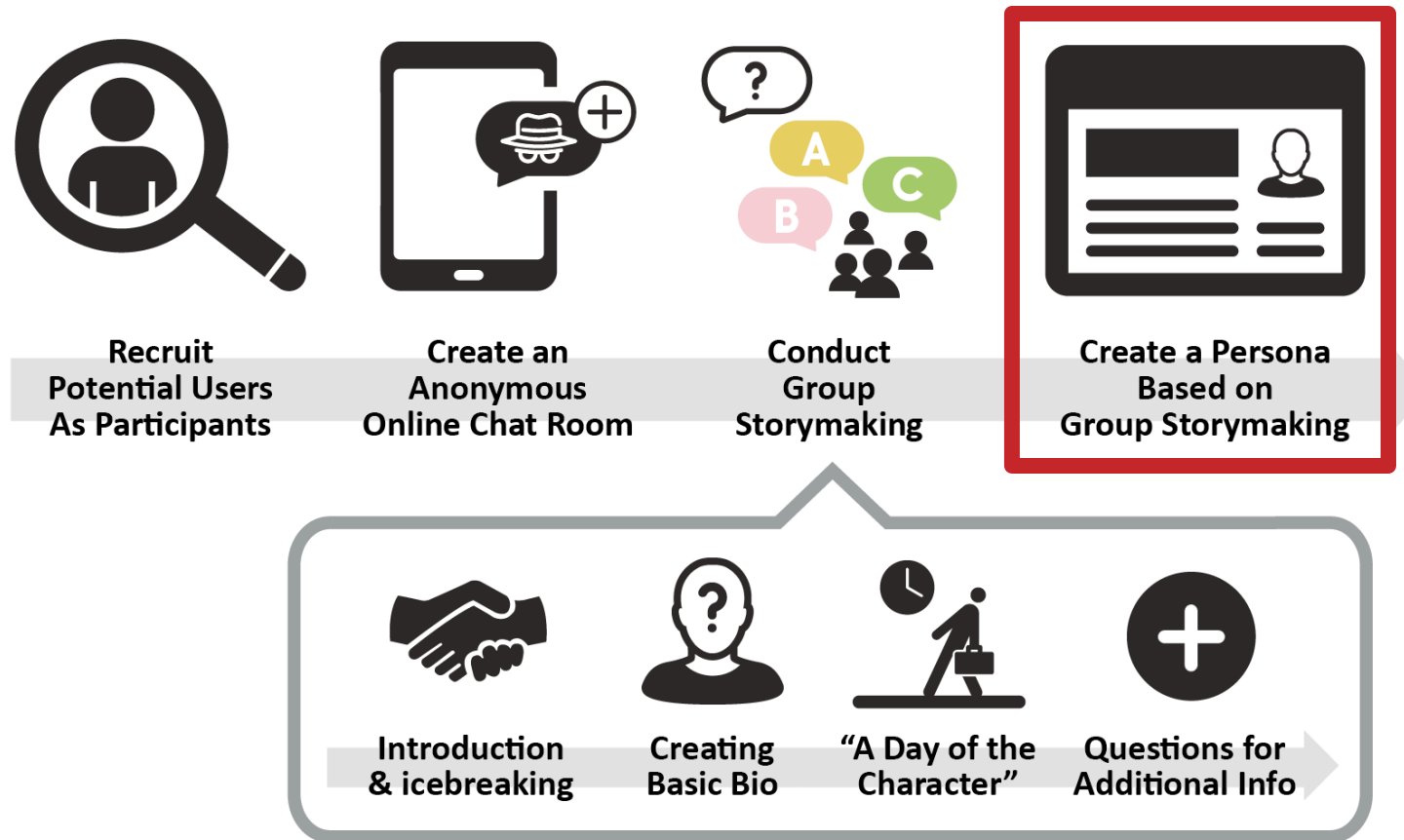
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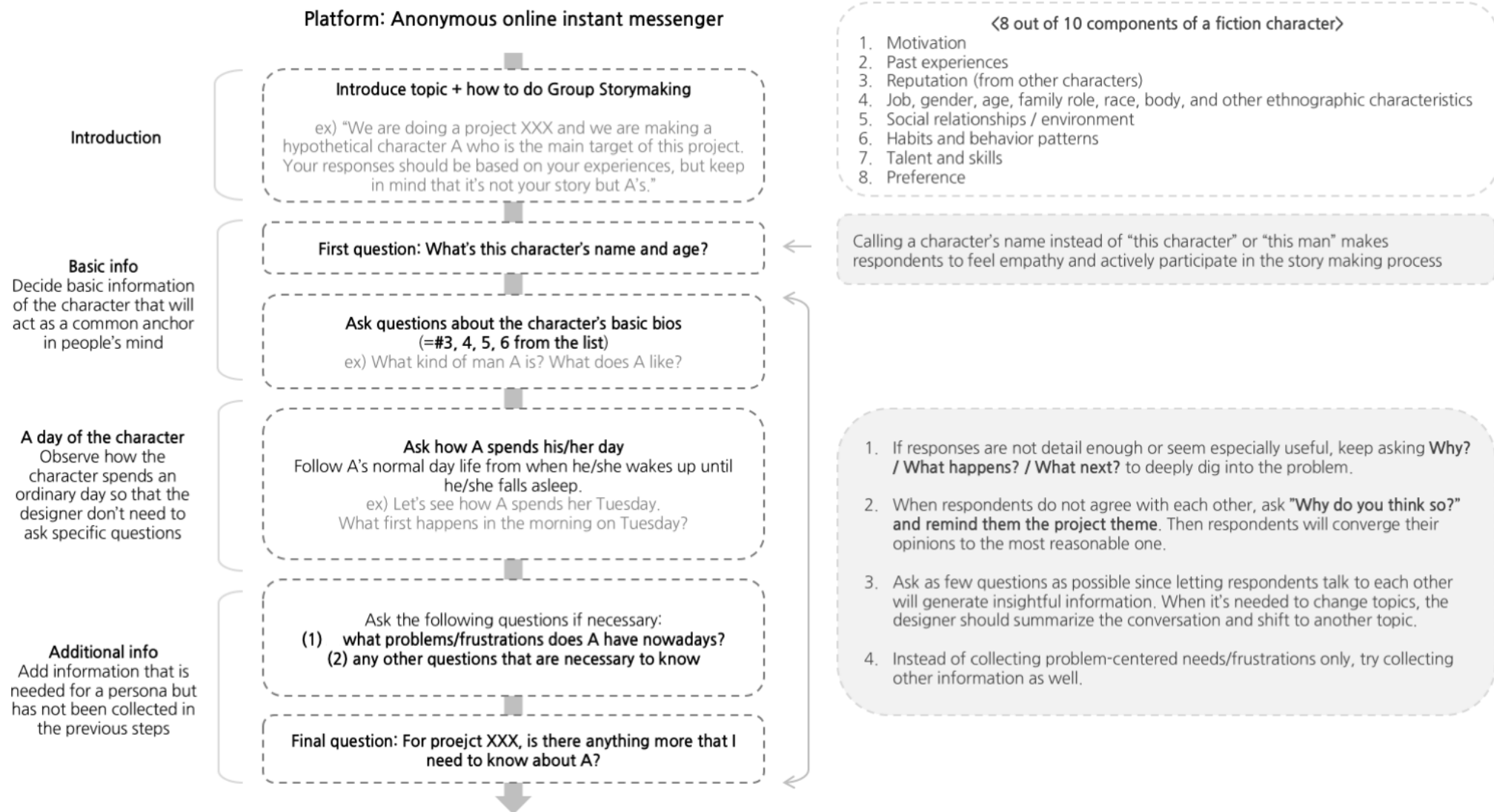
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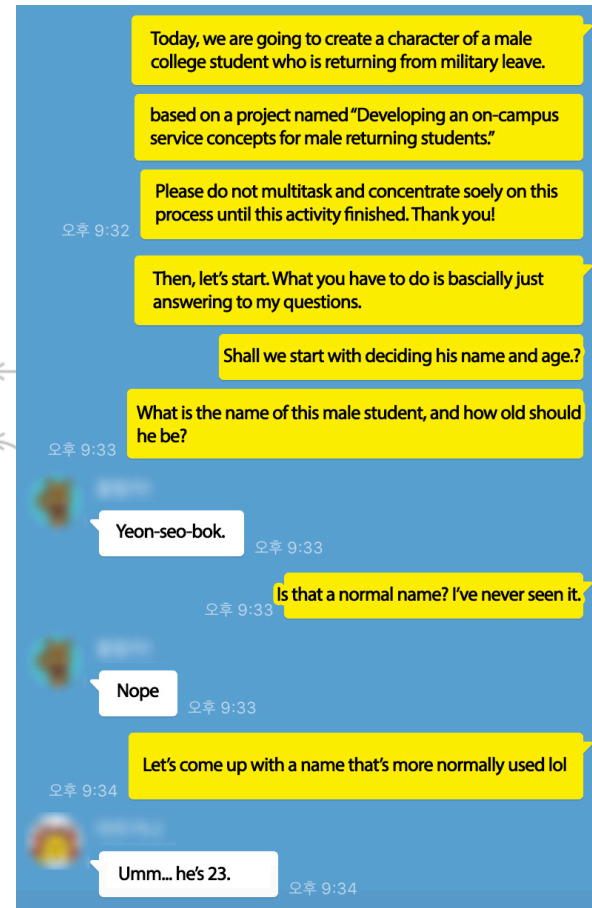
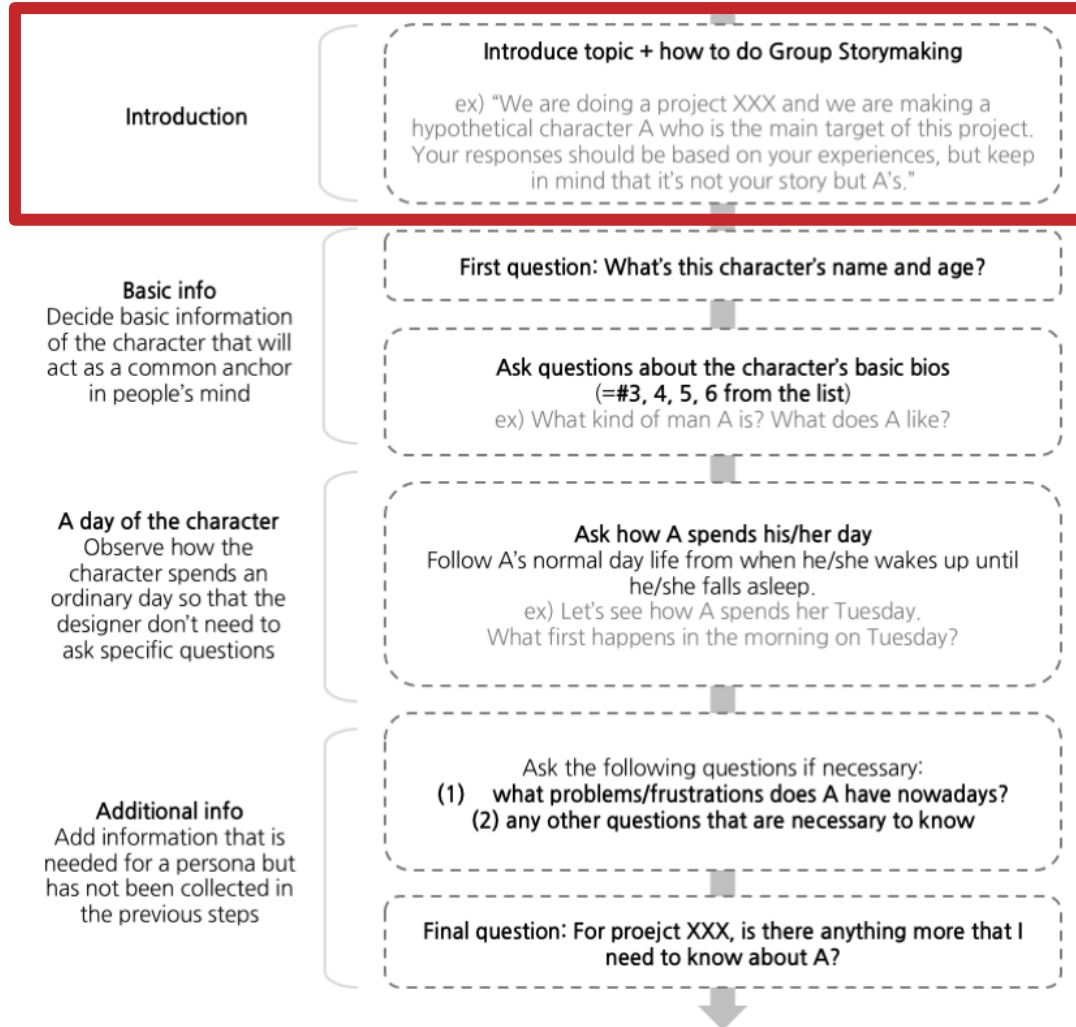


GROUP STORYMAKING : GUIDELINES



GROUP STORYMAKING : GUIDELINES

Platform: Anonymous online instant messenger



ion character>

her ethnographic characteristics

or "this man" makes
in the story making process

pecially useful, keep asking Why?
to the problem.

er, ask "Why do you think so?"
ondents will converge their

espondents talk to each other
needed to change topics, the
nd shift to another topic.

4. Instead of collecting problem-centered needs/frustrations only, try collecting other information as well.

GROUP STORYMAKING : GUIDELINES

Platform: Anonymous online instant messenger

Introduction

Introduce topic + how to do Group Storymaking

ex) "We are doing a project XXX and we are making a hypothetical character A who is the main target of this project. Your responses should be based on your experiences, but keep in mind that it's not your story but A's."

Basic info

Decide basic information of the character that will act as a common anchor in people's mind

First question: What's this character's name and age?

Ask questions about the character's basic bios (=#3, 4, 5, 6 from the list)
ex) What kind of man A is? What does A like?

A day of the character

Observe how the character spends an ordinary day so that the designer don't need to ask specific questions

Ask how A spends his/her day

Follow A's normal day life from when he/she wakes up until he/she falls asleep.
ex) Let's see how A spends her Tuesday. What first happens in the morning on Tuesday?

Ask the following questions if necessary:

- (1) what problems/frustrations does A have nowadays?
- (2) any other questions that are necessary to know

Additional info

Add information that is needed for a persona but has not been collected in the previous steps

Final question: For proejct XXX, is there anything more that I need to know about A?

What kind of this 23-year-old Dongmin Kim is?
오후 9:37

And, why so?
오후 9:37

I think he's quiet.
오후 9:37

Do the rest of you all agree too?
오후 9:37

I've seen that most of the guys returning from military leave were so quiet.
오후 9:37

I think he likes hanging out with his best friends.
오후 9:37

What do you think, XXX(a participant who was not talking)?
오후 9:38

But when he returned, he doesn't have a lot of friends anymore. So he tries to make new ones.
오후 9:38

Oh...
오후 9:38

When he knows somebody in class, he only sits right next to him.
오후 9:38

If he doesn't, he stays quietly at a corner :(
오후 9:38

Okay... Dongming doesn't look very outgoing anymore
오후 9:39

Was he also that quiet before his military leave?
오후 9:39

He hangs out with another guy who just returned.
오후 9:39

He actually likes being outgoing, but he became quiet because he has no one to talk with.
오후 9:39

His freshman year was exciting, and then he went to serve in the military.
오후 9:39

Before his leave, he had a lot of appointments and group chat rooms on Kakotalk, so he didn't care much about making friends. Now he's confused cuz he had to actively make one.
오후 9:39

Oh.. okay. Dongmin was quite outgoing before, but after his military service things like his situations or mindset has changed...
오후 9:40

What kind of school club is he in?
오후 9:40

Volunteers club.?
오후 9:40

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<8 out of 10 components of a fiction character>

1. Motivation
2. Past experiences
3. Reputation (from other characters)
4. Job, gender, age, family role, race, body, and other ethnographic characteristics
5. Social relationships / environment

Okay, then let's talk about Dongmin's every day.

His ordinary, every day routine, from the morning.

He wakes up early in the morning.

He has much time to do assignments.

Oh, why?
Why early?

There was no appointment yesterday,

And he has just returned..

Because he has no friends..

Oh.. is that because no one calls him first?

That's right..

What happens after his classes are finished?

Doesn't he go home right away?

He thinks about where to stay.

He thinks he will probably get messages from his friends, like "A beer today?"

Hmm

After class.. Hmm..

Oh, he used to stay at his club but now he's not welcomed so he goes to a cafe

!!

Going to a cafe, he just doesn't like it.. going to an internet cafe, he feels guilty..

GROUP STORYMAKING : GUIDELINES

Platform: Anonymous online instant messenger

Introduction

Introduce topic + how to do Group Storymaking

ex) "We are doing a project XXX and we are making a hypothetical character A who is the main target of this project. Your responses should be based on your experiences, but keep in mind that it's not your story but A's."

Basic info

Decide basic information of the character that will act as a common anchor in people's mind

First question: What's this character's name and age?

Ask questions about the character's basic bios
(=#3, 4, 5, 6 from the list)
ex) What kind of man A is? What does A like?

A day of the character

Observe how the character spends an ordinary day so that the designer don't need to ask specific questions

Ask how A spends his/her day

Follow A's normal day life from when he/she wakes up until he/she falls asleep.
ex) Let's see how A spends her Tuesday. What first happens in the morning on Tuesday?

Additional info

Add information that is needed for a persona but has not been collected in the previous steps

Ask the following questions if necessary:
(1) what problems/frustrations does A have nowadays?
(2) any other questions that are necessary to know

Final question: For proeject XXX, is there anything more that I need to know about A?

<8 out of 10 components of a fiction character>

1. Motivation
2. Past experiences
3. Reputation (from other characters)
4. Job, gender, age, family role, race, body, and other ethnographic characteristics
5. Social relationships / environment
6. Habits and behavior patterns
7. Talent and skills
8. Preference

Good. Then I have the last two questions.

As a returning student, what problems does he have in school?

Does he have any?

Like frustrations...

He's an engineering student.

What are the most serious problems that he has as a returning student?

and he doesn't have anyone to ask things.

Ohh... :(

That sounds so sad...

He might get an F...

Does anyone else also agree?

He can at least get a B.

And then, last but not least, for the project named "Developing an on-campus service concepts for male returning students," is there any more information that I need to know?

Umm

Hmm

If you think we've talked about Dongmin Kim enough so far, you can just answer no here lol

Well, I think it's enough.

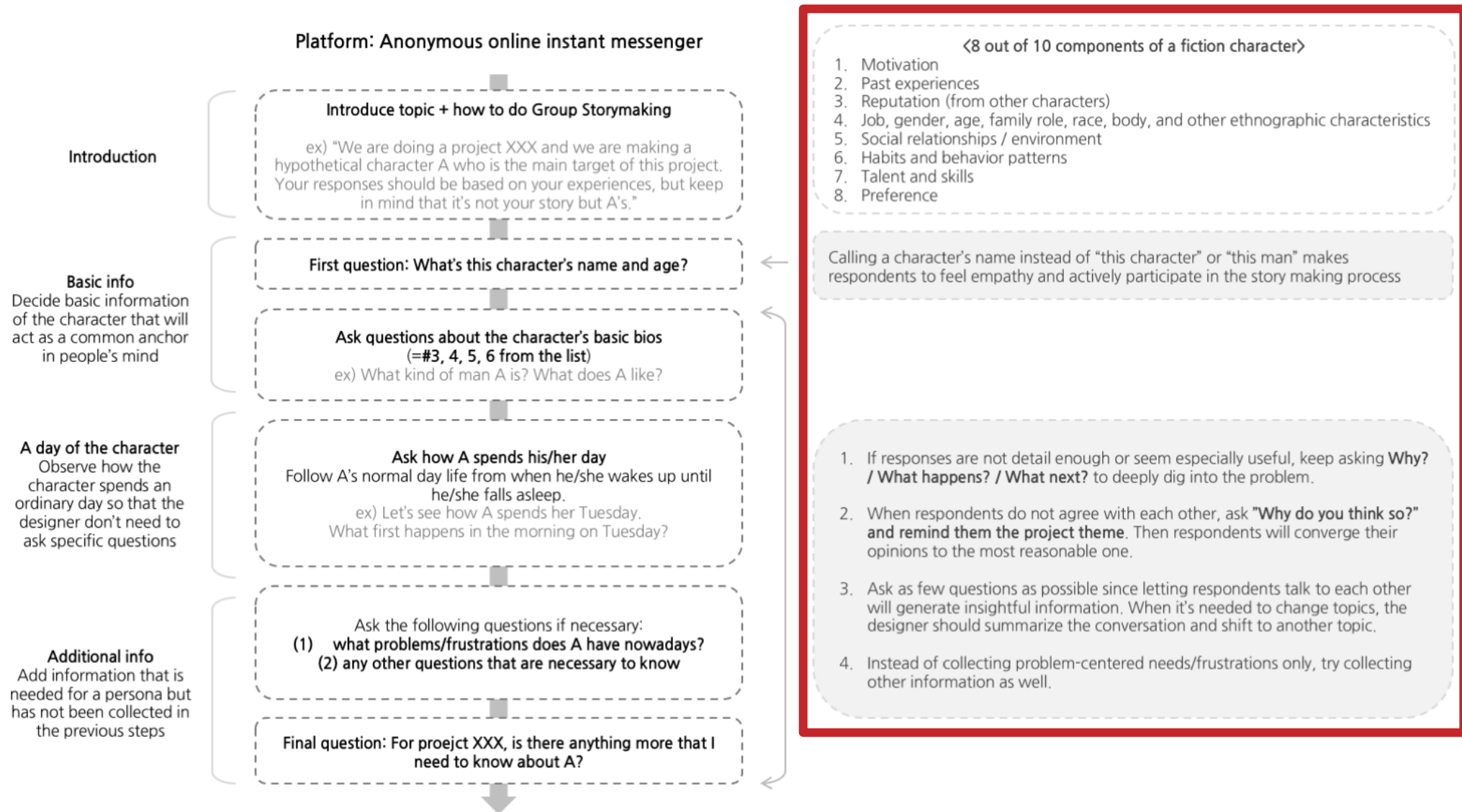
I wonder how his class timetable looks like.

An ordinary college student

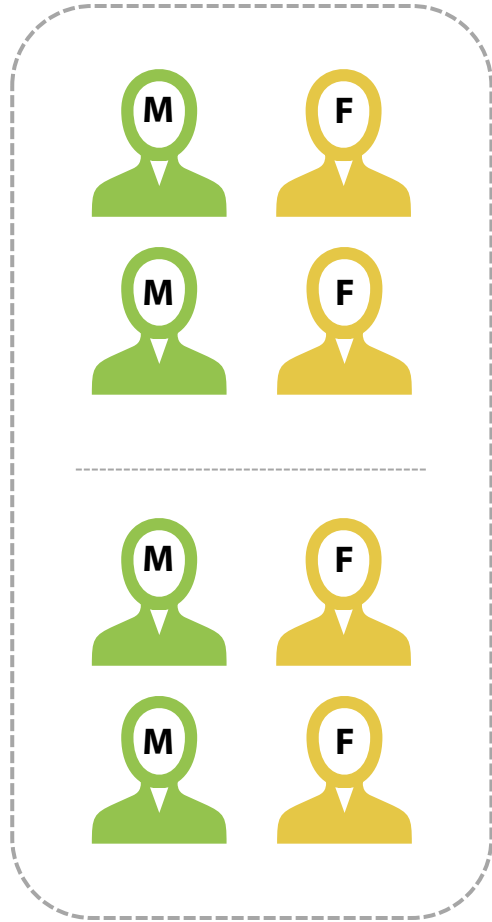
Oh, right.

Classes he takes

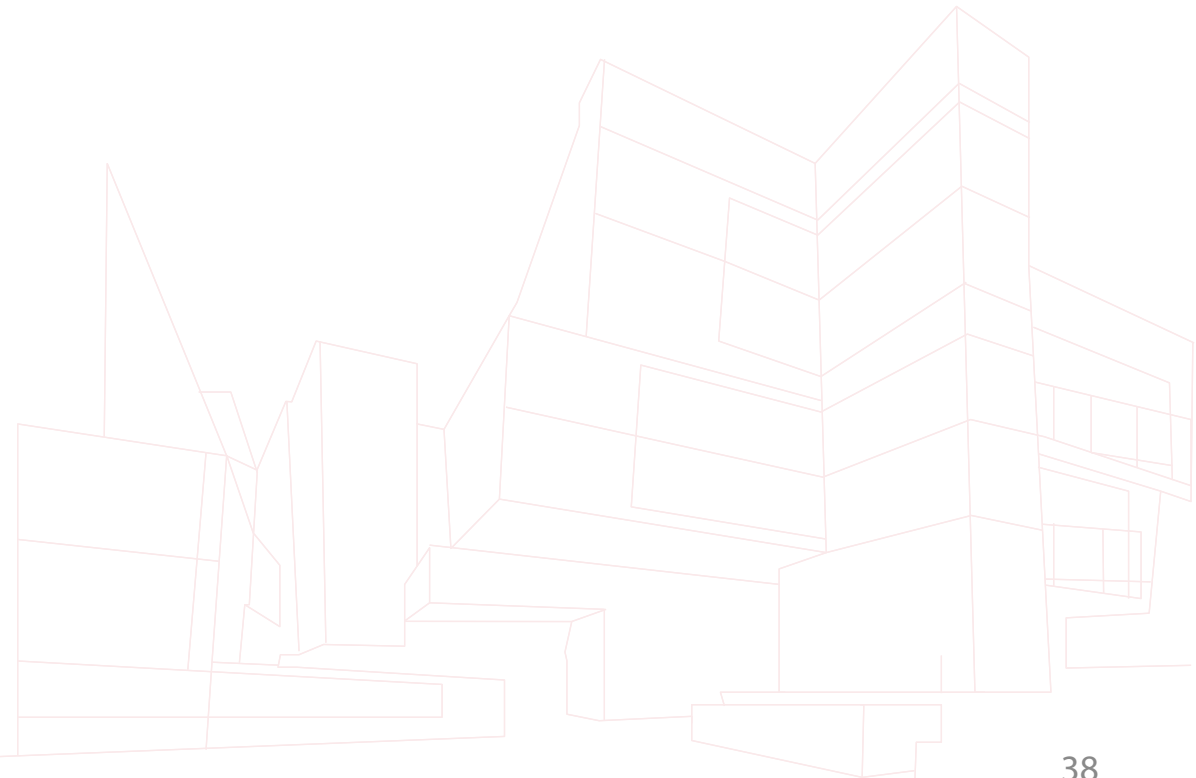
GROUP STORYMAKING : GUIDELINES



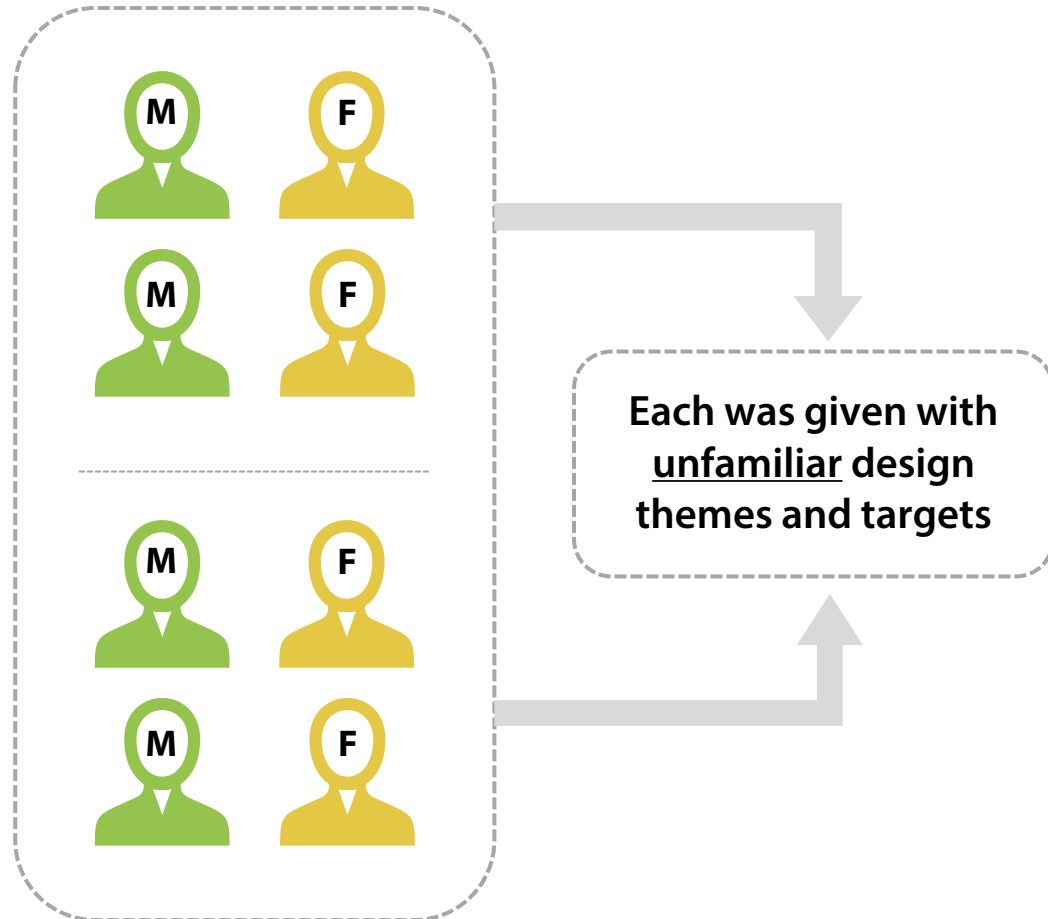
EXAMINING THE METHOD



8 senior design students
(M=24.1 years; SD=1; 4 females)



EXAMINING THE METHOD



8 senior design students
(M=24.1 years; SD=1; 4 females)

Examples:

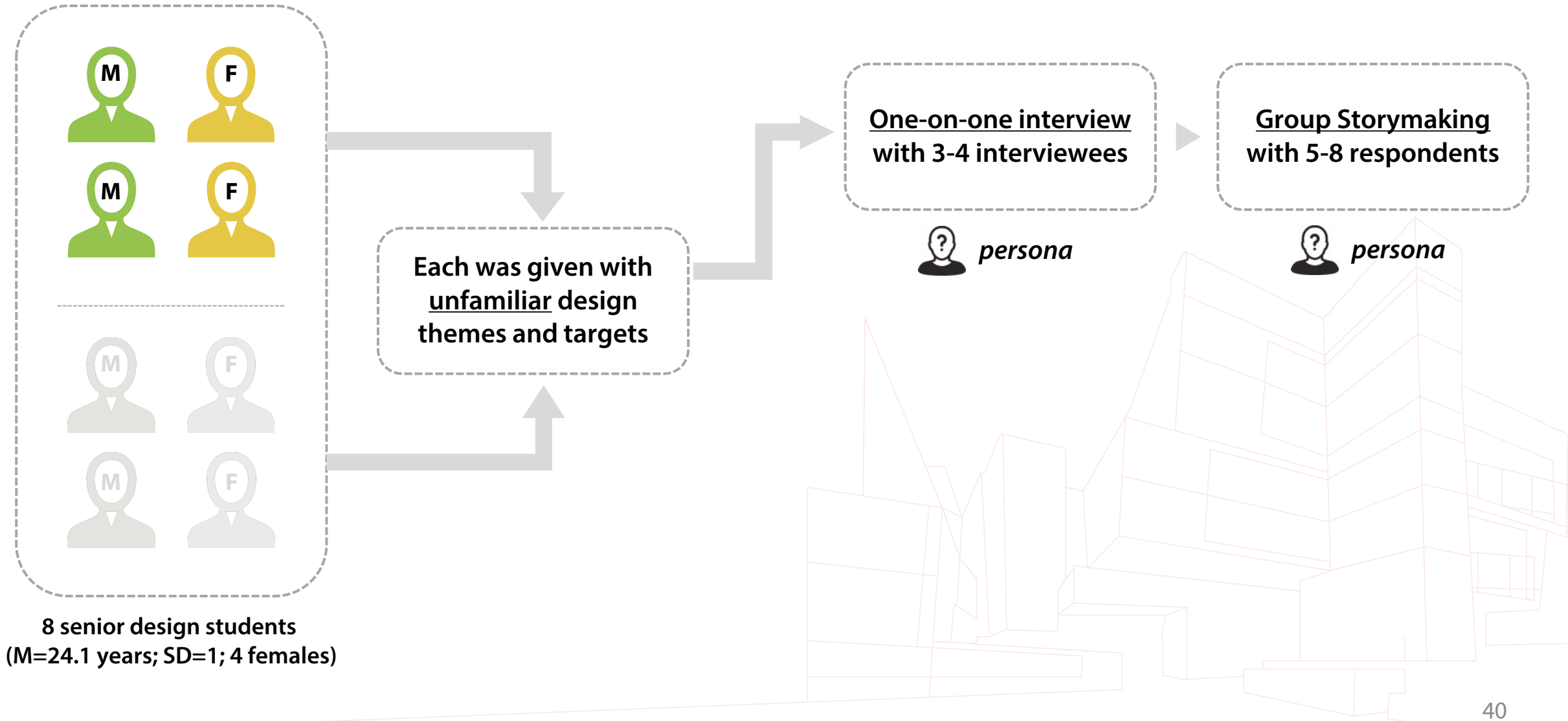
*Developing an online boy group fan goods trading website for female fans (targeting **Female K-pop boy group fans who buy fan goods and CDs**)*

*Developing an animation streaming service website (targeting **Males in their twenties who enjoy watching various Japanese animated movies and TV series**)*

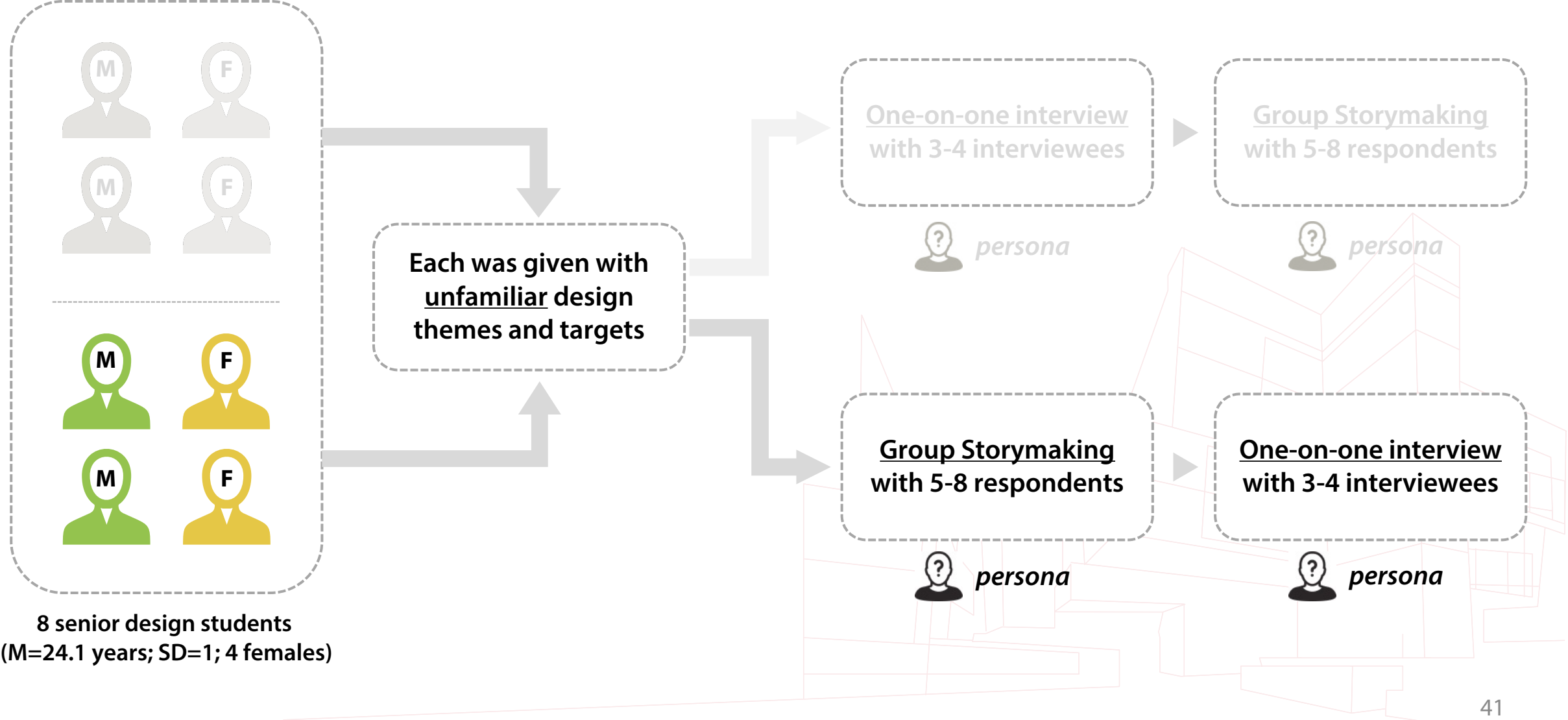
*Developing a Futsal-related service concept for male university students in their twenties (targeting **Male university students who often play Futsal**)*

...

EXAMINING THE METHOD



EXAMINING THE METHOD



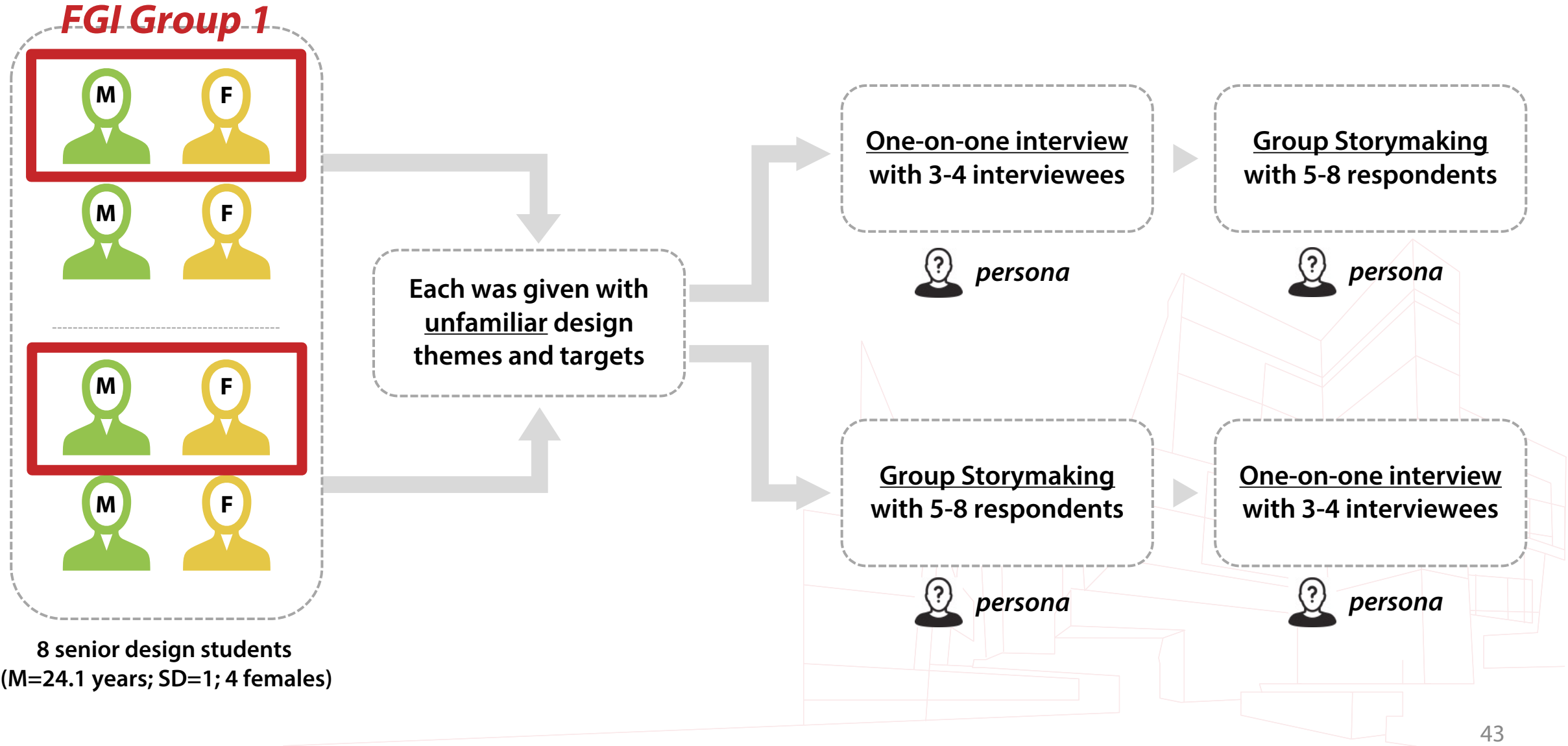
EXAMINING THE METHOD

Persona template given to the participants:

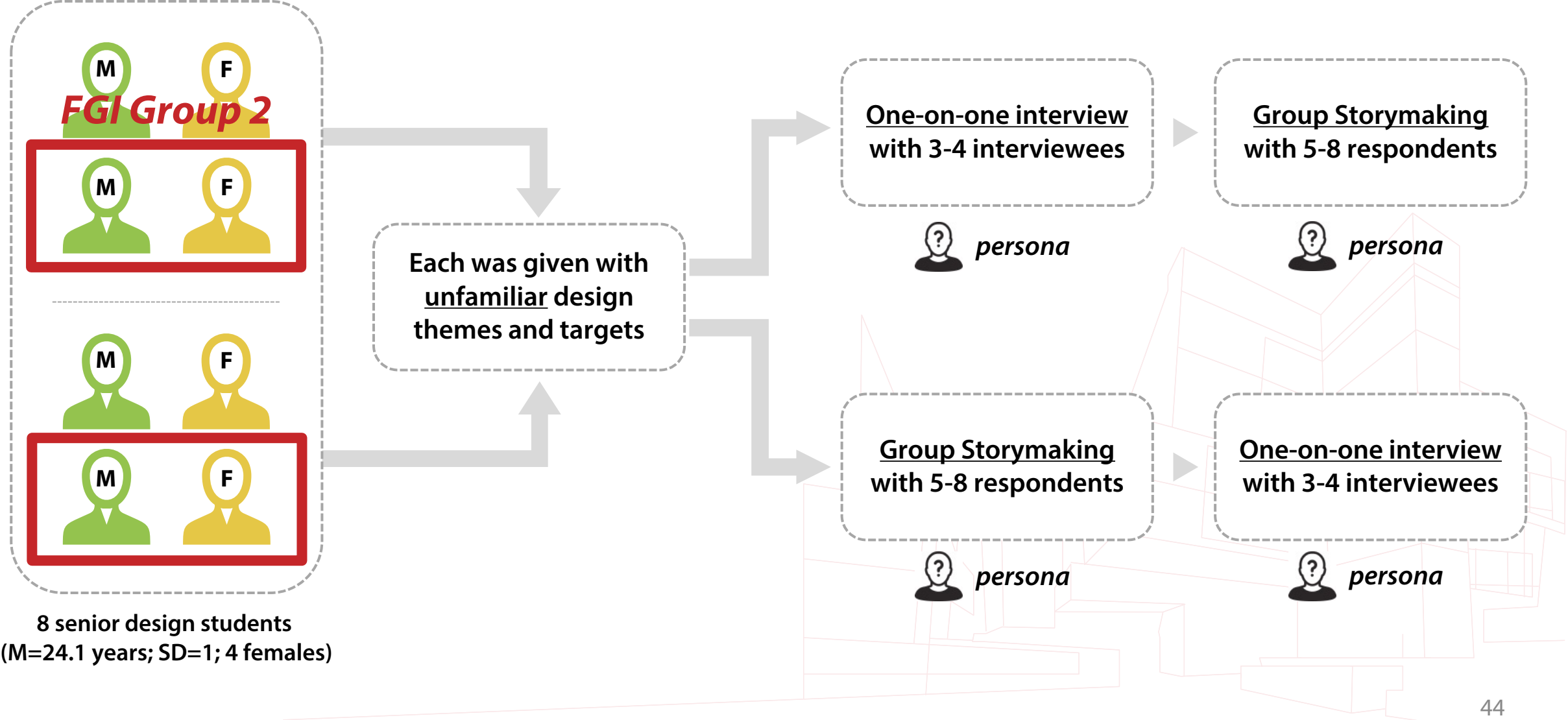
The persona template is enclosed in a dashed border and contains the following elements:

- Profile Photo:** A large dashed circle containing the text "Representative Profile Photo".
- Quote:** A grey rounded rectangle containing the text "A representative quote by this persona".
- Demographics:** A list of fields with "XX" as a placeholder:
 - AGE XX
 - SEX XX
 - LOCATION XX
 - OCCUPATION XX
- Goals/Needs:** A dashed rounded rectangle containing the text "GOALS/NEEDS" followed by two bullet points.
- Name:** A dashed rounded rectangle containing the text "nickname". Below it is the heading "Name".
- Bio:** The heading "BIO" followed by three dots.
- Behaviors:** The heading "BEHAVIORS" followed by five bullet points.
- Key Frustrations:** The heading "KEY FRUSTRATIONS" followed by five bullet points.
- Options:** The text "OPTION 1" is positioned to the right of the "BIO" field, and "OPTION 2" is positioned to the right of the "KEY FRUSTRATIONS" field.

EXAMINING THE METHOD



EXAMINING THE METHOD



FINDING # 1

Quick and broad understanding of unfamiliar targets

*“Group Storymaking helped me to understand the **general, common features of the target**, and interviews were used to find **special particularities**. (P5)”*



Persona based on one-on-one interviews



Outgoing Sports-holic

Taehyun Lee

BIO

Taehyun is a junior student in a university located in Daejeon. After finishing his military service duty, he came back to school. Luckily quite a lot of his friends are still in school. He is interested in social sports that he can play with friends, and he tries to participate as much as possible.

BEHAVIORS

- He has multiple Kakaotalk chatrooms with his Futsal friends.
- He likes sports, but he doesn't like to do it alone. For example, work-out in a gym.
- When he plays Futsal, he just suddenly decides to participate rather than planning it carefully. He also uses Futsal ground outside school more often.
- After getting back to school, he plays Futsal to meet friends rather than to win. He usually plays Futsal once in 2 weeks, often late at night.

- He wishes to do a lot of activities with friends, but he doesn't participate as much.
- He likes almost all kinds of ball games, but he plays Futsal often for many reasons.
- He likes Futsal, but he doesn't proactively gather people to play with.

KEY FRUSTRATIONS

- He wants to gather friends to play Futsal whenever he wants to.
- He doesn't want to spend a lot of money on taxis and Futsal ground.
- He wants to play Futsal more often, but it makes him sad that he cannot make promises as he wishes.
- He becomes friends with people when he plays Futsal, but in reality there are not many chances of meeting new people.

"People becomes friends when they play Futsal together."

AGE 22

SEX Male

LOCATION Daejeon

OCCUPATION Student

GOALS/NEEDS

- He wants to play Futsal whenever he wants to.
- He wants to get closer to his friends by playing Futsal.

Behaviors


- *He wishes to do a lot of activities with friends, but he doesn't participate as much.*
- *He plays Futsal often for many reasons.*

Needs/Problems

- *He wants to meet new people and make new friends by playing Futsal.*
- *He wants to save money spent on Futsal ground and cabs to get there.*

yellow=details that participants mentioned as representative and empathizing
blue=details that participants mentioned as unreliable or not empathizing

Persona based on one-on-one interviews



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- *He wishes to do a lot of activities with friends, but he doesn't participate as much.*
- *He plays Futsal often for many reasons.*

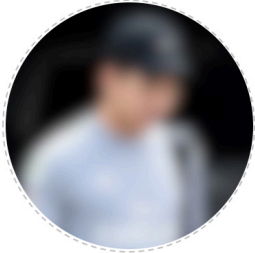
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yellow=details that participants mentioned as representative and empathizing
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“[...] For example, when one says he makes a reservation in the morning and the other says in the evening, I write like ‘make a reservation THAT DAY.’ I make it vague. (P2)”

Persona based on Group Storymaking



Lion King of the ground

Dongkuk Lee

BIO
Dongkuk is a student of a university located in Daejeon. His friends like him because he is very frank, but some do not because he is short tempered when he plays Futsal. Anyway, he likes Futsal and plays it well, so people call him Lion King of the ground.

INTERESTS

- Watching soccer video and mimic it
- Drinking with friend
- His girlfriend

BEHAVIORS

- He usually oversleeps, so he just wears any cap and rides bicycle to go to class.
- He likes to play Futsal with friends and go drink beer at night.
- He plays Futsal once a week when it's not an exam period.
- After morning classes, he sends messages on multiple Kakaotalk chat rooms to gather friends to play Futsal at night.
- He make a reservation on the day of playing Futsal by calling to a Futsal ground owner.
- He is busy finishing his assignments before going to play Futsal.
- He is competitive in Futsal because he likes to win. Sometimes he makes mistakes when playing Futsal with friends.
- He used to argue with his girlfriend because he played Futsal and drank so often. So he always cares about his girlfriend.

KEY FRUSTRATIONS

- There are always one or two people missing, so he has to individually contact his friends to play Futsal, which takes even two or three hours sometimes.
- Dongkuk wears glasses, so he should wear contact lenses when he plays Futsal. Usually he doesn't wear lenses other than for Futsal.
- He doesn't like it when there is a movie play in his team, but he tries to hide it.
- His girlfriend doesn't like him playing Futsal too often, while his friends blame him if he does NOT play it so often, which makes him stressed.

SCREEN NEEDS

- He wants to play Futsal without caring about his girlfriend or friends.

"Beer after Futsal."

AGE 24
GENDER Male
LOCATION Daejeon
OCCUPATION Student

Futsal with.

yellow=details that participants mentioned as representative and empathizing
blue=details that participants mentioned as unreliable or not empathizing

Behaviors

- *His friends like him because he is very frank, but some do not because he gets short-tempered when he plays Futsal.*
- *After morning classes, he send messages on multiple Kakaotalk chat rooms to gather friends to play Futsal at night.*
- *He makes a reservation on the day of playing Futsal by making a call to a Futsal ground owner.*

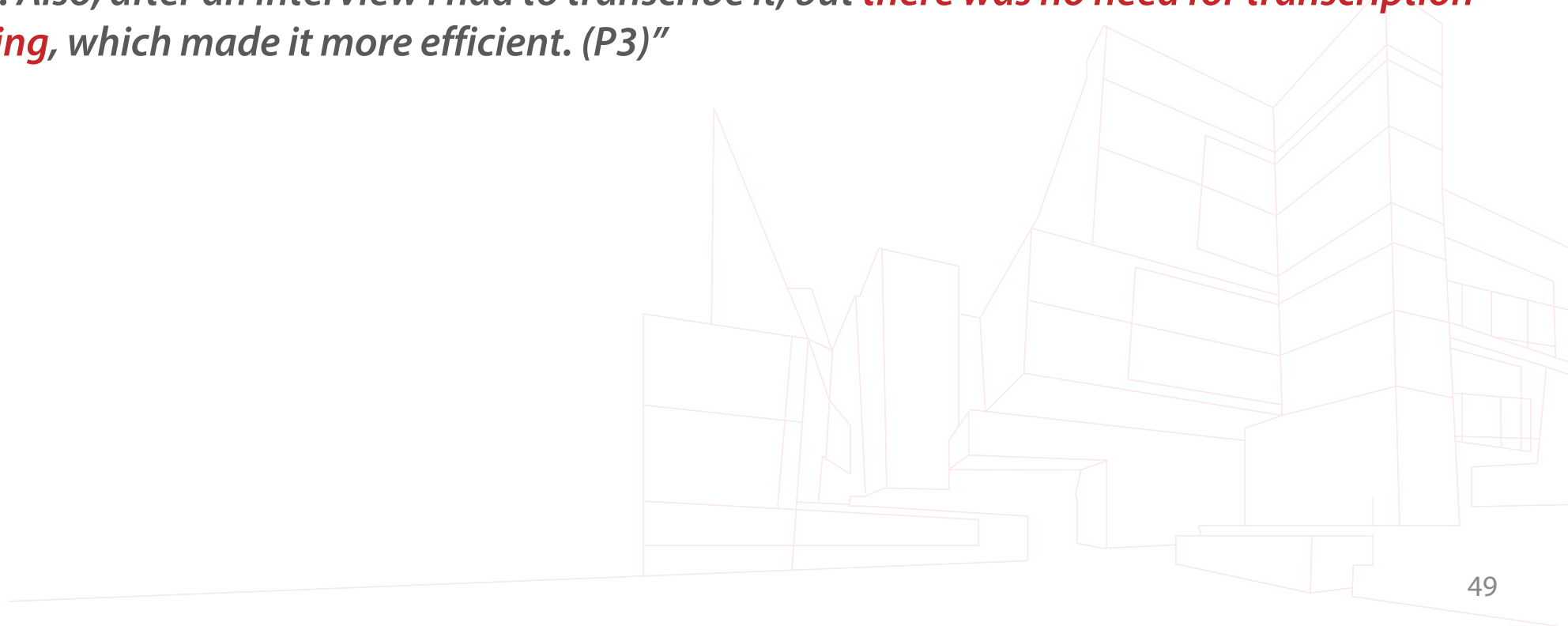
Needs/Problems

- *He should wear contact lenses when he plays Futsal.*
- *He is bothered by his girlfriend while playing Futsal.*

FINDING # 1

Quick and broad understanding of unfamiliar targets

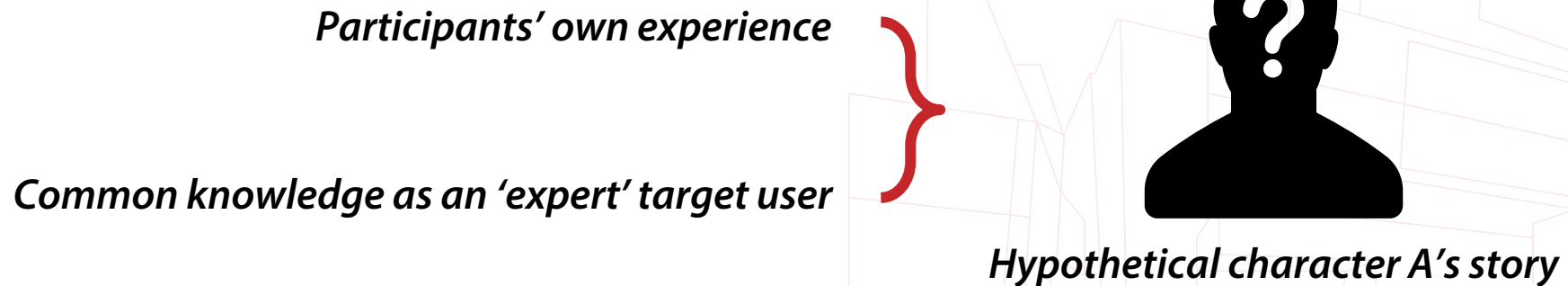
*“Recruitment was really fast. [...] You can do this right in front of your desk, and so do respondents. So it was quick and easy. Also, after an interview I had to transcribe it, but **there was no need for transcription in Group Storymaking**, which made it more efficient. (P3)”*



FINDING # 2

Trustworthy and insightful responses gained from Group Storymaking

*“People thought **they were not telling their stories, but telling a character’s story** during Group Storymaking, so they were more active. During the interview, the interviewees were not willing to honestly tell their secret stories. (P2)”*

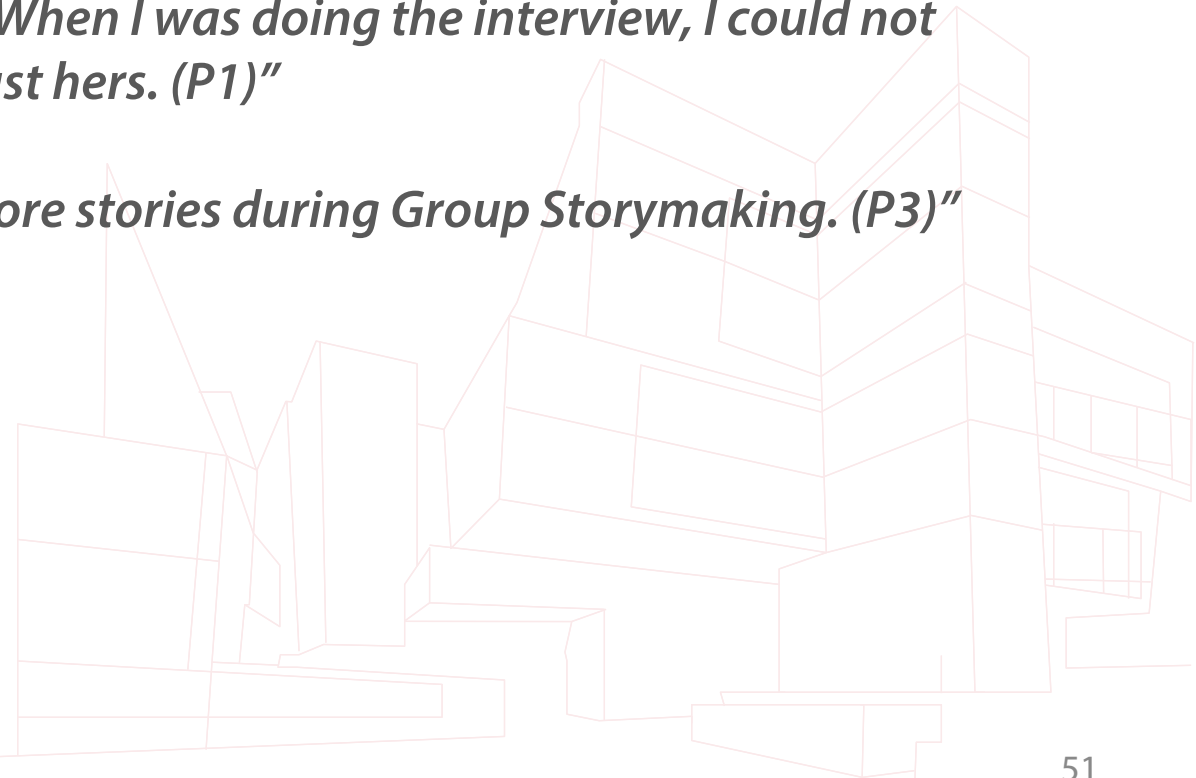


FINDING # 2

Trustworthy and insightful responses gained from Group Storymaking

*“When I saw **many people were agreeing with each other**, I could be sure that **their opinions were common and representative** among most target users. When I was doing the interview, I could not be sure if my interviewees’ opinions were universal or just hers. (P1)”*

*“**People got inspired by each other** and came up with more stories during Group Storymaking. (P3)”*



I think she will use Instagram a lot lol

5:35 PM

Oh Instagram! I also agree.

5:35 PM

She might be good at using both hands.

5:36 PM

I think she likes to be taken photos by others

5:36 PM

Usually Instagramers like to do that kind of things

5:36 PM

Instagram!

5:37 PM

Yes, then is she more like outgoing rather than introvert?

5:37 PM

Oh, right.

5:37 PM

Yes

5:37 PM

Yeap

5:37 PM

His physical ability is mid to low level

오후 9:16

What about his preference and interests? What kind of game does he like? What else is he also interested in?

오후 9:17

He likes movies and American TV series that use a lot of CGs.

오후 9:18

He mostly likes online games that he plays with friends, or web cartoons and browsing.

오후 9:18

Can you tell me why you think so?

오후 9:18

Collecting game and character figures.

오후 9:18

RPG games, and his interest is animation

Because I've seen that kind of people a lot.

오후 9:18

He wants to play game when his friends don't, so he will play Diablo 3 because he can just play it alone.

오후 9:19

I think she will use Instagram a lot lol 5:35 PM

Oh Instagram! I also agree. 5:35 PM

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DISCUSSIONS

- **Pre-user-research method that supplements other research methods**

*Group
Storymaking*

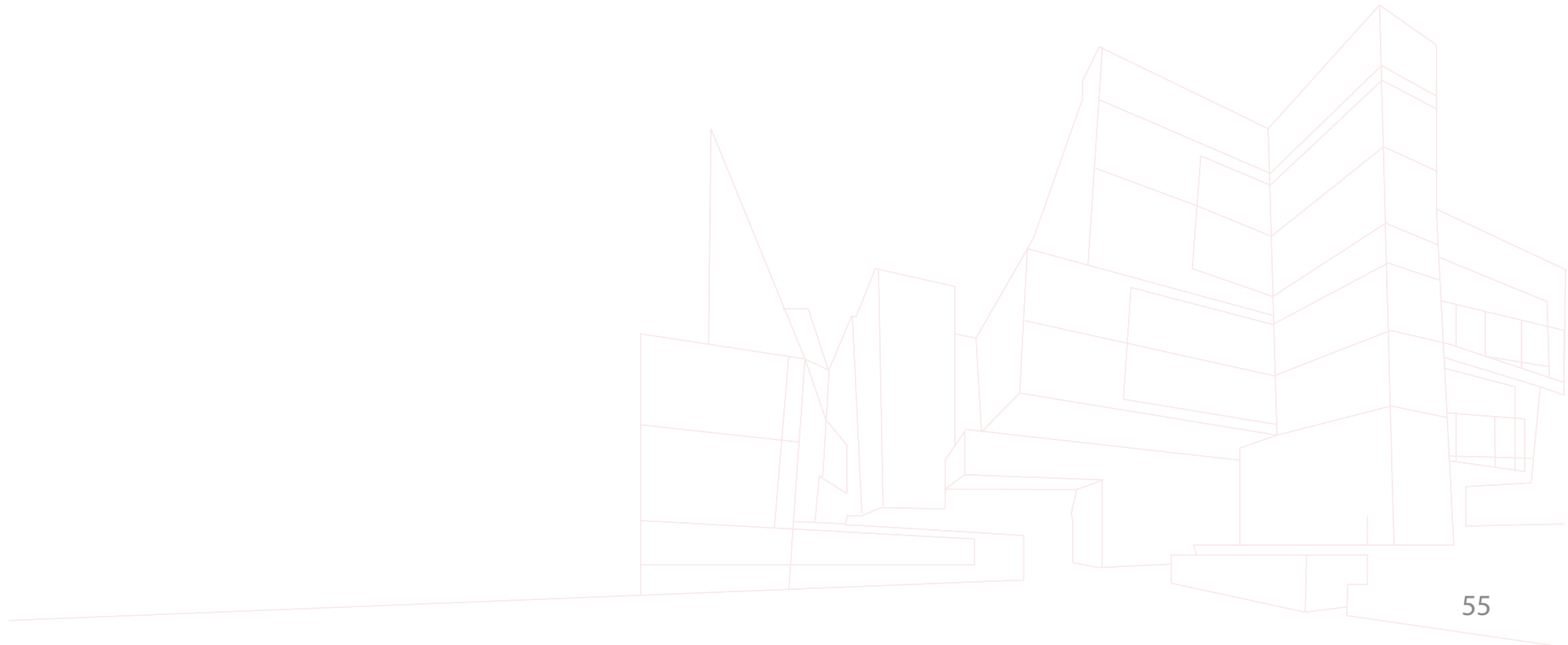


Main user research

- *Basic understanding of a target user*
- *Narrowed down to a more specific group*

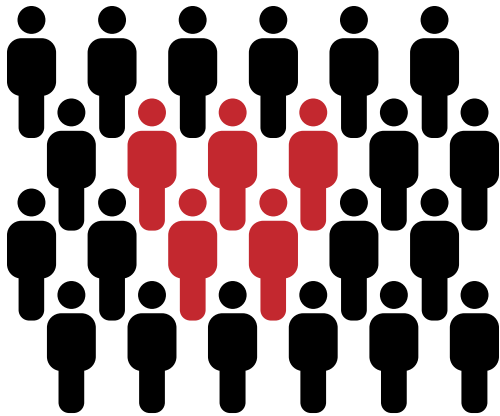
DISCUSSIONS

- **Pre-user-research method that supplements other research methods**
- **Potential as a new user research tool with a bigger number of participants**

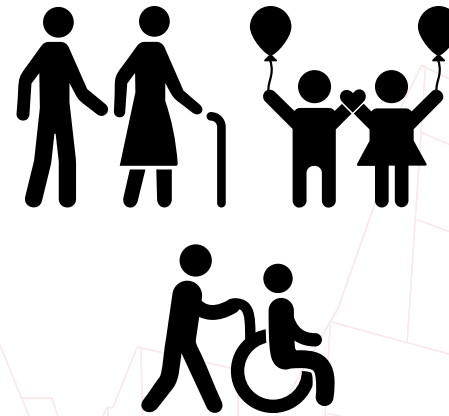


DISCUSSIONS

Limitations of the study:



Participants samples



Other unfamiliar design targets

Thank you.

Acknowledgement:

We would like to thank all the participants and colleagues who we engaged in this work. This work was supported and funded by 2016 Winter-Spring KAIST URP Program and partially by the ICT R&D program of MSIP/IITP [R7124-16-0004, Development of Intelligent Interaction Technology Based on Context Awareness and Human Intention Understanding].

