

Group Storymaking: Understanding an Unfamiliar Target Group through Participatory Storytelling

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Abstract

Based on a sound research plan, qualitative user data help designers understand needs, behaviors, and frustrations of a target user group. However, when a design team attempts to design for unfamiliar target groups, it is extremely difficult to accurately observe and understand them by simply using traditional research methods such as interviews and observation. As a result, the quality of user research data can be called into a question, which leads to unsatisfying design solutions. Inspired by a fiction writer's technique of generating stories together with readers, we present the new method, Group Storymaking, that supports designers to quickly gain broad and clear understanding of an unfamiliar target group throughout a story-making activity with actual users. We envision Group Storymaking as a new user study method that designers can easily implement to learn about an unfamiliar target, involving actual users in a research process with less time and cost commitment.

Keywords: User-centered design; user research; participatory design; storytelling; unfamiliar target users.

User research is regarded as a crucial stage in a user-centered design process. In order to design a new product or system that matches user needs, designers must deeply understand users' behaviors, goals and frustrations first. However, problems arise when an unfamiliar target group becomes a research subject. The quality of user research data much depends on researchers' competence in proper planning and conducting the research, and even a skillful researcher struggles with an unfamiliar target. When designers participate in a project which deals with little known target users, it can be a challenge to understand and empathize with those users (Sleger, 2010). In some cases, even user research itself is not allowed, which makes the research far more difficult (Eriksson, 2013).

For example, when young designers work on a project titled 'developing a new wearable device concept for senior office workers,' they need to find out lifestyle, interests, needs and current frustrations of the senior target group. However, when they try to conduct user research using traditional methods such as interview and observation, they will face the following problems:

- Their project time and budget are limited; therefore, they need to finish their user research using a few possible research methods within a fixed time period;
- It is difficult to think outside the box, avoid young people's stereotypes of the senior and elicit creative answers from the target group;

- Since ‘the senior office workers’ are too broad and abstract, it is difficult to narrow down and categorize detailed user types among them;
- Even though designers have developed design scenarios and personas based on user research data, they cannot deeply empathize with the unfamiliar target group, which makes the persona and scenarios lose value.

As shown in the hypothetical case above, the quality of user research data can often be called into a question when designers attempt to design for a little-known target group. Design solutions that lack tangible understanding of target groups are mostly unsatisfying or even damaging to users (Keinonen, 2008).

As a solution to this problem, we propose a novel, easily implementable design method called Group Storymaking based on a fiction writer’s technique (Card, 2010). Fiction writers excel at eliciting interesting, believable episodes of unfamiliar situations and characters. Fictional stories and characters are described so vividly and concretely that readers are captivated and feel empathy with those imaginative anecdotes and creatures. Those stories and characters are not real, but realistic. As design scenarios and personas have a metaphorical matching with fictional stories and characters (Nielsen, 2002; Quesenbery, 2006), how fiction writers create stories and characters became the motif for our research. In this work, we aim to explore the strengths and distinctions of the Group Storymaking method and examine whether the new method can provide designers with representative, trustworthy and insightful user information that broadens their understanding of an unfamiliar target group.

Background and Related Works

Many researchers, designers and developers have reported difficulties in conducting user research on an unfamiliar target group. Antle (2006) discussed problems associated with defining child-users due to limited access to children and designers’ self-referential, distorted preconceptions about children. Slegers et al. (2010) and Duysburgh et al. (2012) pointed out difficulties in using traditionally used research methods for the disabled such as hearing impaired children. Campbell (2013) described various challenges in designing for the inaccessible developing world. Dee and Hanson (2016) argued that recruiting and communicating with the elderly or ‘vulnerable’ people are often a demanding task for designers. These studies emphasize that using commonly used research methods, such as interviews and observation, to research on unfamiliar target groups can be challenging. Instead, designers should devise different research methods that enable in-depth understanding of target groups that are especially unfamiliar to them. The Cultural Probes method (Gaver et al., 1999) is a classic example of a newly proposed user research method based on the motivation to design for the elders.

Information gained from such ethnographic user research is often embodied as a design persona, or “hypothetical archetypes of real users” as Alan Cooper describes (2015). Based on well-planned, in-depth research data, personas work as a human reference by guiding designers to build a tangible representation of target users, to facilitate the communication of information about the targets among team members, and to build empathy for the targets (Cooper, 2015). However, Chang et al. (2008) portray that when a target group is hard to understand and research on, designers in practice use not only data from qualitative user research but also their own

assumptions and experiences in the process of making personas. Pruitt and Adlin (2006) argue that this kind of practice may lower the value of personas as they do not properly reflect real users and are not deemed credible. To address such a credibility issue, past studies have attempted to combine participatory design with a persona to acquire insightful user research data and a reliable persona. Nielsen (2012) involved potential users in two design workshops that took advantage of personas and scenarios to help users come up with future solution. Van Doorn et al. (2013) conducted a case study where children performed as research collaborators to interview their peers or grandparents, gain user information and fill in given templates to create personas by themselves. Dodge et al. (2017) derived 4 persona skeletons from the results of participatory design workshops where users designed eco-feedback technology for their own homes. Nevertheless, these works do not put stress on a specific situation where researchers are faced with little-known target users. Applying participatory design to studying and creating personas of unfamiliar users is expected to be advantageous, as treating potential users as partners (Sanders & Stappers, 2008) can benefit designers and users by facilitating learning about each other (Roberston & Simonson, 2012). The designers can access the users' tacit knowledge and real stories that are hardly gained when users are viewed as research object. The users can learn about technologies from the designers and create a shared problem space between the designers and them, thereby offering creative insights which the designers might overlook from traditional interview or observation methods.

Based on this notion, this paper presents a new user research method that facilitates understanding of an unfamiliar target through participatory storytelling. When designers attempt to use commonly used research methods for a little-known target group, they often have difficulties in making user research plans and figuring out what type of information they should collect. As a solution to this, our new method gathers rich firsthand user data with unfamiliar target users by letting them collect and classify useful information about themselves, not from them as most traditional user research methods do. Since target users are the 'experts' of their own experiences, they are better at providing their data than designers who barely know about them. We also combined a storytelling technique with our method to assist users in telling their stories in an easy, natural way. Besides, empathy is a key in understanding unfamiliar target groups as literatures portrayed (Koskinen, 2003; Lewis & Coles-Kemp, 2014), but designers tend to fail to achieve it using traditional research methods unless they are highly experienced in conducting serious user studies. Our new method is expected to foster designer's empathy for a target group through storytelling even if s/he is not skillful at user research.

Developing the Group Storymaking Method

Motif for the Method

Group Storymaking is inspired by a renowned fiction writer Orson Scott Card's ideation technique called 'A Thousand Ideas in an Hour' (Card, 2010). It is a story building workshop that involves readers to complete a short story within an hour. The writer begins with any sentence that s/he likes and keeps asking the audience what will happen next, which ends up with forming well-organized, interesting storylines and characters as in Figure 1.

Do you want a story about a boy or a girl?	--- The kids start a fire!
--- <i>A boy! No, a girl!</i>	What do you do then?
OK then, we won't decide yet. How old is this person?	--- Put it out!
--- <i>Ten! No, twelve!</i>	--- Call the fire department!
Twelve? Why twelve? What happens to you when you're twelve?	--- Get out of the house!
--- <i>You can stay up later.</i>	--- Get the kids out of the house!
Oh? What do you do when you stay up later?	--- Leave the one who started the fire!
--- <i>Watch TV!</i>	Oh, you're all heart. A fire would make an exciting story, but I don't feel like doing that one right now.
--- <i>The good shows!</i>	What else can go wrong when you're babysitting?
--- <i>Scary shows!</i>	--- Messy diapers.
What else can you do?	That's just part of the job.
--- <i>Go places by yourself!</i>	--- The baby crying.
Where would you go?	Okay, the baby's crying. What do you do?
--- <i>The mall!</i>	--- Change his diaper.
--- <i>Friends' houses!</i>	You changed the diaper. He's still crying. What do you do?
--- <i>Wherever I want!</i>	--- Feed him.
Heck, I'm thirty-seven and I can't do that.	--- Burp him.
--- <i>When you're twelve you get more money.</i>	--- Tell him to be quiet.
How does that happen?	You do all that, he's still crying.
--- <i>Bigger allowance.</i>	--- Maybe he's sick.
--- <i>Babysitting.</i>	There's a chance of that. What do you do?
So twelve-year-olds can babysit. Have any of you ever done any babysitting?	--- Call your mother!
--- <i>My brothers.</i>	She's isn't home. She had a meeting that night.
--- <i>The baby.</i>	--- Call the people. The people you're babysitting for.
--- <i>I have.</i>	They're driving somewhere and they don't have a car phone.
What can go wrong when you're babysitting?	--- Go next door!
--- The house burns down.	(...continued)
Yeah, but that doesn't happen very often.	

Figure 1. A Thousand Ideas in an Hour workshop with a group of fourth-graders (excerpt) (Card, 2010)

A designer participating in a Group Storymaking process is like a writer in 'A Thousand Ideas in an Hour' workshop. A designer generates a character and his/her stories together with a group of people. Starting with a simple question and continuing to ask cause and result questions to actual target users, the designer 'fleshes out' characters and scenarios using firsthand experiences of users. Also, low accessibility is a problematic issue in designing for an unfamiliar target group. To address this, Group Storymaking is processed online in order to help designers access people located in remote places as well as to support real-time communication and active interaction among those people and designers.

In Group Storymaking, a character is as much important as episodes. An alive, round character created from Group Storymaking is full of insightful attributes of potential users since that character is grounded on users' experiences and opinions. Such a well-made character can help designers better understand an unfamiliar target group. Besides, by having a main character in a story, non-designer respondents can participate in Group Storymaking more actively as they can empathize with the character that resembles them and better imagine how that character will behave. To support designers in construction of a character in Group Storymaking, we revised Scott Card's '10 components of a character' guideline: 1) actions; 2) motivation; 3) past experience; 4) reputation; 5) stereotypes on occupation, gender, age, family role, racial characteristics, and ethnographic nature; 6) relationship with other characters; 7) habits and

behavior patterns; 8) talent and ability; 9) preferences; and 10) physical characteristics (Card, 2010). We assumed that '1) actions' belongs to '7) habits and behavior pattern' as they both referred to the concept of behavior and that '10) physical characteristics' belongs to '5) racial characteristics and ethnographic nature' as the latter includes descriptions of physical appearances. During the Group Storymaking process, designers keep asking questions until enough information about these 8 components is collected to build a vivid character.

Developing the Group Storymaking Guidelines

To develop detailed guidelines for the Group Storymaking method and evaluate its effectiveness, a three-phase study was conducted. In Phase 1, we compared an online 1:1 interview and an online group interview. A designer was recruited and asked to conduct one unstructured online 1:1 interview and one online group chat interview with the same design theme using Kakaotalk, the most widely used instant messenger in Korea, in order to examine the potential of our idea. It was discovered that the online group chat where the respondents were allowed to stimulate each other generated more insightful responses and helped the designer better understand the target.

In Phase 2, multiple online group chats were conducted to establish detailed guidelines for the new method. In this phase, story-making chats were conducted where we generated stories following the method used in 'A Thousand Ideas in an Hour'. Different groups of potential target users for ten design themes were recruited with whom we conducted ten group story-making chats and created personas. Analyzing their contents, we highlighted special issues that occurred, questioning strategies, and key Q&A parts that led to design insights and important information about the target groups. Findings revealed that it was important to first establish a character's basic bio profile before generating his/her stories, to illustrate the character's day from morning till night and to ask questions especially on the character's needs and frustrations as these might not appear in the previous responses. These key points were developed as the guidelines for the Group Storymaking method. To begin with, the designer gives a name and an age to a character by asking 'What will be this character's name and age?' to the respondents. Next, the designer asks questions about character's basic bio profiles, which will act as common ground for the respondents in the next steps. Then, the designer asks how the character spends a day in order to let the respondents chronologically describe a day of the character and various episodes that may happen in that day. Finally, the designer asks questions, if necessary, about the frustrations of the character or any more information that s/he has to know.

In Phase 3, two designers were recruited and asked to conduct two Group Storymaking activities with the same design theme on two different channels: Kakaotalk and Facebook Group. The Group Storymaking activity using Kakaotalk was successfully implemented, but the other one using the Facebook Group page failed in receiving enough useful responses. We found it was important to make sure all respondents were participating real-time with full concentration. As a result, the most suitable platform for our new method turned out to be an online instant messenger which supports anonymous chatting. In our guidelines, we suggest using an anonymous chat room in Kakaotalk. Kakaotalk is the most popular instant messaging application in Korea that supports anonymous group chatting in both mobile and PC environments. It is a suitable platform for conducting our method as it allows for quick and easy recruitment of diverse, remote respondents. After creating an anonymous chat room, the designer sends the hyperlinks of the chat rooms to the respondents that s/he has recruited, and asks various

questions based on the Group Storymaking guidelines.

Figure 2 depicts the overall process of Group Storymaking, and Figure 3 shows the detailed guidelines for Group Storymaking that we developed through the above three-phase studies. In Figure 3, the left part describes the steps of Group Storymaking. A designer begins with an introduction and goes through each step to complete the entire Group Storymaking process, where the designer determines basic biographic information of a character to form common ground identity (name, age, gender, etc.), depicts a day of the character to probe its behaviors, perceptions and wishes, and asks additional questions related to the character's frustrations or needs to elaborate persona description. The boxes on the right of the guidelines in Figure 3 work as tips for designers. As most designers are hardly aware of the 8 components of a character, we provided the list on the guidelines. To help designers better elicit useful responses, we also present some questioning strategies such as 'Keep asking what will happen next' or 'Calling a character's name instead of saying this character helps respondents to feel empathy and participate actively.'

If the designer thinks s/he has collected enough information on 'the 8 components of a character' given in the guidelines, s/he can stop the stork-making activity. The responses can directly be 'copy-and-pasted' as persona details without extra analysis.

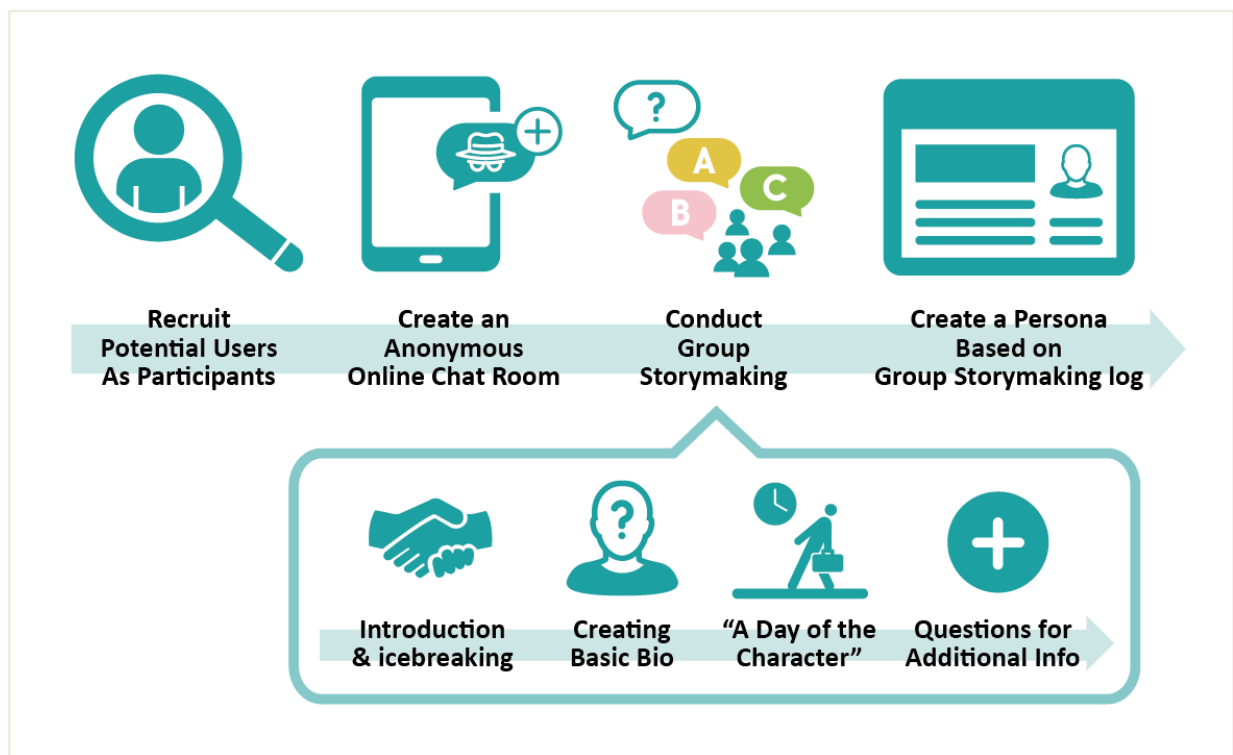


Figure 2. Overall process of the Group Storymaking method

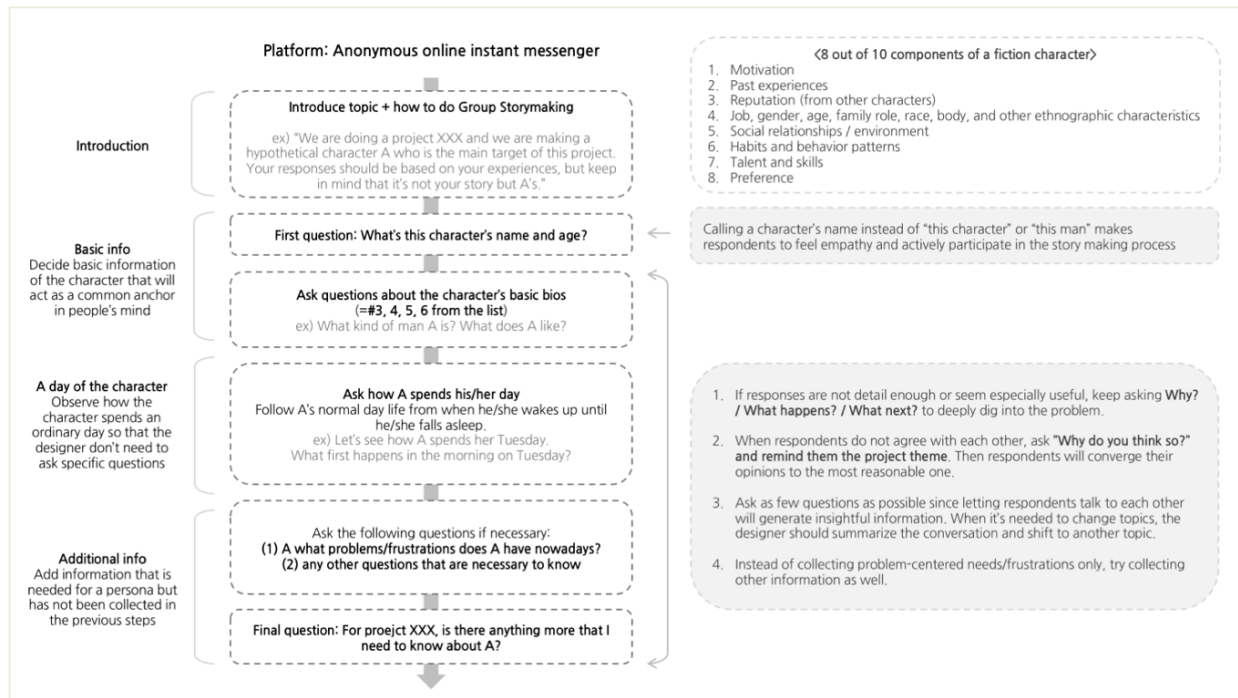


Figure 3. Detailed guidelines developed for Group Storymaking

Examining the Group Storymaking Method

Based on these guidelines, a study was conducted to explore how Group Storymaking works and what pros and cons it has by comparing Group Storymaking with one of the most popular, commonly used traditional user study method in a user-centered design process, 1:1 face-to-face interview. To facilitate comparison, we examined design personas made from the results of each method as they are tangible representations of what has been achieved by each method.

The study was set up as Table 1. We recruited 8 designer students who already had experience in conducting user research as well as using personas and scenarios in a design process. Design students were considered to be more proper participants for our study, as professional designers with rich experiences might not be highly susceptible to minor problems that could occur in a design process, which would make it difficult to examine the effectiveness and distinctions of our method. Design students or design novices, however, usually lack experience in user research compared to professional designers. Therefore, the fact that even such design students can successfully grasp unfamiliar target groups using Group Storymaking would mirror the effectiveness of the method.

To begin with, we showed the participants several examples of design themes and target groups, and asked each of them to select one unfamiliar theme and target among those given examples. We then asked each participant to implement 1:1 face-to-face interviews and Group Storymaking so that s/he can compare both experiences. To compensate possible learning effect, we equally randomized the order of implementation of the two methods; 4 participants (P1, P2, P5, P6) conducted first 1:1 interviews and then Group Storymaking, while for the other 4 participants (P3, P4, P7, P8) the order was inverse. Prior to the beginning we asked all the participants to first

write down questions for 1:1 interviews in order to avoid interview questions being influenced by the result of Group Storymaking. Also, one method should be completely finished before conducting the other one in order to prevent the former from affecting the latter. For example, we did not allow the participants to first interview a couple of people, conduct Group Storymaking in the middle and come back to conduct a few more interviews.

Table 1. Study setup for comparison of 1:1 interview and Group Storymaking

Order of methods	P#	Gender, age	Design Theme and Target	FGI Group
First conducted 1:1 interviews, and then conducted Group Storymaking	P1	M, 23	Developing a new liquid makeup container for females in 20s <i>Target: Females in 20s who are interested in makeup</i>	Group 1
	P2	F, 23	Developing a Futsal-related service concept for male university students in 20s <i>Target: Male university students who often play Futsal</i>	Group 1
	P5	M, 24	Developing an online goods trading website for female K-pop idol fans <i>Target: Female K-pop idol fans who have bought idol-related CDs and/or goods</i>	Group 2
	P6	F, 26	Developing an animation streaming service website <i>Target: Males in 20s who enjoy watching Japanese animation of various genres</i>	Group 2
First conducted Group Storymaking and then conducted 1:1 interviews	P3	M, 24	Developing a new online fashion store concept for female university students in 20s <i>Target: Female university students who often buy clothes from online shopping stores</i>	Group 1
	P4	F, 25	Developing a new e-sports service concept for male university students in 20s <i>Target: Male university students who likes playing online and/or offline PC/mobile/console games</i>	Group 1
	P7	M, 24	Developing a new self nail art design catalog application <i>Target: Females in 20s who regularly do manicure/pedicure and self nail art</i>	Group 2
	P8	F, 24	Developing an online select shop for low and middle priced male shoes <i>Target: Males in 20s who are interested in buying low and middle priced shoes</i>	Group 2

Before beginning, we provided the participants with our Group Storymaking guidelines and a commonly used persona template with blank spaces for basic bio, behavior, needs and frustrations. However, if those who had to conduct interviews first were already aware of the the guidelines, the interview questions might be affected by them. Therefore, we provided those four participants (P1, P2, P5, P6) with our guidelines after they finished interviews.

As for interviews, each participant implemented 3-4 individual face-to-face interviews with 3-4 different interviewees. The participants could only use the interview questions that they had listed at the beginning, but they were allowed to improvise other derived questions if necessary. As for Group Storymaking, each participant conducted one Group Storymaking activity with 5-8 respondents, using an anonymous chat room of the online instant messenger Kakaotalk as shown in Figure 4. The participants followed the guidelines that we provided during this activity.

We also asked each participant to create 2 different personas: one from the result of 1:1 interviews and the other from Group Storymaking as shown in Figure 4. After 1:1 interviews, each participant transcribed the scripts to analyze them and create a persona. As for Group

Storymaking, each participant directly rephrased the responses from the Group Storymaking activity and put them in a persona template without extra analysis.

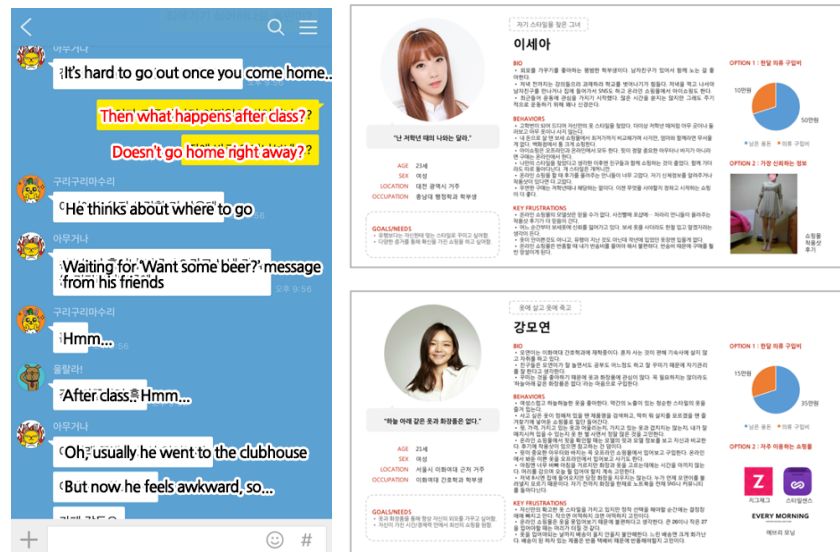


Figure 4. An example of Group Storymaking activity (left) and the personas that a participant submitted (right), each based on the 1:1 interview (top-right) and Group Storymaking (bottom-right).

After all the participants finished user research and persona submission, they discussed the new method in debriefing focus group interviews. We conducted two focus group interviews (i.e. four participants in each group with an equal gender ratio) to evaluate and refine our method. We organized the two groups in a way that each participant was well aware of or even belonged to at least one target group of the other participants in the same focus group. In this way, the participants could evaluate each other's personas from an actual target user's point of view.

Each focus group consisted of three sessions. In the first session, we discussed pros and cons, memorable issues, and any general opinions on the Group Storymaking method. In the second session, we provided printed versions of all the eight personas that the participants in the same focus group had made. The participants were asked to evaluate and discuss those personas in order to validate whether Group Storymaking actually enabled in-depth understanding of an unfamiliar target user or not. The participants highlighted persona details that caught their eyes, either positively or negatively. In the last session, the participants shared opinions on the Group Storymaking guidelines to refine them together.

Transcripts of these discussions, Group Storymaking processes and persona descriptions were analyzed using affinity diagramming until recurring themes emerged.

Findings

A summary of the findings regarding the two methods is demonstrated in Table 2. In this section, we recapped these results as two primary findings: (1) quick and broad understanding of unfamiliar targets throughout Group Storymaking, and (2) trustworthy and insightful responses from Group Storymaking.

Table 2. Summary of the features of the two methods: interview and Group Storymaking

Method	Interview		Group Storymaking	
Feature	Process	Persona	Process	Persona
Advantages	<ul style="list-style-type: none"> • Non-verbal cues help interpreting answers. • Important exceptional cases can be addressed. • Detailed problems and user needs are revealed (narrow and deep). 	<ul style="list-style-type: none"> • Perceived to be useful when directly applied into the design process. 	<ul style="list-style-type: none"> • Easy to implement without time and space limitations. • Participants confirm reliability of information by agreeing to each other. • Participants tend to become more candid. • Overall background and behavior patterns are revealed (wide and shallow). 	<ul style="list-style-type: none"> • Perceived to be more realistic and representative of a certain target. • Perceived to be useful when constructing a basic image of an 'ordinary' unknown target.
Disadvantages	<ul style="list-style-type: none"> • Planning proper questions is challenging. • Analysis skill determines the quality of product. • Time and space limitations exist. 	<ul style="list-style-type: none"> • Biographical descriptions and behaviors are vague or superficial. • Subjectivity of information reduces reliability. 	<ul style="list-style-type: none"> • Crowd psychology is a critical factor. • Enough guidelines should be given when dealing with non-tech-savvy participants. 	<ul style="list-style-type: none"> • Persona descriptions are not necessarily related to a design problem.

Quick and Broad Understanding of Unfamiliar Targets throughout Group Storymaking

The Group Storymaking method allowed for quick, broad understanding of an unfamiliar target group in an efficient manner. While deep-rooted needs and frustrations were revealed more during the individual face-to-face interviews, Group Storymaking method enabled designers to rapidly learn much about general features of a target group when designers have little or no knowledge of that target. The participants mentioned that they would conduct Group Storymaking first to gain basic knowledge about a target, and this knowledge would supplement follow-up 1:1 interviews to gain more in-depth information and find out tangible design opportunities:

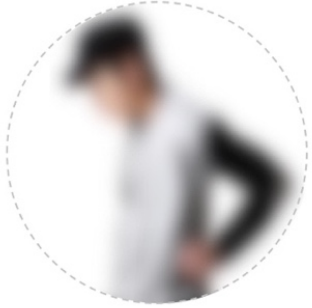
P2: "When I was setting up interview questions, I didn't know what to ask because I knew nothing about my targets, but Group Storymaking guided me what to ask, so it was easier to carry on."

P5: "Group Storymaking helped me to understand the general, common features of the target, and interviews were used to find special particularities."

For instance, there were notable differences in descriptions of the two 'male university students who often play Futsal' personas that P2 made. The persona's frustrations found from 1:1

interviews (Figure 5) seemed more intuitive and closer to design-related problems, but other biographic information was rather plain, superficial or too personal to be generalized as a concrete feature of the entire target group:

P2: “When you interview people and they have different opinions, I become confused because I don’t know how to decide which one is right. When details are different, I have to make an abstract persona. 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.”



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.

GOALS/NEEDS

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

“People becomes friends when they play Futsal together.”

AGE 22
SEX Male
LOCATION Daejeon
OCCUPATION Student

Figure 5. ‘Male university students who often play Futsal’ persona based on 1:1 interview (translated, yellow=details that participants mentioned as representative and empathizing, blue=details that participants mentioned as unreliable or not empathizing)

The other persona based on Group Storymaking (Figure 6) contained plenty of details about not only Futsal-related behaviors and habits but also his overall lifestyle which shapes it as a realistic persona, while his frustrations, although very empathizing, seemed to be complex, social problems from which designers need to extract practical value.

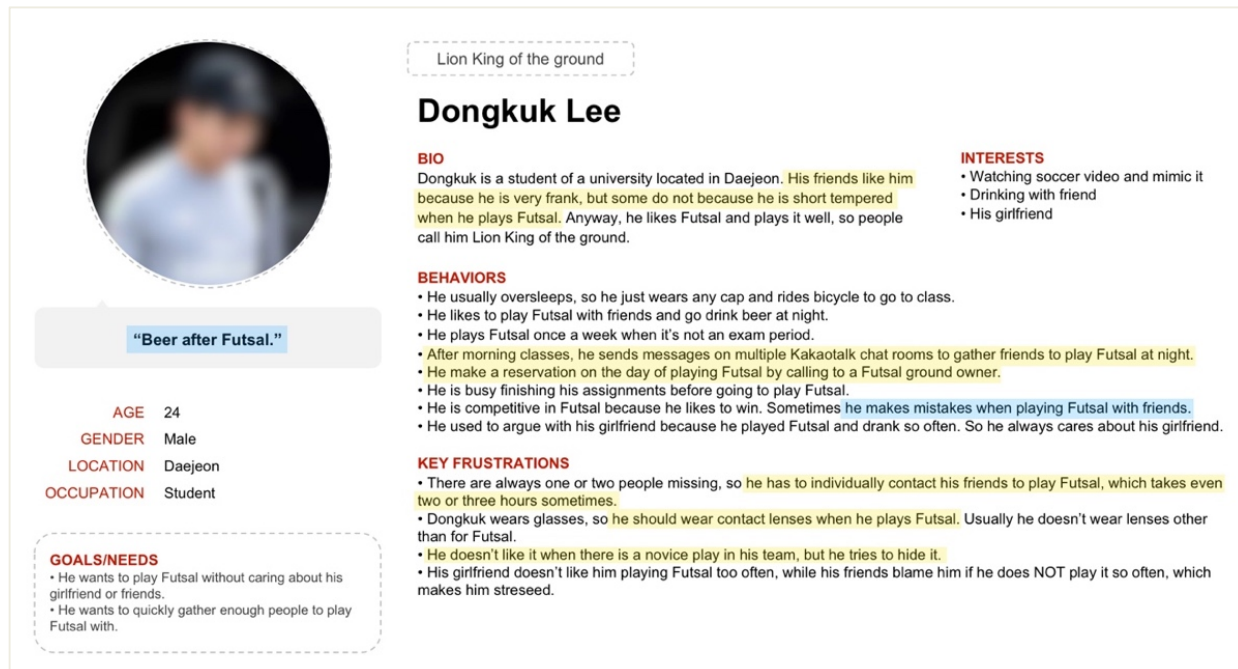


Figure 6. ‘Male university students who often play Futsal’ persona based on Group Storymaking (translated, yellow=details that participants mentioned as empathizing, blue=details that participants mentioned as unreliable or not empathizing)

Besides, with little restriction of time and space, designers can implement Group Storymaking several times much more quickly than a 1:1 face-to-face interview. This enables designers to get used to an unfamiliar target group in a short time period:

P3: “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.”

Trustworthy and Insightful Responses from Group Storymaking

Participants mentioned that the responses from Group Storymaking were vivid, honest and specific. During the Group Storymaking activities as in Figure 7, respondents who belonged to an actual target group collaborated to construct a hypothetical character in an anonymous third-person-manner based on not only their own previous experiences but also ‘expert’ knowledge that they had as they belonged to a certain target group. Since the respondents felt that they are not telling their own stories but a character A’s stories, they actively participated in the story-making process and generated more specific, frank responses than in the interviews:

P2: “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.”

P6: “Because Group Storymaking is anonymous... During the interview, people see each other’s face and know who they are talking to, so they say things carefully, but when (they are) anonymous, they can say anything.”



Figure 7. Examples of Group Storymaking process

Thus, responses generated from Group Storymaking were trustworthy and representative of the target groups. During 1:1 interviews, the designers interpreted each interviewee's response as how s/he behaves, while during Group Storymaking the designers found the responses as how a random, ordinary person A in a target group generally behaves:

P1: "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."

P3: "People got inspired by each other and came up with more stories during Group Storymaking. [...] For me responses and personas made from Group Storymaking seemed more realistic and representative because they were what many people agreed on."

What designers gained from Group Storymaking was not raw data that needed extra manual analysis but verified information that actual target users agreed on. As a result, designers' subjective misinterpretation and assumptions that frequently happen during a raw-data analysis stage could be minimized. Throughout Group Storymaking a designer could extract numerous

commonalities which respondents have validated to be representative features of a certain target group, ensuring the reliability and representativeness of the responses gained.

Discussion and Potential Benefits of Group Storymaking

Guide to Planning of User Research on Unfamiliar Target Users

When designers have too little understanding in their target group to plan and carry out concrete user research, Group Storymaking can work as a universal, logical guideline to start with. Listing up interview questions or planning for observation can be a challenging task for designers who are unfamiliar with their target group, as they are not confident of what to ask and record. At this point, Group Storymaking guides them to obtain information that they need and to probe into their target step by step starting from ground zero. Especially, Group Storymaking helps designers to acquire even sensitive information from unfamiliar users. Since respondents anonymously tell a story as if it is not theirs, designers can gain what people are reluctant to tell specifically and/or honestly.

Because of this nature, Group Storymaking can be used as a rapid pre-user-research method for designers to quickly study and familiarize with a little-known theme or target group. A persona created by Group Storymaking consists of trustworthy, insightful details which are common features of the target group where that persona belongs to. Therefore, it helps designers to delineate in their mind a basic image of a representative user in a certain target group. Referring to personas and design scenarios created from Group Storymaking, designers can screen and recruit relevant participants and set up a sound research plan.

Potential as a New User Study Tool with a Bigger Number of Participants

Group Storymaking minimizes the role of designers in the process of user data collection by involving a group of actual target users in that process. A possible future scenario can be increasing the number of respondents who participate in one Group Storymaking activity. We suggest applying crowdsourcing to Group Storymaking so that a statistically meaningful number of people can participate in real time to construct design scenarios and personas composed of abundant firsthand user data even without a designer's control. Also in this way, a digital archive is expected to be developed to work as a computationally supported user study platform, where various types of scenarios and personas are created, saved, shared among designers, and employed for diverse design projects.

Limitations of the Study

This research is based on a sample of Korean design student participants aged between 23 to 26. It is necessary to validate the new method with other design researchers and practitioners that belong to a more general global population before generalizing the findings. Beyond this, despite our efforts to deal with a variety of design cases and target users, not all the situations where unfamiliarity is often an issue were not covered in this study, such as designing for children, the elderly or the disabled. We leave these investigations to future work.

Conclusion

We developed Group Storymaking as a new method for enabling designers to gain broad understanding of unfamiliar design project themes and target user groups as well as to elicit trustworthy, specific and representative information about that target by directly engaging even remote target users in the design process. Based on a fiction writer's ideation technique, Group Storymaking utilized the method for making *fictional* stories to create *factual* stories of real users.

We found that a storyline with a character in a fiction writing and a design scenario with a persona have common features, and therefore the ideation technique that fictions writers use could be applied in a design process. Most responses from Group Storymaking based on our guidelines were perceived as insightful, representative and believable by actual designers. The new method is quickly and easily implementable, and it can involve target users in a design process with less time and cost commitment. Designers can also use Group Storymaking as a rapid pre-user-research method to quickly get familiarized with unknown theme and target group.

Furthermore, we suggest combining our method with crowdsourcing. By doing so, a persona archive as a new user research tool can be developed. A statistically meaningful number of actual target users are expected to offer valuable stories throughout the group interaction and communication without designers' great efforts in planning and carrying out qualitative field research.

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